

# Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

# **SECTION 1: Identification**

#### 1.1. Product identifier

3M<sup>™</sup> Process Colour 990-12 Red

**Product Identification Numbers** 

LE-N100-0147-1 42-0016-3988-1 75-0300-8079-2 HB-0041-7700-0 TM-0000-0740-0

XX-0000-0020-6

### 1.2. Recommended use and restrictions on use

## **Intended Use**

Ink

#### Restrictions on use

Not applicable

## 1.3. Supplier's details

**Company:** 3M Canada Company

**Division:** Transportation Safety Division

Address: 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1

**Telephone:** (800) 364-3577 **Website:** www.3M.ca

# 1.4. Emergency telephone number

Medical Emergency Telephone:1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

# **SECTION 2: Hazard identification**

## 2.1. Classification of the substance or mixture

Flammable Liquid: Category 3.

Serious Eye Damage/Irritation: Category 1. Skin Corrosion/Irritation: Category 2. Respiratory Sensitizer: Category 1. Skin Sensitizer: Category 1A. Reproductive Toxicity: Category 1B.

Carcinogenicity: Category 1A.

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Specific Target Organ Toxicity (single exposure): Category 1. Specific Target Organ Toxicity (single exposure): Category 3. Specific Target Organ Toxicity (repeated exposure): Category 1.

#### 2.2. Label elements

#### Signal word

Danger

### **Symbols**

Flame | Corrosion | Exclamation mark | Health Hazard |

### **Pictograms**



#### Hazard statements

Flammable liquid and vapour.

Causes serious eye damage. Causes skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause drowsiness or dizziness. May damage fertility or the unborn child. May cause cancer.

Causes damage to organs: sensory organs

Causes damage to organs through prolonged or repeated exposure: nervous system

May cause damage to organs through prolonged or repeated exposure: sensory organs

# **Precautionary statements**

### **Prevention:**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. Wear protective gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash exposed skin thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

#### **Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

#### Storage:

Store in a well-ventilated place. Keep cool. Store locked up.

#### Disposal

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

### 2.3. Other hazards

None known.

\_\_\_\_\_\_

23% of the mixture consists of ingredients of unknown acute inhalation toxicity.

# **SECTION 3: Composition/information on ingredients**

This material is a mixture.

| Ingredient                       | C.A.S. No.   | % by Wt                  | Common Name                                 |
|----------------------------------|--------------|--------------------------|---------------------------------------------|
| 1-Methoxy-2-propyl acetate       | 108-65-6     | 10 - 30                  | 2-Propanol, 1-methoxy-, acetate             |
| Cyclohexanone                    | 108-94-1     | 10 - 30 Trade Secret *   | Cyclohexanone                               |
| Dipropylene glycol methyl ether  | 88917-22-0   | 10 - 30                  | Propanol, 1(or 2)-(2-                       |
| acetate                          |              |                          | methoxymethylethoxy)-, acetate (9CI)        |
| Vinyl polymer                    | Trade Secret | 10 - 30                  | Not Applicable                              |
| Organic pigment                  | Trade Secret | 1 - 10                   | Not Applicable                              |
| Alkyd resin 259722               | Trade Secret | 3 - 7                    | Not Applicable                              |
| Xylene                           | 1330-20-7    | 3 - 7 Trade Secret *     | Dimethylbenzene                             |
| 2,4-Dihydroxybenzophenone        | 131-56-6     | 0.1 - 2                  | Methanone, (2,4-dihydroxyphenyl)phenyl-     |
| Ethylbenzene                     | 100-41-4     | 0.1 - 2                  | Benzene, ethyl-                             |
| Bis(2,2,6,6-tetramethyl-4-       | 52829-07-9   | 0.1 - 1.0 Trade Secret * | Decanedioic acid, bis(2,2,6,6-tetramethyl-  |
| piperidinyl) sebacate            |              |                          | 4-piperidinyl) ester                        |
| Nickel salts of naphthenic acids | 61788-71-4   | 0.1 - 1.0 Trade Secret * | Naphthenic acids, nickel salts              |
| Poly(oxy-1,2-                    | 104810-48-2  | 0.1 - 1.0 Trade Secret * | Poly(oxy-1,2-ethanediyl), .alpha[3-[3-      |
| ethanediyl), .alpha[3-[3-(2H-    |              |                          | (2H-benzotriazol-2-yl)-5-(1,1-dimethy       |
| benzotriazol-2-yl)-5-(1,1-       |              |                          | lethyl)-4-hydroxyphenyl]-1-                 |
| dimethylethyl)-4-                |              |                          | oxopropyl]omegahydr o xy-                   |
| hydroxyphenyl]-1-                |              |                          |                                             |
| oxopropyl]omegahydroxy-          |              |                          |                                             |
| Polymeric Benzotriazole          | 104810-47-1  | 0.1 - 1.0 Trade Secret * | Poly(oxy-1,2-ethanediyl), .alpha[3-[3-      |
|                                  |              |                          | (2H-benzotriazol-2-yl)-5-(1,1-dimethy       |
|                                  |              |                          | lethyl)-4-hydroxyphenyl]-1-                 |
|                                  |              |                          | oxopropyl]omega[3-[ 3 -(2H-                 |
|                                  |              |                          | benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4- |
|                                  |              |                          | hyd roxyphenyl]-1-oxopropoxy]-              |
| 2,3-epoxypropyl neodecanoate     | 26761-45-5   | 0.0 - 0.27               | Neodecanoic acid, oxiranylmethyl ester      |
| Naphthenic acid                  | 1338-24-5    | 0.00 - 0.21              | Naphthenic acids                            |
| (3',4'-Epoxycyclohexylmethyl)    | 2386-87-0    | < 0.2                    | 7-Oxabicyclo[4.1.0]heptane-3-carboxylic     |
| 3,4-                             |              |                          | acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl    |
| epoxycyclohexanecarboxylate      |              |                          | ester                                       |
| Calcium 2-ethylhexanoate         | 136-51-6     | < 0.2                    | Hexanoic acid, 2-ethyl-, calcium salt       |
| Phosphonic acid, diphenyl ester  | 4712-55-4    | < 0.2                    | No Data Available                           |
| Zinc 2-ethylhexanoate            | 136-53-8     | < 0.2                    | Hexanoic acid, 2-ethyl-, zinc salt          |
| Triphenyl phosphite              | 101-02-0     | < 0.04                   | Phosphorous acid, triphenyl ester           |

Alkyd resin 259722 is a non-hazardous Trade Secret material according to WHMIS criteria.

Organic pigment is a non-hazardous Trade Secret material according to WHMIS criteria.

Vinyl polymer is a non-hazardous Trade Secret material according to WHMIS criteria.

# **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

#### Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

<sup>\*</sup>The actual concentration of this ingredient has been withheld as a trade secret.

#### **Skin Contact:**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

#### **Eve Contact:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

#### If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details. Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

#### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

# **SECTION 5: Fire-fighting measures**

### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

### 5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

#### **Hazardous Decomposition or By-Products**

| <u>Substance</u>  | <u>Condition</u>  |
|-------------------|-------------------|
| Hydrocarbons      | During Combustion |
| Carbon monoxide   | During Combustion |
| Carbon dioxide    | During Combustion |
| Hydrogen Chloride | During Combustion |
|                   |                   |

### 5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

# **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

## **6.2.** Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

### 6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire extinguishing foam that is resistant to polar solvents. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

# **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

For industrial or professional use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

## 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing agents.

# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient                 | C.A.S. No. | Agency | Limit type             | <b>Additional Comments</b> |
|----------------------------|------------|--------|------------------------|----------------------------|
| Ethylbenzene               | 100-41-4   | ACGIH  | TWA:20 ppm             |                            |
| 1-Methoxy-2-propyl acetate | 108-65-6   | AIHA   | TWA:50 ppm             |                            |
| Cyclohexanone              | 108-94-1   | ACGIH  | TWA:20 ppm;STEL:50 ppm | Danger of cutaneous        |
|                            |            |        |                        | absorption                 |
| Xylene                     | 1330-20-7  | ACGIH  | TWA:20 ppm             |                            |

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

#### **8.2.1.** Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

### 8.2.2. Personal protective equipment (PPE)

## Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full Face Shield

**Indirect Vented Goggles** 

### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

## Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

# **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

| into mation on basic physical and chemical properties |                                             |
|-------------------------------------------------------|---------------------------------------------|
| Physical state                                        | Liquid                                      |
| Specific Physical Form:                               | Liquid                                      |
|                                                       |                                             |
| Colour                                                | Red                                         |
| Odour                                                 | Solvent                                     |
| Odour threshold                                       | No Data Available                           |
| pH                                                    | Not Applicable                              |
| Melting point/Freezing point                          | Not Applicable                              |
| Boiling point                                         | >=138.3 °C                                  |
| Flash Point                                           | 42.8 °C [Test Method: Tagliabue Closed Cup] |
| Evaporation rate                                      | <=1 [Ref Std:BUOAC=1]                       |
| Flammability (solid, gas)                             | Not Applicable                              |
| Flammable Limits(LEL)                                 | 1 %                                         |
| Flammable Limits(UEL)                                 | 12.75 %                                     |
| Vapour Pressure                                       | <=895.9 Pa [@ 20 °C ]                       |
| Vapour Density and/or Relative Vapour Density         | >=3.4 [ <i>Ref Std</i> :AIR=1]              |
| Density                                               | 0.97 g/ml [@ 20 °C ]                        |
| Relative density                                      | 0.97 [ <i>Ref Std</i> :WATER=1]             |
| Water solubility                                      | No Data Available                           |
| Solubility- non-water                                 | No Data Available                           |
| Partition coefficient: n-octanol/ water               | No Data Available                           |
| Autoignition temperature                              | No Data Available                           |
| Decomposition temperature                             | No Data Available                           |

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| Viscosity/Kinematic Viscosity  | 1,300 - 1,500 mPa-s                           |
|--------------------------------|-----------------------------------------------|
| Volatile Organic Compounds     | 700 - 800 g/l [ <i>Details:</i> As Packaged.] |
| Percent volatile               | 65 - 80 % weight                              |
| VOC Less H2O & Exempt Solvents | No Data Available                             |
| Molecular weight               | No Data Available                             |

# **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

Sparks and/or flames

## 10.5. Incompatible materials

Strong oxidizing agents

### 10.6. Hazardous decomposition products

**Substance** 

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

# **SECTION 11: Toxicological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

#### **Inhalation:**

May be harmful if inhaled. Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

### **Skin Contact:**

May be harmful in contact with skin. Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

#### **Eve Contact:**

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing,

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ulcerations, significantly impaired vision or complete loss of vision.

#### Ingestion:

May be harmful if swallowed. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. May cause additional health effects (see below).

#### **Additional Health Effects:**

### Single exposure may cause target organ effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

### Prolonged or repeated exposure may cause target organ effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

### Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

### Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

| Ingredient                       | CAS No.    | Class Description              | Regulation                                  |
|----------------------------------|------------|--------------------------------|---------------------------------------------|
| Nickel Compounds (except alloys) | 61788-71-4 | Known To Be Human Carcinogen.  | National Toxicology Program Carcinogens     |
| Nickel compounds                 | 61788-71-4 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| Ethylbenzene                     | 100-41-4   | Grp. 2B: Possible human carc.  | International Agency for Research on Cancer |

### **Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

#### **Acute Toxicity**

| Name                                    | Route       | Species | Value                                             |
|-----------------------------------------|-------------|---------|---------------------------------------------------|
| Overall product                         | Dermal      |         | No data available; calculated ATE >2,000 - =5,000 |
|                                         |             |         | mg/kg                                             |
| Overall product                         | Inhalation- |         | No data available; calculated ATE >20 - =50 mg/l  |
|                                         | Vapor(4 hr) |         |                                                   |
| Overall product                         | Ingestion   |         | No data available; calculated ATE >2,000 - =5,000 |
|                                         |             |         | mg/kg                                             |
| Cyclohexanone                           | Dermal      | Rabbit  | LD50 >794, <3160 mg/kg                            |
| Cyclohexanone                           | Inhalation- | Rat     | LC50 > 6.2  mg/l                                  |
|                                         | Vapor (4    |         |                                                   |
|                                         | hours)      |         |                                                   |
| Cyclohexanone                           | Ingestion   | Rat     | LD50 1,296 mg/kg                                  |
| Dipropylene glycol methyl ether acetate | Dermal      | Rat     | LD50 > 2,000 mg/kg                                |
| Dipropylene glycol methyl ether acetate | Inhalation- | Rat     | LC50 > 5.7  mg/l                                  |
|                                         | Dust/Mist   |         |                                                   |
|                                         | (4 hours)   |         |                                                   |
| Dipropylene glycol methyl ether acetate | Ingestion   | Rat     | LD50 > 5,000 mg/kg                                |
| 1-Methoxy-2-propyl acetate              | Dermal      | Rabbit  | LD50 > 5,000 mg/kg                                |
| 1-Methoxy-2-propyl acetate              | Inhalation- | Rat     | LC50 > 28.8 mg/l                                  |
|                                         | Vapor (4    |         |                                                   |
|                                         | hours)      |         |                                                   |
| 1-Methoxy-2-propyl acetate              | Ingestion   | Rat     | LD50 8,532 mg/kg                                  |
| Vinyl polymer                           | Dermal      | Rabbit  | LD50 > 8,000 mg/kg                                |
| Vinyl polymer                           | Ingestion   | Rat     | LD50 > 8,000 mg/kg                                |
| Alkyd resin 259722                      | Dermal      |         | LD50 estimated to be > 5,000 mg/kg                |
| Alkyd resin 259722                      | Ingestion   |         | LD50 estimated to be > 5,000 mg/kg                |

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| Xylene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dermal                 | Rabbit | LD50 > 4,200 mg/kg                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------|---------------------------------------|
| Xylene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Inhalation-            | Rat    | LC50 29 mg/l                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Vapor (4               |        | e e e e e e e e e e e e e e e e e e e |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | hours)                 |        |                                       |
| Xylene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ingestion              | Rat    | LD50 3,523 mg/kg                      |
| Organic pigment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dermal                 |        | LD50 estimated to be > 5,000 mg/kg    |
| Organic pigment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Inhalation-            |        | LC50 estimated to be > 12.5 mg/l      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dust/Mist              |        |                                       |
| Organic pigment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ingestion              |        | LD50 estimated to be > 5,000 mg/kg    |
| Ethylbenzene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Dermal                 | Rabbit | LD50 15,433 mg/kg                     |
| Ethylbenzene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Inhalation-            | Rat    | LC50 17.4 mg/l                        |
| .,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Vapor (4               |        | 511 11 5                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | hours)                 |        |                                       |
| Ethylbenzene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Ingestion              | Rat    | LD50 4,769 mg/kg                      |
| 2,4-Dihydroxybenzophenone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Dermal                 |        | LD50 estimated to be > 5,000 mg/kg    |
| 2,4-Dihydroxybenzophenone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Ingestion              | Rat    | LD50 8,600 mg/kg                      |
| Nickel salts of naphthenic acids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Ingestion              | Rat    | LD50 419 mg/kg                        |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dermal                 | Rat    | LD50 > 3,170 mg/kg                    |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Inhalation-            | Rat    | LC50 0.5 mg/l                         |
| 3 11 37                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Dust/Mist              |        | e e e e e e e e e e e e e e e e e e e |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (4 hours)              |        |                                       |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ingestion              | Rat    | LD50 3,700 mg/kg                      |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dermal                 | Rat    | LD50 > 2,000 mg/kg                    |
| (1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omega                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |        |                                       |
| hydroxy-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |        |                                       |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Inhalation-            | Rat    | LC50 > 5.8  mg/l                      |
| (1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omega                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Dust/Mist              |        |                                       |
| hydroxy-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | (4 hours)              | D.     | I D50 > 5 000 //                      |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omega                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Ingestion              | Rat    | LD50 > 5,000 mg/kg                    |
| hydroxy-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |        |                                       |
| Polymeric Benzotriazole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Dermal                 | Rat    | LD50 > 2,000 mg/kg                    |
| Polymeric Benzotriazole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Inhalation-            | Rat    | LC50 > 5.8 mg/l                       |
| 1 organization Benefit and State of Sta | Dust/Mist              | 1      | Dett U.S ing.                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (4 hours)              |        |                                       |
| Polymeric Benzotriazole                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Ingestion              | Rat    | LD50 > 5,000 mg/kg                    |
| 2,3-epoxypropyl neodecanoate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Dermal                 | Rat    | LD50 > 2,000 mg/kg                    |
| 2,3-epoxypropyl neodecanoate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Ingestion              | Rat    | LD50 > 2,000 mg/kg                    |
| Naphthenic acid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dermal                 | Rabbit | LD50 > 20,000 mg/kg                   |
| Naphthenic acid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ingestion              | Rat    | LD50 5,880 mg/kg                      |
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Dermal                 | Rat    | LD50 > 2,000 mg/kg                    |
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Inhalation-            | Rat    | LC50 > 5.19 mg/l                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dust/Mist              |        |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (4 hours)              |        |                                       |
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Ingestion              | Rat    | LD50 5,000 mg/kg                      |
| Phosphonic acid, diphenyl ester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dermal                 | Rabbit | LD50 > 2,000 mg/kg                    |
| Phosphonic acid, diphenyl ester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ingestion              | Rat    | LD50 600 mg/kg                        |
| Zinc 2-ethylhexanoate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Dermal                 |        | LD50 estimated to be > 5,000 mg/kg    |
| Zinc 2-ethylhexanoate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Ingestion              | Rat    | LD50 > 5,000 mg/kg                    |
| Calcium 2-ethylhexanoate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Dermal                 | Rabbit | LD50 > 5,000 mg/kg                    |
| Calcium 2-ethylhexanoate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Inhalation-            | Rat    | LC50 > 1.2  mg/l                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dust/Mist              |        |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (4 hours)              | n .    | 1 7 7 7 0 0 0 M                       |
| Calcium 2-ethylhexanoate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Ingestion              | Rat    | LD50 > 5,000 mg/kg                    |
| Triphenyl phosphite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Dermal                 | Rabbit | LD50 > 2,000 mg/kg                    |
| Triphenyl phosphite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Inhalation-            | Rat    | LC50 > 1.7 mg/l                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dust/Mist              |        |                                       |
| Triphenyl phosphite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (4 hours)<br>Ingestion | Rat    | LD50 1,590 mg/kg                      |
| ATE = acute toxicity estimate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | mgcstion               | Nat    | LD30 1,330 Hig/kg                     |

ATE = acute toxicity estimate

# Skin Corrosion/Irritation

| Skin Corrosion/Irritation |         |          |
|---------------------------|---------|----------|
| Name                      | Species | Value    |
| Cyclohexanone             | Rabbit  | Irritant |

| Dipropylene glycol methyl ether acetate                              | Rabbit    | No significant irritation |
|----------------------------------------------------------------------|-----------|---------------------------|
| 1-Methoxy-2-propyl acetate                                           | Rabbit    | No significant irritation |
| Vinyl polymer                                                        | Professio | No significant irritation |
|                                                                      | nal       |                           |
|                                                                      | judgeme   |                           |
|                                                                      | nt        |                           |
| Xylene                                                               | Rabbit    | Mild irritant             |
| Organic pigment                                                      | Professio | No significant irritation |
|                                                                      | nal       |                           |
|                                                                      | judgeme   |                           |
|                                                                      | nt        |                           |
| Ethylbenzene                                                         | Rabbit    | Mild irritant             |
| 2,4-Dihydroxybenzophenone                                            | Rabbit    | No significant irritation |
| Nickel salts of naphthenic acids                                     | Professio | Minimal irritation        |
|                                                                      | nal       |                           |
|                                                                      | judgeme   |                           |
|                                                                      | nt        |                           |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                      | Rabbit    | No significant irritation |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1- | Rabbit    | No significant irritation |
| dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omegahydroxy-            |           |                           |
| Polymeric Benzotriazole                                              | Rabbit    | No significant irritation |
| 2,3-epoxypropyl neodecanoate                                         | Rabbit    | No significant irritation |
| Naphthenic acid                                                      | Rabbit    | Mild irritant             |
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate        | Rabbit    | Minimal irritation        |
| Zinc 2-ethylhexanoate                                                | Rabbit    | Mild irritant             |
| Calcium 2-ethylhexanoate                                             | Rabbit    | No significant irritation |
| Triphenyl phosphite                                                  | Rabbit    | Irritant                  |

**Serious Eye Damage/Irritation** 

| Name                                                                 | Species      | Value                     |
|----------------------------------------------------------------------|--------------|---------------------------|
|                                                                      |              |                           |
| Cyclohexanone                                                        | In vitro     | Corrosive                 |
|                                                                      | data         |                           |
| Dipropylene glycol methyl ether acetate                              | Rabbit       | No significant irritation |
| 1-Methoxy-2-propyl acetate                                           | Rabbit       | Mild irritant             |
| Vinyl polymer                                                        | Professio    | No significant irritation |
|                                                                      | nal          |                           |
|                                                                      | judgeme      |                           |
|                                                                      | nt           |                           |
| Xylene                                                               | Rabbit       | Mild irritant             |
| Organic pigment                                                      | Professio    | No significant irritation |
|                                                                      | nal          |                           |
|                                                                      | judgeme      |                           |
| Ethylbenzene                                                         | nt<br>Rabbit | Moderate irritant         |
| 2,4-Dihydroxybenzophenone                                            | Rabbit       | Severe irritant           |
| Nickel salts of naphthenic acids                                     | Professio    | Mild irritant             |
| Nicket saits of naphinenic acids                                     | nal          | Ivilia ilitalit           |
|                                                                      | judgeme      |                           |
|                                                                      | nt           |                           |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                      | Rabbit       | Corrosive                 |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1- | Rabbit       | No significant irritation |
| dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omegahydroxy-            |              |                           |
| Polymeric Benzotriazole                                              | Rabbit       | No significant irritation |
| 2,3-epoxypropyl neodecanoate                                         | Rabbit       | No significant irritation |
| Naphthenic acid                                                      | Rabbit       | Moderate irritant         |
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate        | Rabbit       | Mild irritant             |
| Zinc 2-ethylhexanoate                                                | Rabbit       | Severe irritant           |
| Calcium 2-ethylhexanoate                                             | Rabbit       | Corrosive                 |
| Triphenyl phosphite                                                  | Rabbit       | Moderate irritant         |

# **Skin Sensitization**

| Name          | Species | Value          |
|---------------|---------|----------------|
| Cyclohexanone | Guinea  | Not classified |
|               | pig     |                |

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| Dipropylene glycol methyl ether acetate                              | Guinea  | Not classified |
|----------------------------------------------------------------------|---------|----------------|
|                                                                      | pıg     |                |
| 1-Methoxy-2-propyl acetate                                           | Guinea  | Not classified |
|                                                                      | pig     |                |
| Ethylbenzene                                                         | Human   | Not classified |
| Nickel salts of naphthenic acids                                     | similar | Sensitizing    |
|                                                                      | compoun |                |
|                                                                      | ds      |                |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                      | Guinea  | Not classified |
|                                                                      | pig     |                |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1- | Guinea  | Sensitizing    |
| dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omegahydroxy-            | pig     |                |
| Polymeric Benzotriazole                                              | Guinea  | Sensitizing    |
|                                                                      | pig     |                |
| 2,3-epoxypropyl neodecanoate                                         | Guinea  | Sensitizing    |
|                                                                      | pig     |                |
| Naphthenic acid                                                      | Guinea  | Sensitizing    |
|                                                                      | pig     | _              |
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate        | Guinea  | Sensitizing    |
|                                                                      | pig     |                |
| Triphenyl phosphite                                                  | Mouse   | Sensitizing    |

# Photosensitization

| Name                                            | Species | Value           |
|-------------------------------------------------|---------|-----------------|
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate | Guinea  | Not sensitizing |
|                                                 | pig     |                 |

**Respiratory Sensitization** 

| Name                             | Species                           | Value       |
|----------------------------------|-----------------------------------|-------------|
| Nickel salts of naphthenic acids | Professio<br>nal<br>judgeme<br>nt | Sensitizing |

Germ Cell Mutagenicity

| Name                                                                                                                          | Route    | Value                                                                        |  |  |
|-------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------|--|--|
| Cyclohexanone                                                                                                                 | In vivo  | Not mutagenic                                                                |  |  |
| Cyclohexanone                                                                                                                 | In Vitro | Some positive data exist, but the data are not sufficient for classification |  |  |
| Dipropylene glycol methyl ether acetate                                                                                       | In Vitro | Not mutagenic                                                                |  |  |
| Dipropylene glycol methyl ether acetate                                                                                       | In vivo  | Not mutagenic                                                                |  |  |
| 1-Methoxy-2-propyl acetate                                                                                                    | In Vitro | Not mutagenic                                                                |  |  |
| Xylene                                                                                                                        | In Vitro | Not mutagenic                                                                |  |  |
| Xylene                                                                                                                        | In vivo  | Not mutagenic                                                                |  |  |
| Ethylbenzene                                                                                                                  | In vivo  | Not mutagenic                                                                |  |  |
| Ethylbenzene                                                                                                                  | In Vitro | Some positive data exist, but the data are not sufficient for classification |  |  |
| Nickel salts of naphthenic acids                                                                                              | In Vitro | Some positive data exist, but the data are not sufficient for classification |  |  |
| Nickel salts of naphthenic acids                                                                                              | In vivo  | Mutagenic                                                                    |  |  |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                                                                               | In Vitro | Not mutagenic                                                                |  |  |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omegahydroxy- | In Vitro | Not mutagenic                                                                |  |  |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omegahydroxy- | In vivo  | Not mutagenic                                                                |  |  |
| Polymeric Benzotriazole                                                                                                       | In Vitro | Not mutagenic                                                                |  |  |
| Polymeric Benzotriazole                                                                                                       | In vivo  | Not mutagenic                                                                |  |  |
| 2,3-epoxypropyl neodecanoate                                                                                                  | In Vitro | Some positive data exist, but the data are not sufficient for classification |  |  |
| 2,3-epoxypropyl neodecanoate                                                                                                  | In vivo  | Mutagenic                                                                    |  |  |
| Naphthenic acid                                                                                                               | In vivo  | Not mutagenic                                                                |  |  |

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| Naphthenic acid                                               | In Vitro | Some positive data exist, but the data are not sufficient for classification |
|---------------------------------------------------------------|----------|------------------------------------------------------------------------------|
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate | In vivo  | Some positive data exist, but the data are not sufficient for classification |
| Calcium 2-ethylhexanoate                                      | In Vitro | Not mutagenic                                                                |
| Triphenyl phosphite                                           | In Vitro | Not mutagenic                                                                |
| Triphenyl phosphite                                           | In vivo  | Not mutagenic                                                                |

Carcinogenicity

| Name                                                          | Route      | Species                       | Value                                                                        |
|---------------------------------------------------------------|------------|-------------------------------|------------------------------------------------------------------------------|
| Cyclohexanone                                                 | Ingestion  | Multiple<br>animal<br>species | Some positive data exist, but the data are not sufficient for classification |
| Xylene                                                        | Dermal     | Rat                           | Not carcinogenic                                                             |
| Xylene                                                        | Ingestion  | Multiple<br>animal<br>species | Not carcinogenic                                                             |
| Xylene                                                        | Inhalation | Human                         | Some positive data exist, but the data are not sufficient for classification |
| Ethylbenzene                                                  | Inhalation | Multiple<br>animal<br>species | Carcinogenic                                                                 |
| Nickel salts of naphthenic acids                              | Inhalation | similar<br>compoun<br>ds      | Carcinogenic                                                                 |
| (3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate | Dermal     | Mouse                         | Not carcinogenic                                                             |

# **Reproductive Toxicity**

Reproductive and/or Developmental Effects

| Name                       | Route      | Value                                  | Species                       | Test result              | Exposure<br>Duration         |
|----------------------------|------------|----------------------------------------|-------------------------------|--------------------------|------------------------------|
| Cyclohexanone              | Inhalation | Not classified for female reproduction | Rat                           | NOAEL 4<br>mg/l          | 2 generation                 |
| Cyclohexanone              | Inhalation | Not classified for male reproduction   | Rat                           | NOAEL 2<br>mg/l          | 2 generation                 |
| Cyclohexanone              | Ingestion  | Not classified for development         | Mouse                         | LOAEL 1,100<br>mg/kg/day | during<br>organogenesi<br>s  |
| Cyclohexanone              | Inhalation | Not classified for development         | Rat                           | NOAEL 2<br>mg/l          | 2 generation                 |
| 1-Methoxy-2-propyl acetate | Ingestion  | Not classified for female reproduction | Rat                           | NOAEL 1,000<br>mg/kg/day | premating & during gestation |
| 1-Methoxy-2-propyl acetate | Ingestion  | Not classified for male reproduction   | Rat                           | NOAEL 1,000<br>mg/kg/day | premating & during gestation |
| 1-Methoxy-2-propyl acetate | Ingestion  | Not classified for development         | Rat                           | NOAEL 1,000<br>mg/kg/day | premating & during gestation |
| 1-Methoxy-2-propyl acetate | Inhalation | Not classified for development         | Rat                           | NOAEL 21.6<br>mg/l       | during<br>organogenesi<br>s  |
| Xylene                     | Inhalation | Not classified for female reproduction | Human                         | NOAEL Not available      | occupational exposure        |
| Xylene                     | Ingestion  | Not classified for development         | Mouse                         | NOAEL Not available      | during<br>organogenesi<br>s  |
| Xylene                     | Inhalation | Not classified for development         | Multiple<br>animal<br>species | NOAEL Not<br>available   | during<br>gestation          |
| Ethylbenzene               | Inhalation | Not classified for development         | Rat                           | NOAEL 4.3<br>mg/l        | premating & during gestation |

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| Nickel salts of naphthenic acids                                                                                              | Ingestion | Toxic to development                   | similar<br>compoun<br>ds | NOAEL not available    | 2 generation             |
|-------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------|--------------------------|------------------------|--------------------------|
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                                                                               | Ingestion | Not classified for male reproduction   | Rat                      | NOAEL 430<br>mg/kg/day | 2 generation             |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                                                                               | Ingestion | Not classified for development         | Rat                      | NOAEL 130<br>mg/kg/day | 2 generation             |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                                                                               | Ingestion | Toxic to female reproduction           | Rat                      | NOAEL 130<br>mg/kg/day | 2 generation             |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omegahydroxy- | Ingestion | Not classified for female reproduction | Rat                      | NOAEL 100<br>mg/kg/day | premating into lactation |
| Poly(oxy-1,2-ethanediyl), .alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omegahydroxy- | Ingestion | Not classified for male reproduction   | Rat                      | NOAEL 100<br>mg/kg/day | 115 days                 |
| Poly(oxy-1,2-ethanediyl), alpha[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]omegahydroxy-  | Ingestion | Not classified for development         | Rat                      | NOAEL 2<br>mg/kg/day   | premating into lactation |
| Polymeric Benzotriazole                                                                                                       | Ingestion | Not classified for female reproduction | Rat                      | NOAEL 100<br>mg/kg/day | premating into lactation |
| Polymeric Benzotriazole                                                                                                       | Ingestion | Not classified for male reproduction   | Rat                      | NOAEL 100<br>mg/kg/day | 115 days                 |
| Polymeric Benzotriazole                                                                                                       | Ingestion | Not classified for development         | Rat                      | NOAEL 2<br>mg/kg/day   | premating into lactation |
| Naphthenic acid                                                                                                               | Ingestion | Not classified for female reproduction | Rat                      | NOAEL 900<br>mg/kg/day | premating into lactation |
| Naphthenic acid                                                                                                               | Ingestion | Not classified for male reproduction   | Rat                      | NOAEL 900<br>mg/kg/day | 28 days                  |
| Naphthenic acid                                                                                                               | Ingestion | Toxic to development                   | Rat                      | NOAEL 100<br>mg/kg/day | premating into lactation |
| (3',4'-Epoxycyclohexylmethyl) 3,4-<br>epoxycyclohexanecarboxylate                                                             | Ingestion | Not classified for development         | Rat                      | NOAEL 125<br>mg/kg/day | during<br>gestation      |
| Zinc 2-ethylhexanoate                                                                                                         | Ingestion | Not classified for female reproduction | similar<br>compoun<br>ds | NOAEL 800<br>mg/kg/day | 2 generation             |
| Zinc 2-ethylhexanoate                                                                                                         | Ingestion | Not classified for male reproduction   | similar<br>compoun<br>ds | NOAEL 800<br>mg/kg/day | 2 generation             |
| Zinc 2-ethylhexanoate                                                                                                         | Ingestion | Toxic to development                   | similar<br>compoun<br>ds | NOAEL 100<br>mg/kg/day | during<br>gestation      |
| Calcium 2-ethylhexanoate                                                                                                      | Ingestion | Not classified for female reproduction | similar<br>compoun<br>ds | NOAEL 800<br>mg/kg/day | 2 generation             |
| Calcium 2-ethylhexanoate                                                                                                      | Ingestion | Not classified for male reproduction   | similar<br>compoun<br>ds | NOAEL 800<br>mg/kg/day | 2 generation             |
| Calcium 2-ethylhexanoate                                                                                                      | Ingestion | Toxic to development                   | similar<br>compoun<br>ds | NOAEL 100<br>mg/kg/day | during<br>gestation      |
| Triphenyl phosphite                                                                                                           | Ingestion | Not classified for female reproduction | Rat                      | NOAEL 40<br>mg/kg/day  | premating into lactation |
| Triphenyl phosphite                                                                                                           | Ingestion | Not classified for male reproduction   | Rat                      | NOAEL 40<br>mg/kg/day  | 28 days                  |
| Triphenyl phosphite                                                                                                           | Ingestion | Not classified for development         | Rat                      | NOAEL 40<br>mg/kg/day  | during gestation         |

# Lactation

| Name   | Route                                                        | Species | Value                                          |
|--------|--------------------------------------------------------------|---------|------------------------------------------------|
| Xylene | Ingestion Mouse Not classified for effects on or via lactati |         | Not classified for effects on or via lactation |

# Target Organ(s)

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Specific Target Organ Toxicity - single exposure

| Name                                            | Route      | Target Organ(s)                      | Value                                                                        | Species                           | Test result            | Exposure<br>Duration |
|-------------------------------------------------|------------|--------------------------------------|------------------------------------------------------------------------------|-----------------------------------|------------------------|----------------------|
| Cyclohexanone                                   | Inhalation | central nervous<br>system depression | May cause drowsiness or dizziness                                            | Guinea<br>pig                     | LOAEL 16.1<br>mg/l     | 6 hours              |
| Cyclohexanone                                   | Inhalation | respiratory irritation               | Some positive data exist, but the data are not sufficient for classification | Human                             | NOAEL Not available    |                      |
| Cyclohexanone                                   | Ingestion  | central nervous<br>system depression | May cause drowsiness or dizziness                                            | Professio<br>nal<br>judgeme<br>nt | NOAEL Not available    |                      |
| 1-Methoxy-2-propyl acetate                      | Inhalation | respiratory irritation               | Some positive data exist, but the data are not sufficient for classification |                                   | NOAEL Not available    |                      |
| 1-Methoxy-2-propyl acetate                      | Ingestion  | central nervous<br>system depression | Some positive data exist, but the data are not sufficient for classification | Rat                               | NOAEL not available    |                      |
| Xylene                                          | Inhalation | auditory system                      | Causes damage to organs                                                      | Rat                               | LOAEL 6.3<br>mg/l      | 8 hours              |
| Xylene                                          | Inhalation | central nervous<br>system depression | May cause drowsiness or dizziness                                            | Human                             | NOAEL Not available    |                      |
| Xylene                                          | Inhalation | respiratory irritation               | Some positive data exist, but the data are not sufficient for classification | Human                             | NOAEL Not<br>available |                      |
| Xylene                                          | Inhalation | eyes                                 | Not classified                                                               | Rat                               | NOAEL 3.5<br>mg/l      | not available        |
| Xylene                                          | Inhalation | liver                                | Not classified                                                               | Multiple<br>animal<br>species     | NOAEL Not<br>available |                      |
| Xylene                                          | Ingestion  | central nervous<br>system depression | May cause drowsiness or dizziness                                            | Multiple<br>animal<br>species     | NOAEL Not<br>available |                      |
| Xylene                                          | Ingestion  | eyes                                 | Not classified                                                               | Rat                               | NOAEL 250<br>mg/kg     | not applicable       |
| Ethylbenzene                                    | Inhalation | central nervous<br>system depression | May cause drowsiness or dizziness                                            | Human                             | NOAEL Not<br>available |                      |
| Ethylbenzene                                    | Inhalation | respiratory irritation               | Some positive data exist, but the data are not sufficient for classification | Human<br>and<br>animal            | NOAEL Not<br>available |                      |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate | Dermal     | photoirritation                      | Not classified                                                               | Mouse                             | NOAEL not available    |                      |
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate | Inhalation | respiratory irritation               | Some positive data exist, but the data are not sufficient for classification | similar<br>health<br>hazards      | NOAEL not available    |                      |
| Naphthenic acid                                 | Inhalation | respiratory irritation               | Some positive data exist, but the data are not sufficient for classification | similar<br>health<br>hazards      | NOAEL Not<br>available |                      |
| Zinc 2-ethylhexanoate                           | Inhalation | respiratory irritation               | Some positive data exist, but the data are not sufficient for classification | similar<br>health<br>hazards      | NOAEL not available    |                      |
| Calcium 2-ethylhexanoate                        | Inhalation | respiratory irritation               | Some positive data exist, but the data are not sufficient for classification | similar<br>health<br>hazards      | NOAEL not available    |                      |

Specific Target Organ Toxicity - repeated exposure

| Name                                    | Route      | Target Organ(s)                                        | Value          | Species | Test result                 | Exposure<br>Duration |
|-----------------------------------------|------------|--------------------------------------------------------|----------------|---------|-----------------------------|----------------------|
| Cyclohexanone                           | Inhalation | liver   kidney and/or<br>bladder                       | Not classified | Rabbit  | NOAEL 0.76<br>mg/l          | 50 days              |
| Cyclohexanone                           | Ingestion  | liver                                                  | Not classified | Mouse   | NOAEL<br>4,800<br>mg/kg/day | 90 days              |
| Dipropylene glycol methyl ether acetate | Ingestion  | liver   heart  <br>endocrine system  <br>hematopoietic | Not classified | Rat     | NOAEL<br>1,000<br>mg/kg/day | 4 weeks              |

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|                            |            | system   kidney<br>and/or bladder                                                                                                                                      |                                                                              |                               |                             |           |
|----------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------------------|-----------------------------|-----------|
| 1-Methoxy-2-propyl acetate | Inhalation | kidney and/or<br>bladder                                                                                                                                               | Not classified                                                               | Rat                           | NOAEL 16.2<br>mg/l          | 9 days    |
| 1-Methoxy-2-propyl         | Inhalation | olfactory system                                                                                                                                                       | Not classified                                                               | Mouse                         | LOAEL 1.62<br>mg/l          | 9 days    |
| 1-Methoxy-2-propyl acetate | Inhalation | blood                                                                                                                                                                  | Not classified                                                               | Multiple<br>animal<br>species | NOAEL 16.2<br>mg/l          | 9 days    |
| l-Methoxy-2-propyl acetate | Ingestion  | endocrine system                                                                                                                                                       | Not classified                                                               | Rat                           | NOAEL<br>1,000<br>mg/kg/day | 44 days   |
| Xylene                     | Inhalation | nervous system                                                                                                                                                         | Causes damage to organs through prolonged or repeated exposure               | Rat                           | LOAEL 0.4<br>mg/l           | 4 weeks   |
| Xylene                     | Inhalation | auditory system                                                                                                                                                        | May cause damage to organs<br>though prolonged or repeated<br>exposure       | Rat                           | LOAEL 7.8<br>mg/l           | 5 days    |
| Xylene                     | Inhalation | liver                                                                                                                                                                  | Not classified                                                               | Multiple<br>animal<br>species | NOAEL Not<br>available      |           |
| Xylene                     | Inhalation | heart   endocrine<br>system  <br>gastrointestinal tract<br>  hematopoietic<br>system   muscles  <br>kidney and/or<br>bladder   respiratory<br>system                   | Not classified                                                               | Multiple<br>animal<br>species | NOAEL 3.5<br>mg/l           | 13 weeks  |
| Xylene                     | Ingestion  | auditory system                                                                                                                                                        | Not classified                                                               | Rat                           | NOAEL 900<br>mg/kg/day      | 2 weeks   |
| Xylene                     | Ingestion  | kidney and/or<br>bladder                                                                                                                                               | Not classified                                                               | Rat                           | NOAEL<br>1,500<br>mg/kg/day | 90 days   |
| Xylene                     | Ingestion  | liver                                                                                                                                                                  | Not classified                                                               | Multiple<br>animal<br>species | NOAEL Not<br>available      |           |
| Xylene                     | Ingestion  | heart   skin  <br>endocrine system  <br>bone, teeth, nails,<br>and/or hair  <br>hematopoietic<br>system   immune<br>system   nervous<br>system   respiratory<br>system | Not classified                                                               | Mouse                         | NOAEL<br>1,000<br>mg/kg/day | 103 weeks |
| Ethylbenzene               | Inhalation | kidney and/or<br>bladder                                                                                                                                               | Some positive data exist, but the data are not sufficient for classification | Rat                           | NOAEL 1.1<br>mg/l           | 2 years   |
| Ethylbenzene               | Inhalation | liver                                                                                                                                                                  | Some positive data exist, but the data are not sufficient for classification | Mouse                         | NOAEL 1.1<br>mg/l           | 103 weeks |
| Ethylbenzene               | Inhalation | hematopoietic<br>system                                                                                                                                                | Not classified                                                               | Rat                           | NOAEL 3.4<br>mg/l           | 28 days   |
| Ethylbenzene               | Inhalation | auditory system                                                                                                                                                        | Not classified                                                               | Rat                           | NOAEL 2.4<br>mg/l           | 5 days    |
| Ethylbenzene               | Inhalation | endocrine system                                                                                                                                                       | Not classified                                                               | Mouse                         | NOAEL 3.3<br>mg/l           | 103 weeks |
| Ethylbenzene               | Inhalation | gastrointestinal tract                                                                                                                                                 | Not classified                                                               | Rat                           | NOAEL 3.3<br>mg/l           | 2 years   |
| Ethylbenzene               | Inhalation | bone, teeth, nails,<br>and/or hair  <br>muscles                                                                                                                        | Not classified                                                               | Multiple<br>animal<br>species | NOAEL 4.2<br>mg/l           | 90 days   |
| Ethylbenzene               | Inhalation | heart   immune<br>system   respiratory<br>system                                                                                                                       | Not classified                                                               | Multiple<br>animal<br>species | NOAEL 3.3<br>mg/l           | 2 years   |
| Ethylbenzene               | Ingestion  | liver   kidney and/or                                                                                                                                                  | Not classified                                                               | Rat                           | NOAEL 680                   | 6 months  |

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| acids                                                                                                                                                 |           |                                                                                                                                                                                                                                                                                | prolonged or repeated exposure                                               | compoun<br>ds | available              |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------|------------------------|---------|
| Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate                                                                                                       | Ingestion | heart   skin   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system                                     | Not classified                                                               | Rat           | NOAEL 261<br>mg/kg/day | 90 days |
| Poly(oxy-1,2-<br>ethanediyl), .alpha[3-[3-<br>(2H-benzotriazol-2-yl)-5-<br>(1,1-dimethylethyl)-4-<br>hydroxyphenyl]-1-<br>oxopropyl]omega<br>hydroxy- | Ingestion | liver   endocrine<br>system  <br>hematopoietic<br>system   eyes  <br>kidney and/or<br>bladder   respiratory<br>system                                                                                                                                                          | Not classified                                                               | Rat           | NOAEL 50<br>mg/kg/day  | 90 days |
| Polymeric Benzotriazole                                                                                                                               | Ingestion | liver   endocrine<br>system  <br>hematopoietic<br>system   eyes  <br>kidney and/or<br>bladder   respiratory<br>system                                                                                                                                                          | Not classified                                                               | Rat           | NOAEL 50<br>mg/kg/day  | 90 days |
| 2,3-epoxypropyl<br>neodecanoate                                                                                                                       | Ingestion | hematopoietic<br>system   liver                                                                                                                                                                                                                                                | Not classified                                                               | Rat           | NOAEL 400<br>mg/kg/day | 5 weeks |
| 2,3-epoxypropyl neodecanoate                                                                                                                          | Ingestion | kidney and/or<br>bladder                                                                                                                                                                                                                                                       | Not classified                                                               | Rat           | NOAEL 40<br>mg/kg/day  | 5 weeks |
| Naphthenic acid                                                                                                                                       | Ingestion | endocrine system  <br>liver   heart   skin  <br>gastrointestinal tract<br>  bone, teeth, nails,<br>and/or hair  <br>hematopoietic<br>system   immune<br>system   muscles  <br>nervous system  <br>eyes   kidney and/or<br>bladder   respiratory<br>system   vascular<br>system | Not classified                                                               | Rat           | NOAEL 881<br>mg/kg/day | 90 days |
| (3',4'-<br>Epoxycyclohexylmethyl)<br>3,4-<br>epoxycyclohexanecarboxyl<br>ate                                                                          | Ingestion | olfactory system                                                                                                                                                                                                                                                               | Some positive data exist, but the data are not sufficient for classification | Rat           | NOAEL 50<br>mg/kg/day  | 91 days |
| (3',4'-<br>Epoxycyclohexylmethyl)<br>3,4-<br>epoxycyclohexanecarboxyl<br>ate                                                                          | Ingestion | liver   kidney and/or<br>bladder   heart   skin<br>  endocrine system  <br>gastrointestinal tract<br>  hematopoietic<br>system   immune<br>system   nervous<br>system   eyes  <br>respiratory system  <br>vascular system                                                      | Not classified                                                               | Rat           | NOAEL 500<br>mg/kg/day | 91 days |
| Triphenyl phosphite                                                                                                                                   | Ingestion | nervous system                                                                                                                                                                                                                                                                 | May cause damage to organs though prolonged or repeated exposure             | Rat           | NOAEL 15<br>mg/kg/day  | 28 days |
| Triphenyl phosphite                                                                                                                                   | Ingestion | hematopoietic<br>system   kidney<br>and/or bladder                                                                                                                                                                                                                             | Not classified                                                               | Rat           | NOAEL 40<br>mg/kg/day  | 28 days |

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#### **Aspiration Hazard**

| Name         | Value             |
|--------------|-------------------|
| Xylene       | Aspiration hazard |
| Ethylbenzene | Aspiration hazard |

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

# **SECTION 12: Ecological information**

No data available.

# **SECTION 13: Disposal considerations**

# 13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

# **SECTION 14: Transport Information**

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

# **SECTION 15: Regulatory information**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

### Global inventory status

Contact 3M for more information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

# **SECTION 16: Other information**

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Health: 3 Flammability: 2 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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