



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Process Color 1130-12 AQM Red

Product Identification Numbers

42-0021-6001-0, 75-0301-1173-8

1.2. Recommended use and restrictions on use

Recommended use

Ink

1.3. Supplier's details

| | |
|----------------------|---|
| MANUFACTURER: | 3M |
| DIVISION: | Transportation Safety Division |
| ADDRESS: | 3M Center, St. Paul, MN 55144-1000, USA |
| Telephone: | 1-888-3M HELPS (1-888-364-3577) |

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Flammable Liquid: Category 3.
Skin Corrosion/Irritation: Category 2.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 2.
Carcinogenicity: Category 1A.
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 | Exclamation mark | Health Hazard |

Pictograms**Hazard Statements**

Flammable liquid and vapor.

Causes skin irritation.

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

Suspected of damaging 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/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash 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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

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 container tightly closed.
Keep cool.
Store locked up.

Disposal:

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

3% of the mixture consists of ingredients of unknown acute oral toxicity.

3% of the mixture consists of ingredients of unknown acute dermal toxicity.

22% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|---------------|--------------------------|
| Long oil alkyd resin 292077 | Trade Secret* | 30 - 60 |
| Hydrotreated light petroleum distillates | 64742-47-8 | 10 - 30 Trade Secret * |
| Stoddard solvent | 8052-41-3 | 10 - 30 Trade Secret * |
| Acrylic polymer 16022 | Unknown | 3 - 7 |
| Heavy aromatic solvent naphtha (petroleum) | 64742-94-5 | 1 - 5 Trade Secret * |
| Medium aliphatic solvent naphtha | 64742-88-7 | 1 - 5 Trade Secret * |
| Pine oil | 8002-09-3 | 1 - 5 Trade Secret * |
| Xylene | 1330-20-7 | 1 - 5 Trade Secret * |
| Organic pigment (New Jersey Trade Secret # 04499600-5232P) | Trade Secret* | 1 - 5 |
| Acrylic polymer 36568 | Unknown | 1 - 5 |
| Ethylbenzene | 100-41-4 | 0.1 - 1.0 Trade Secret * |
| Nickel salts of naphthenic acids | 61788-71-4 | 0.1 - 1.0 Trade Secret * |
| Naphthalene | 91-20-3 | < 0.4 Trade Secret * |
| Butyl benzyl phthalate | 85-68-7 | < 0.2 Trade Secret * |
| Methyl ethyl ketone oxime | 96-29-7 | < 0.2 Trade Secret * |

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

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.

Skin Contact:

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

Eye 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

See Section 11.1. Information on toxicological effects.

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

Substance

Carbon monoxide

Carbon dioxide

Condition

During Combustion

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.

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 vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors 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. An appropriate aqueous film forming foam (AFFF) is recommended. 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. 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/vapors/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 | Additional Comments |
|---|------------|--------|--|------------------------------------|
| Ethylbenzene | 100-41-4 | OSHA | TWA:435 mg/m3(100 ppm) | |
| Ethylbenzene | 100-41-4 | ACGIH | TWA:20 ppm | A3: Confirmed animal carcin. |
| Xylene | 1330-20-7 | ACGIH | TWA:100 ppm;STEL:150 ppm | A4: Not class. as human carcin |
| Xylene | 1330-20-7 | OSHA | TWA:435 mg/m3(100 ppm) | |
| NICKEL, SOLUBLE COMPOUNDS | 61788-71-4 | OSHA | TWA(as Ni):1 mg/m3 | |
| JET FUELS (NON-AEROSOL), AS TOTAL HYDROCARBON VAPOR | 64742-47-8 | ACGIH | TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3 | A3: Confirmed animal carcin., SKIN |
| Kerosine (petroleum) | 64742-47-8 | ACGIH | TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3 | A3: Confirmed animal carcin., SKIN |
| Kerosine (petroleum) | 64742-88-7 | ACGIH | TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3 | A3: Confirmed animal carcin., SKIN |
| Kerosine (petroleum) | 64742-94-5 | ACGIH | TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3 | A3: Confirmed animal carcin., SKIN |
| Stoddard solvent | 8052-41-3 | OSHA | TWA:2900 mg/m3(500 ppm) | |
| Stoddard solvent | 8052-41-3 | ACGIH | TWA:100 ppm | |
| Naphthalene | 91-20-3 | ACGIH | TWA:10 ppm | A3: Confirmed animal carcin., SKIN |
| Naphthalene | 91-20-3 | OSHA | TWA:50 mg/m3(10 ppm) | |
| Methyl ethyl ketone oxime | 96-29-7 | AIHA | TWA:36 mg/m3(10 ppm) | Dermal Sensitizer |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

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/vapors/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**

None required.

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 vapors 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**

| | |
|--|---|
| General Physical Form: | Liquid |
| Odor, Color, Grade: | solvent odor, red, liquid |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | >=232 °F |
| Flash Point | 103.00 °F [<i>Test Method</i> :Tagliabue Closed Cup] |
| Evaporation rate | <=1 [<i>Ref Std</i> :BUOAC=1] |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>No Data Available</i> |
| Flammable Limits(UEL) | <i>No Data Available</i> |
| Vapor Pressure | <=22 mmHg [@ 68 °F] |
| Vapor Density | >=1.0 [<i>Ref Std</i> :AIR=1] |
| Density | Approximately 1 g/ml |
| Specific Gravity | Approximately 1 [<i>Ref Std</i> :WATER=1] |
| Solubility in Water | Negligible |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | 3,000 - 4,000 centipoise |

| | |
|---|---|
| Volatile Organic Compounds | <=400 g/l [<i>Details: AS PACKAGED</i>] |
| Percent volatile | 25 - 45 % weight |
| VOC Less H2O & Exempt Solvents | <i>Not Applicable</i> |

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

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| 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:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

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.

Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:

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 |
|---------------------|----------------|--------------------------------|---|
| NI CMPDS NOT ALLOYS | 61788-71-4 | Known 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 |
| Naphthalene | 91-20-3 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |
| Naphthalene | 91-20-3 | Anticipated human carcinogen | National Toxicology Program Carcinogens |

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 >5,000 mg/kg |
| Overall product | Inhalation-Vapor(4 hr) | | No data available; calculated ATE >50 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Stoddard solvent | Inhalation-Vapor | | LC50 estimated to be 20 - 50 mg/l |
| Stoddard solvent | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Stoddard solvent | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Hydrotreated light petroleum distillates | Dermal | Rabbit | LD50 > 3,160 mg/kg |
| Hydrotreated light petroleum distillates | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 3 mg/l |
| Hydrotreated light petroleum distillates | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Xylene | Dermal | Rabbit | LD50 > 4,200 mg/kg |
| Xylene | Inhalation-Vapor (4 hours) | Rat | LC50 29 mg/l |
| Xylene | Ingestion | Rat | LD50 3,523 mg/kg |
| Organic pigment (New Jersey Trade Secret # 04499600-5232P) | Dermal | | LD50 estimated to be > 5,000 mg/kg |

| | | | |
|--|--------------------------------|--------|--|
| Organic pigment (New Jersey Trade Secret # 04499600-5232P) | Inhalation-Dust/Mist | | LC50 estimated to be > 12.5 mg/l |
| Organic pigment (New Jersey Trade Secret # 04499600-5232P) | Ingestion | | LD50 estimated to be > 5,000 mg/kg |
| Heavy aromatic solvent naphtha (petroleum) | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| Heavy aromatic solvent naphtha (petroleum) | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Medium aliphatic solvent naphtha | Inhalation-Vapor | | LC50 estimated to be 20 - 50 mg/l |
| Medium aliphatic solvent naphtha | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Medium aliphatic solvent naphtha | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Pine oil | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| Pine oil | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Ethylbenzene | Dermal | Rabbit | LD50 15,433 mg/kg |
| Ethylbenzene | Inhalation-Vapor (4 hours) | Rat | LC50 17.4 mg/l |
| Ethylbenzene | Ingestion | Rat | LD50 4,769 mg/kg |
| Nickel salts of naphthenic acids | Ingestion | | LD50 estimated to be 50 - 300 mg/kg |
| Naphthalene | Dermal | Human | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Naphthalene | Inhalation-Vapor | Human | LC50 estimated to be 20 - 50 mg/l |
| Naphthalene | Ingestion | Human | LD50 estimated to be 300 - 2,000 mg/kg |
| Butyl benzyl phthalate | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| Butyl benzyl phthalate | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 6.7 mg/l |
| Butyl benzyl phthalate | Ingestion | Rat | LD50 2,330 mg/kg |
| Methyl ethyl ketone oxime | Dermal | Rabbit | LD50 > 1,000 mg/kg |
| Methyl ethyl ketone oxime | Inhalation-Vapor | Rat | LC50 estimated to be 20 - 50 mg/l |
| Methyl ethyl ketone oxime | Ingestion | Rat | LD50 2,300 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|------------------------|---------------------------|
| Stoddard solvent | Rabbit | Irritant |
| Hydrotreated light petroleum distillates | Rabbit | Mild irritant |
| Xylene | Rabbit | Mild irritant |
| Organic pigment (New Jersey Trade Secret # 04499600-5232P) | Professional judgement | No significant irritation |
| Heavy aromatic solvent naphtha (petroleum) | Rabbit | Irritant |
| Medium aliphatic solvent naphtha | Rabbit | Irritant |
| Pine oil | Not available | Irritant |
| Ethylbenzene | Rabbit | Mild irritant |
| Nickel salts of naphthenic acids | Professional judgement | Minimal irritation |
| Naphthalene | Rabbit | Minimal irritation |
| Butyl benzyl phthalate | Rabbit | No significant irritation |
| Methyl ethyl ketone oxime | Rabbit | Minimal irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|------------------------|---------------------------|
| Stoddard solvent | Rabbit | No significant irritation |
| Hydrotreated light petroleum distillates | Rabbit | Mild irritant |
| Xylene | Rabbit | Mild irritant |
| Organic pigment (New Jersey Trade Secret # 04499600-5232P) | Professional judgement | No significant irritation |

| | | |
|--|------------------------|---------------------------|
| | nt | |
| Heavy aromatic solvent naphtha (petroleum) | Rabbit | Mild irritant |
| Medium aliphatic solvent naphtha | Rabbit | No significant irritation |
| Pine oil | Rabbit | Severe irritant |
| Ethylbenzene | Rabbit | Moderate irritant |
| Nickel salts of naphthenic acids | Professional judgement | Mild irritant |
| Naphthalene | Rabbit | No significant irritation |
| Butyl benzyl phthalate | Rabbit | Mild irritant |
| Methyl ethyl ketone oxime | Rabbit | Corrosive |

Skin Sensitization

| Name | Species | Value |
|--|-------------------|----------------|
| Stoddard solvent | Guinea pig | Not classified |
| Hydrotreated light petroleum distillates | Guinea pig | Not classified |
| Heavy aromatic solvent naphtha (petroleum) | Guinea pig | Not classified |
| Medium aliphatic solvent naphtha | Guinea pig | Not classified |
| Pine oil | Guinea pig | Not classified |
| Ethylbenzene | Human | Not classified |
| Nickel salts of naphthenic acids | similar compounds | Sensitizing |
| Butyl benzyl phthalate | Human and animal | Not classified |
| Methyl ethyl ketone oxime | Guinea pig | Sensitizing |

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

| Name | Route | Value |
|--|----------|--|
| Stoddard solvent | In vivo | Not mutagenic |
| Stoddard solvent | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Hydrotreated light petroleum distillates | In Vitro | Not mutagenic |
| Xylene | In Vitro | Not mutagenic |
| Xylene | In vivo | Not mutagenic |
| Medium aliphatic solvent naphtha | In vivo | Not mutagenic |
| Medium aliphatic solvent naphtha | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Pine oil | In Vitro | Not mutagenic |
| Pine oil | In vivo | Not mutagenic |
| Ethylbenzene | In vivo | Not mutagenic |
| Ethylbenzene | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Butyl benzyl phthalate | In Vitro | Not mutagenic |
| Butyl benzyl phthalate | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Methyl ethyl ketone oxime | In Vitro | Not mutagenic |
| Methyl ethyl ketone oxime | In vivo | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|------------------|--------|---------|--|
| Stoddard solvent | Dermal | Mouse | Some positive data exist, but the data are not |

| | | | |
|--|---------------|-------------------------|--|
| | | | sufficient for classification |
| Stoddard solvent | Inhalation | Human and animal | Some positive data exist, but the data are not sufficient for classification |
| Hydrotreated light petroleum distillates | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Xylene | Dermal | Rat | Not carcinogenic |
| Xylene | Ingestion | Multiple animal species | Not carcinogenic |
| Xylene | Inhalation | Human | Some positive data exist, but the data are not sufficient for classification |
| Heavy aromatic solvent naphtha (petroleum) | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Medium aliphatic solvent naphtha | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Medium aliphatic solvent naphtha | Inhalation | Human and animal | Some positive data exist, but the data are not sufficient for classification |
| Ethylbenzene | Inhalation | Multiple animal species | Carcinogenic |
| Nickel salts of naphthenic acids | Not Specified | similar compounds | Carcinogenic |
| Naphthalene | Inhalation | Multiple animal species | Carcinogenic |
| Butyl benzyl phthalate | Ingestion | Rat | Some positive data exist, but the data are not sufficient for classification |
| Methyl ethyl ketone oxime | Inhalation | Multiple animal species | Carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|----------------------------------|------------|--|-------------------------|---------------------|-------------------------------|
| Stoddard solvent | Inhalation | Not classified for development | Rat | NOAEL 2.4 mg/l | during organogenesis |
| Xylene | Inhalation | Not classified for female reproduction | Human | NOAEL Not available | occupational exposure |
| Xylene | Ingestion | Not classified for development | Mouse | NOAEL Not available | during organogenesis |
| Xylene | Inhalation | Not classified for development | Multiple animal species | NOAEL Not available | during gestation |
| Medium aliphatic solvent naphtha | Inhalation | Not classified for development | Rat | NOAEL 2.4 mg/l | during organogenesis |
| Pine oil | Ingestion | Not classified for development | Rat | NOAEL 600 mg/kg/day | during gestation |
| Ethylbenzene | Inhalation | Not classified for development | Rat | NOAEL 4.3 mg/l | prematings & during gestation |
| Butyl benzyl phthalate | Ingestion | Toxic to female reproduction | Rat | NOAEL 250 mg/kg/day | 2 generation |
| Butyl benzyl phthalate | Ingestion | Toxic to male reproduction | Rat | NOAEL 250 mg/kg/day | 2 generation |
| Butyl benzyl phthalate | Ingestion | Toxic to development | Rat | NOAEL 50 mg/kg/day | 2 generation |
| Methyl ethyl ketone oxime | Ingestion | Not classified for female reproduction | Rat | NOAEL 200 mg/kg/day | 2 generation |

| | | | | | |
|---------------------------|-----------|--------------------------------------|-----|---------------------|----------------------|
| Methyl ethyl ketone oxime | Ingestion | Not classified for male reproduction | Rat | NOAEL 200 mg/kg/day | 2 generation |
| Methyl ethyl ketone oxime | Ingestion | Not classified for development | Rat | NOAEL 600 mg/kg/day | during organogenesis |

Lactation

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|--|------------|-----------------------------------|--|-------------------------|---------------------|-------------------|
| Stoddard solvent | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| Stoddard solvent | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| Stoddard solvent | Inhalation | nervous system | Not classified | Dog | NOAEL 6.5 mg/l | 4 hours |
| Stoddard solvent | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Professional judgement | NOAEL Not available | |
| Hydrotreated light petroleum distillates | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| Hydrotreated light petroleum distillates | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| Hydrotreated light petroleum distillates | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Professional judgement | NOAEL Not available | |
| Xylene | Inhalation | auditory system | Causes damage to organs | Rat | LOAEL 6.3 mg/l | 8 hours |
| Xylene | Inhalation | central nervous 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 available | |
| Xylene | Inhalation | eyes | Not classified | Rat | NOAEL 3.5 mg/l | not available |
| Xylene | Inhalation | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | eyes | Not classified | Rat | NOAEL 250 mg/kg | not applicable |
| Heavy aromatic solvent naphtha (petroleum) | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| Heavy aromatic solvent naphtha (petroleum) | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Professional judgement | NOAEL Not available | |
| Heavy aromatic solvent naphtha (petroleum) | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Professional judgement | NOAEL Not available | |

| | | | | | | |
|----------------------------------|------------|-----------------------------------|--|------------------------|---------------------|------------------------|
| Medium aliphatic solvent naphtha | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| Medium aliphatic solvent naphtha | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| Medium aliphatic solvent naphtha | Inhalation | nervous system | Not classified | Dog | NOAEL 6.5 mg/l | 4 hours |
| Medium aliphatic solvent naphtha | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Professional judgement | NOAEL Not available | |
| Pine oil | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Not available | NOAEL Not available | |
| Pine oil | Ingestion | central nervous system depression | Not classified | | NOAEL Not available | |
| Ethylbenzene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Ethylbenzene | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human and animal | NOAEL Not available | |
| Ethylbenzene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Professional judgement | NOAEL Not available | |
| Naphthalene | Ingestion | blood | Causes damage to organs | Human | NOAEL Not available | poisoning and/or abuse |
| Methyl ethyl ketone oxime | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Methyl ethyl ketone oxime | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Rat | NOAEL 100 mg/kg | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|------------------|------------|--|---|-------------------------|---------------------|-------------------|
| Stoddard solvent | Inhalation | nervous system | Not classified | Rat | LOAEL 4.6 mg/l | 6 months |
| Stoddard solvent | Inhalation | kidney and/or bladder | Not classified | Rat | LOAEL 1.9 mg/l | 13 weeks |
| Stoddard solvent | Inhalation | respiratory system | Not classified | Multiple animal species | NOAEL 0.6 mg/l | 90 days |
| Stoddard solvent | Inhalation | bone, teeth, nails, and/or hair blood liver muscles | Not classified | Rat | NOAEL 5.6 mg/l | 12 weeks |
| Stoddard solvent | Inhalation | heart | Not classified | Multiple animal species | NOAEL 1.3 mg/l | 90 days |
| Xylene | Inhalation | nervous system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.4 mg/l | 4 weeks |
| Xylene | Inhalation | auditory system | May cause damage to organs through prolonged or repeated exposure | Rat | LOAEL 7.8 mg/l | 5 days |
| Xylene | Inhalation | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Inhalation | heart endocrine system hematopoietic system muscles kidney and/or bladder respiratory system | Not classified | Multiple animal species | NOAEL 3.5 mg/l | 13 weeks |
| Xylene | Ingestion | auditory system | Not classified | Rat | NOAEL 900 mg/kg/day | 2 weeks |

| | | | | | | |
|----------------------------------|------------|--|--|-------------------------|-----------------------|------------------------|
| Xylene | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 1,500 mg/kg/day | 90 days |
| Xylene | Ingestion | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system nervous system respiratory system | Not classified | Mouse | NOAEL 1,000 mg/kg/day | 103 weeks |
| Medium aliphatic solvent naphtha | Inhalation | nervous system | Not classified | Rat | LOAEL 4.6 mg/l | 6 months |
| Medium aliphatic solvent naphtha | Inhalation | kidney and/or bladder | Not classified | Rat | LOAEL 1.9 mg/l | 13 weeks |
| Medium aliphatic solvent naphtha | Inhalation | respiratory system | Not classified | Multiple animal species | NOAEL 0.6 mg/l | 90 days |
| Medium aliphatic solvent naphtha | Inhalation | bone, teeth, nails, and/or hair blood liver muscles | Not classified | Rat | NOAEL 5.6 mg/l | 12 weeks |
| Medium aliphatic solvent naphtha | Inhalation | heart | Not classified | Multiple animal species | NOAEL 1.3 mg/l | 90 days |
| Ethylbenzene | Inhalation | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1.1 mg/l | 2 years |
| Ethylbenzene | Inhalation | liver | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 1.1 mg/l | 103 weeks |
| Ethylbenzene | Inhalation | hematopoietic system | Not classified | Rat | NOAEL 3.4 mg/l | 28 days |
| Ethylbenzene | Inhalation | auditory system | Not classified | Rat | NOAEL 2.4 mg/l | 5 days |
| Ethylbenzene | Inhalation | endocrine system | Not classified | Mouse | NOAEL 3.3 mg/l | 103 weeks |
| Ethylbenzene | Inhalation | bone, teeth, nails, and/or hair muscles | Not classified | Multiple animal species | NOAEL 4.2 mg/l | 90 days |
| Ethylbenzene | Inhalation | heart immune system respiratory system | Not classified | Multiple animal species | NOAEL 3.3 mg/l | 2 years |
| Ethylbenzene | Ingestion | liver kidney and/or bladder | Not classified | Rat | NOAEL 680 mg/kg/day | 6 months |
| Naphthalene | Dermal | blood | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | poisoning and/or abuse |
| Naphthalene | Dermal | eyes | Not classified | Human | NOAEL Not available | occupational exposure |
| Naphthalene | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.01 mg/l | 13 weeks |
| Naphthalene | Inhalation | blood | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | poisoning and/or abuse |
| Naphthalene | Inhalation | eyes | Not classified | Human | NOAEL Not available | occupational exposure |
| Naphthalene | Ingestion | blood | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | poisoning and/or abuse |
| Naphthalene | Ingestion | eyes | May cause damage to organs though prolonged or repeated exposure | Rabbit | LOAEL 500 mg/kg/day | 15 days |
| Butyl benzyl phthalate | Inhalation | liver kidney and/or bladder | Not classified | Rat | NOAEL 0.789 mg/l | 90 days |
| Butyl benzyl phthalate | Ingestion | endocrine system | Some positive data exist, but the data are not sufficient for | Rat | NOAEL 240 mg/kg/day | 2 years |

| | | | classification | | | |
|---------------------------|------------|--|--|-------|---------------------|---------|
| Butyl benzyl phthalate | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 960 mg/kg/day | 90 days |
| Butyl benzyl phthalate | Ingestion | blood | Not classified | Rat | NOAEL 500 mg/kg/day | 2 years |
| Butyl benzyl phthalate | Ingestion | liver | Not classified | Rat | NOAEL 381 mg/kg/day | 90 days |
| Methyl ethyl ketone oxime | Inhalation | hematopoietic system | May cause damage to organs though prolonged or repeated exposure | Rat | NOAEL 0.36 mg/l | 28 days |
| Methyl ethyl ketone oxime | Inhalation | respiratory system | May cause damage to organs though prolonged or repeated exposure | Mouse | NOAEL 0.01 mg/l | 90 days |
| Methyl ethyl ketone oxime | Inhalation | liver | Not classified | Rat | NOAEL 1.44 mg/l | 28 days |
| Methyl ethyl ketone oxime | Ingestion | blood | May cause damage to organs though prolonged or repeated exposure | Rat | NOAEL 25 mg/kg/day | 90 days |
| Methyl ethyl ketone oxime | Ingestion | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 100 mg/kg/day | 90 days |
| Methyl ethyl ketone oxime | Ingestion | nervous system | Not classified | Rat | NOAEL 400 mg/kg/day | 90 days |
| Methyl ethyl ketone oxime | Ingestion | liver kidney and/or bladder heart endocrine system bone, teeth, nails, and/or hair immune system | Not classified | Rat | NOAEL 335 mg/kg/day | 90 days |

Aspiration Hazard

| Name | Value |
|--|-------------------|
| Stoddard solvent | Aspiration hazard |
| Hydrotreated light petroleum distillates | Aspiration hazard |
| Xylene | Aspiration hazard |
| Heavy aromatic solvent naphtha (petroleum) | Aspiration hazard |
| Medium aliphatic solvent naphtha | 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

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Incinerate in a permitted waste incineration 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.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

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. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

Health Hazards

Carcinogenicity

Reproductive toxicity

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

| <u>Ingredient</u> | <u>C.A.S. No</u> | <u>% by Wt</u> |
|---|------------------|------------------------|
| Xylene | 1330-20-7 | Trade Secret 1 - 5 |
| Ethylbenzene | 100-41-4 | Trade Secret 0.1 - 1.0 |
| Nickel salts of naphthenic acids (NICKEL COMPOUNDS) | 61788-71-4 | 0.1 - 1.0 |
| Naphthalene | 91-20-3 | Trade Secret < 0.4 |

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 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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