



## Safety Data Sheet

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|------------------------|------------|-------------------------|------------|
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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™ Screen Printing UV Ink Series 9849 Lemon Yellow

#### Product Identification Numbers

75-3470-6909-0

#### 1.2. Recommended use and restrictions on use

##### Intended Use

Ink

##### Specific Use

Screen Printing Ink

##### Restrictions on use

Not applicable

#### 1.3. Supplier's details

|                   |  |
|-------------------|--|
| <b>Company:</b>   | 3M Canada Company  |
| <b>Division:</b>  | Commercial Solutions Division  |
| <b>Address:</b>   | 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1 |
| <b>Telephone:</b> | (800) 364-3577   |
| <b>Website:</b>   | 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

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1A.

Reproductive Toxicity: Category 1B.

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

**2.2. Label elements****Signal word**

Danger

**Symbols**

Exclamation mark | Health Hazard |

**Pictograms****Hazard statements**

Causes serious eye irritation. May cause an allergic skin reaction. May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure: respiratory system |

**Precautionary statements****Prevention:**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. 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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF exposed or concerned: Get medical advice/attention.

**Storage:**

Store locked up.

**Disposal:**

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

**2.3. Other hazards**

None known.

11% of the mixture consists of ingredients of unknown acute oral toxicity.

27% of the mixture consists of ingredients of unknown acute dermal toxicity.

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

This material is a mixture.

| <b>Ingredient</b>      | <b>C.A.S. No.</b> | <b>% by Wt</b>         | <b>Common Name</b>                          |
|------------------------|-------------------|------------------------|---|
| PHENOXY ETHYL ACRYLATE | 48145-04-6        | 30 - 40 Trade Secret * | 2-Propenoic acid, 2-phenoxyethyl ester      |
| BISMUTH VANADATE       | 14059-33-7        | 10 - 20                | Bismuth vanadium oxide (BiVO <sub>4</sub> ) |
| METHACRYLATE POLYMER   | Trade Secret      | 10 - 20                | Not Applicable                              |

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|   |              |                          |  |
|---|--------------|--------------------------|--|
| VINYLCAPROLACTAM  | 2235-00-9    | 10 - 20 Trade Secret *   | 2H-Azepin-2-one, 1-ethenylhexahydro-; Vinylcaprolactam   |
| ALIPHATIC URETHANE ACRYLATE   | Trade Secret | 7 - 13                   | Not Applicable   |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)-     | 119313-12-1  | 1 - 5                    | 1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-  |
| 1-PROPANONE, 2-METHYL-1-[4-(METHYLTHIO)PHENYL]-2-(4-MORPHOLINYL)-               | 71868-10-5   | 1 - 5 Trade Secret *     | 2-Methyl-4'-(methylthio)-2-morpholinopropiophenone   |
| Aluminum Salt   | Trade Secret | 1 - 5                    | Not Applicable   |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                             | 112945-52-5  | 1 - 5                    | Fumed amorphous silica, crystalline-free   |
| Zinc Salt   | Trade Secret | 1 - 5                    | Not Applicable   |
| .ALPHA.,.ALPHA.',.ALPHA.'-1,2,3-PROPANETRIYLTRIS[POLYPROPYLENE GLYCOL ACRYLATE] | 52408-84-1   | 0.1 - 1.0 Trade Secret * | glycerol, propoxylated, esters with Acrylic acid; Propoxylated glycerol triacrylate  |
| ACRYLATE ESTER  | 7328-17-8    | 0.1 - 1.0 Trade Secret * | 2-Propenoic acid, 2-(2-ethoxyethoxy)ethyl ester; Carbitol acrylate   |
| OCTAMETHYLCYCLOTETRA-SILOXANE   | 556-67-2     | 0.1 - 1.0 Trade Secret * | Octamethylcyclotetrasiloxane   |
| TMPEOTA   | 28961-43-5   | < 1.0                    | Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-[(1-oxo-2-propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) |

Zinc Salt is a non-hazardous Trade Secret material according to WHMIS criteria.

Aluminum Salt is a non-hazardous Trade Secret material according to WHMIS criteria.

METHACRYLATE POLYMER is a non-hazardous Trade Secret material according to WHMIS criteria.

ALIPHATIC URETHANE ACRYLATE is a non-hazardous Trade Secret material according to WHMIS criteria.

\*The actual concentration of this ingredient 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. Remove contact lenses if easy to do. Continue rinsing. 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 ordinary combustible material such as water or foam 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>  |
|------------------|-------------------|
| Aldehydes        | During Combustion |
| Formaldehyde     | During Combustion |
| Carbon monoxide  | During Combustion |
| Carbon dioxide   | 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. 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. 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. 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. Place in a closed 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

Do not handle until all safety precautions have been read and understood. 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.) Use personal protective equipment (gloves, respirators, etc.) as required.

#### 7.2. Conditions for safe storage including any incompatibilities

Keep cool. Protect from sunlight. Store away from heat. 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.

| <b>Ingredient</b>             | <b>C.A.S. No.</b> | <b>Agency</b>           | <b>Limit type</b>                    | <b>Additional Comments</b> |
|-------------------------------|-------------------|-------------------------|--------------------------------------|----------------------------|
| VINYLCAPROLACTAM              | 2235-00-9         | Manufacturer determined | TWA:0.1 ppm(0.57 mg/m <sup>3</sup> ) |                            |
| OCTAMETHYLCYCLOTETRA SILOXANE | 556-67-2          | AIHA                    | TWA:10 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**

Provide local exhaust ventilation at transfer points. 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.

#### **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:

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

|  |   |
|--|---|
| Physical state   | Liquid  |
| Specific Physical Form:  | Liquid  |
| Colour   | Yellow  |
| Odour  | Acrylate  |
| Odour threshold  | No Data Available                                 |
| pH   | Not Applicable                                    |
| Melting point/Freezing point                                     | Not Applicable                                    |
| Boiling point  | > 148.9 °C  |
| Flash Point  | > 93.3 °C [Test Method:Pensky-Martens Closed Cup] |
| Evaporation rate   | < 1 [Ref Std:BUOAC=1]                             |
| Flammability (solid, gas)  | Not Applicable                                    |
| Flammable Limits(LEL)  | No Data Available                                 |
| Flammable Limits(UEL)  | No Data Available                                 |
| Vapour Pressure  | < 160 Pa [@ 20 °C ]                               |
| Viscosity/Kinematic Viscosity      Viscosity/Kinematic Viscosity | No Data Available                                 |
| Density  | Approximately 1.3 g/ml                            |
| Relative density   | Approximately 1.3 [Ref Std:WATER=1]               |
| Water solubility   | Negligible  |
| Solubility- non-water  | No Data Available                                 |
| Partition coefficient: n-octanol/ water                          | No Data Available                                 |
| Autoignition temperature   | No Data Available                                 |
| Decomposition temperature  | No Data Available                                 |
| Viscosity/Kinematic Viscosity                                    | No Data Available                                 |
| Volatile Organic Compounds                                       | 5 g/l   |
| Percent volatile   | 1 - 5 % weight                                    |
| VOC Less H2O & Exempt Solvents                                   | 5 g/l   |

#### Nanoparticles

This material contains nanoparticles.

## 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 may occur. Upon loss of initiator or with exposure to heat.

### 10.4. Conditions to avoid

Sparks and/or flames

Heat

### 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:**

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:**

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired 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:****Prolonged or repeated exposure may cause target organ effects:**

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

**Reproductive/Developmental Toxicity:**

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

**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        | Ingestion |         | No data available; calculated ATE 2,000 - 5,000 mg/kg |
| PHENOXY ETHYL ACRYLATE | Dermal    | Rat     | LD50 > 2,000 mg/kg                                    |

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|   |                                |        |  |
|---|--------------------------------|--------|--|
| PHENOXY ETHYL ACRYLATE  | Ingestion                      | Rat    | LD50 > 5,000 mg/kg                       |
| METHACRYLATE POLYMER  | Dermal                         |        | LD50 estimated to be > 5,000 mg/kg       |
| METHACRYLATE POLYMER  | Ingestion                      |        | LD50 estimated to be 2,000 - 5,000 mg/kg |
| VINYLCAPROLACTAM  | Dermal                         | Rabbit | LD50 1,700 mg/kg                         |
| VINYLCAPROLACTAM  | Ingestion                      | Rat    | LD50 1,049 mg/kg                         |
| BISMUTH VANADATE  | Dermal                         |        | LD50 estimated to be > 5,000 mg/kg       |
| BISMUTH VANADATE  | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 5.2 mg/l                          |
| BISMUTH VANADATE  | Ingestion                      | Rat    | LD50 > 5,000 mg/kg                       |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                             | Dermal                         | Rabbit | LD50 > 5,000 mg/kg                       |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                             | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 0.691 mg/l                        |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                             | Ingestion                      | Rat    | LD50 > 5,110 mg/kg                       |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)-     | Dermal                         | Rat    | LD50 > 2,000 mg/kg                       |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)-     | Ingestion                      | Rat    | LD50 > 5,000 mg/kg                       |
| 1-PROPANONE, 2-METHYL-1-[4-(METHYLTHIO)PHENYL]-2-(4-MORPHOLINYL)-               | Dermal                         | Rat    | LD50 > 2,000 mg/kg                       |
| 1-PROPANONE, 2-METHYL-1-[4-(METHYLTHIO)PHENYL]-2-(4-MORPHOLINYL)-               | Ingestion                      | Rat    | LD50 967 mg/kg                           |
| ACRYLATE ESTER  | Dermal                         |        | LD50 estimated to be 1,000 - 2,000 mg/kg |
| ACRYLATE ESTER  | Ingestion                      | Rat    | LD50 1,860 mg/kg                         |
| .ALPHA.,.ALPHA.',.ALPHA."-1,2,3-PROPANETRIYLTRIS[POLYPROPYLENE GLYCOL ACRYLATE] | Dermal                         | Rabbit | LD50 > 2,000 mg/kg                       |
| .ALPHA.,.ALPHA.',.ALPHA."-1,2,3-PROPANETRIYLTRIS[POLYPROPYLENE GLYCOL ACRYLATE] | Ingestion                      | Rat    | LD50 > 2,000 mg/kg                       |
| TMPEOTA   | Dermal                         | Rabbit | LD50 > 13,000 mg/kg                      |
| TMPEOTA   | Ingestion                      | Rat    | LD50 > 2,000 mg/kg                       |
| OCTAMETHYLCYCLOTETRASILOXANE  | Dermal                         | Rat    | LD50 > 2,400 mg/kg                       |
| OCTAMETHYLCYCLOTETRASILOXANE  | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 36 mg/l                             |
| OCTAMETHYLCYCLOTETRASILOXANE  | Ingestion                      | Rat    | LD50 > 5,000 mg/kg                       |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name  | Species | Value                     |
|---|---------|---------------------------|
| PHENOXY ETHYL ACRYLATE  | Rabbit  | No significant irritation |
| VINYLCAPROLACTAM  | Rabbit  | Minimal irritation        |
| BISMUTH VANADATE  | Rabbit  | No significant irritation |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                             | Rabbit  | No significant irritation |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)-     | Rabbit  | No significant irritation |
| 1-PROPANONE, 2-METHYL-1-[4-(METHYLTHIO)PHENYL]-2-(4-MORPHOLINYL)-               | Rabbit  | No significant irritation |
| ACRYLATE ESTER  | Rabbit  | Irritant                  |
| .ALPHA.,.ALPHA.',.ALPHA."-1,2,3-PROPANETRIYLTRIS[POLYPROPYLENE GLYCOL ACRYLATE] | Rabbit  | Minimal irritation        |
| TMPEOTA   | Rabbit  | Minimal irritation        |
| OCTAMETHYLCYCLOTETRASILOXANE  | Rabbit  | Minimal irritation        |

**Serious Eye Damage/Irritation**

| Name  | Species | Value                     |
|---|---------|---------------------------|
| PHENOXY ETHYL ACRYLATE                              | Rabbit  | No significant irritation |
| VINYLCAPROLACTAM                                    | Rabbit  | Severe irritant           |
| BISMUTH VANADATE                                    | Rabbit  | No significant irritation |
| Synthetic Amorphous Silica, Fumed, Crystalline Free | Rabbit  | No significant irritation |

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| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)-     | Rabbit | No significant irritation |
| 1-PROPANONE, 2-METHYL-1-[4-(METHYLTHIO)PHENYL]-2-(4-MORPHOLINYL)-               | Rabbit | No significant irritation |
| ACRYLATE ESTER  | Rabbit | Severe irritant           |
| .ALPHA.,.ALPHA.',.ALPHA."-1,2,3-PROPANETRIYLTRIS[POLYPROPYLENE GLYCOL ACRYLATE] | Rabbit | Severe irritant           |
| TMPEOTA   | Rabbit | Severe irritant           |
| OCTAMETHYLCYCLOTETRASILOXANE  | Rabbit | No significant irritation |

**Skin Sensitization**

| Name  | Species          | Value          |
|---|------------------|----------------|
| PHENOXY ETHYL ACRYLATE  | Guinea pig       | Sensitizing    |
| VINYLCAPROLACTAM  | Mouse            | Sensitizing    |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                             | Human and animal | Not classified |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)-     | Guinea pig       | Not classified |
| ACRYLATE ESTER  | Guinea pig       | Sensitizing    |
| .ALPHA.,.ALPHA.',.ALPHA."-1,2,3-PROPANETRIYLTRIS[POLYPROPYLENE GLYCOL ACRYLATE] | Mouse            | Sensitizing    |
| TMPEOTA   | Guinea pig       | Sensitizing    |
| OCTAMETHYLCYCLOTETRASILOXANE  | Human and animal | Not classified |

**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  |
|---|----------|--|
| VINYLCAPROLACTAM  | In Vitro | Not mutagenic  |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                         | In Vitro | Not mutagenic  |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)- | In Vitro | Not mutagenic  |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)- | In vivo  | Not mutagenic  |
| OCTAMETHYLCYCLOTETRASILOXANE  | In Vitro | Some positive data exist, but the data are not sufficient for classification |

**Carcinogenicity**

| Name  | Route         | Species | Value  |
|---|---------------|---------|--|
| Synthetic Amorphous Silica, Fumed, Crystalline Free | Not Specified | Mouse   | Some positive data exist, but the data are not sufficient for classification |

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

| Name  | Route     | Value                                  | Species | Test result         | Exposure Duration        |
|---|-----------|--|---------|---------------------|--------------------------|
| PHENOXY ETHYL ACRYLATE                              | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 800 mg/kg/day | 43 days                  |
| PHENOXY ETHYL ACRYLATE                              | Ingestion | Toxic to female reproduction           | Rat     | NOAEL 300 mg/kg/day | premating into lactation |
| PHENOXY ETHYL ACRYLATE                              | Ingestion | Toxic to development                   | Rat     | NOAEL 300 mg/kg/day | premating into lactation |
| Synthetic Amorphous Silica, Fumed, Crystalline Free | Ingestion | Not classified for female reproduction | Rat     | NOAEL 509 mg/kg/day | 1 generation             |
| Synthetic Amorphous Silica, Fumed,                  | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 497           | 1 generation             |

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|---|------------|--|--------|-----------------------|----------------------|
| Crystalline Free  |            |  |        | mg/kg/day             |                      |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                         | Ingestion  | Not classified for development         | Rat    | NOAEL 1,350 mg/kg/day | during organogenesis |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)- | Ingestion  | Not classified for female reproduction | Rat    | NOAEL 300 mg/kg/day   | 1 generation         |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)- | Ingestion  | Not classified for male reproduction   | Rat    | NOAEL 300 mg/kg/day   | 1 generation         |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)- | Ingestion  | Toxic to development                   | Rat    | NOAEL 30 mg/kg/day    | 1 generation         |
| 1-PROPANONE, 2-METHYL-1-[4-(METHYLTHIO)PHENYL]-2-(4-MORPHOLINYL)-           | Ingestion  | Toxic to female reproduction           | Rat    | LOAEL 40 mg/kg/day    | 1 generation         |
| 1-PROPANONE, 2-METHYL-1-[4-(METHYLTHIO)PHENYL]-2-(4-MORPHOLINYL)-           | Ingestion  | Toxic to development                   | Rat    | LOAEL 40 mg/kg/day    | 1 generation         |
| OCTAMETHYLCYCLOTETRASIOXANE   | Inhalation | Not classified for male reproduction   | Rat    | NOAEL 8.5 mg/l        | 2 generation         |
| OCTAMETHYLCYCLOTETRASIOXANE   | Ingestion  | Toxic to female reproduction           | Rabbit | NOAEL 50 mg/kg/day    | during organogenesis |
| OCTAMETHYLCYCLOTETRASIOXANE   | Inhalation | Toxic to female reproduction           | Rat    | NOAEL 3.6 mg/l        | 2 generation         |

**Target Organ(s)**
**Specific Target Organ Toxicity - single exposure**

| Name             | Route      | Target Organ(s)        | Value  | Species | Test result         | Exposure Duration |
|------------------|------------|------------------------|--|---------|---------------------|-------------------|
| VINYLCAPROLACTAM | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Rat     | NOAEL Not available |                   |

**Specific Target Organ Toxicity - repeated exposure**

| Name  | Route      | Target Organ(s)   | Value  | Species | Test result         | Exposure Duration     |
|---|------------|---|--|---------|---------------------|-----------------------|
| VINYLCAPROLACTAM  | Inhalation | respiratory system  | Causes damage to organs through prolonged or repeated exposure               | Rat     | NOAEL 0.001 mg/l    | 28 days               |
| VINYLCAPROLACTAM  | Inhalation | blood   liver   kidney and/or bladder   eyes                            | Not classified   | Rat     | NOAEL 0.18 mg/l     | 90 days               |
| VINYLCAPROLACTAM  | Ingestion  | liver   | Not classified   | Rat     | NOAEL 260 mg/kg/day | 3 months              |
| BISMUTH VANADATE  | Inhalation | respiratory system  | May cause damage to organs though prolonged or repeated exposure             | Rat     | NOAEL 0.02 mg/l     | 28 days               |
| Synthetic Amorphous Silica, Fumed, Crystalline Free                         | Inhalation | respiratory system   silicosis  | Not classified   | Human   | NOAEL Not available | occupational exposure |
| 1-BUTANONE, 2-(DIMETHYLAMINO)-1-[4-(4-MORPHOLINYL)PHENYL]-2-(PHENYLMETHYL)- | Ingestion  | endocrine system   hematopoietic system   liver   kidney and/or bladder | Not classified   | Rat     | NOAEL 500 mg/kg/day | 28 days               |
| 1-PROPANONE, 2-METHYL-1-[4-(METHYLTHIO)PHENYL]-2-(4-MORPHOLINYL)-           | Ingestion  | peripheral nervous system   eyes  | Some positive data exist, but the data are not sufficient for classification | Rat     | NOAEL 75 mg/kg/day  | 90 days               |
| OCTAMETHYLCYCLOTETRASIOXANE   | Dermal     | hematopoietic system  | Not classified   | Rabbit  | NOAEL 960 mg/kg/day | 3 weeks               |
| OCTAMETHYLCYCLOTETRASIOXANE   | Inhalation | liver   | Not classified   | Rat     | NOAEL 8.5 mg/l      | 13 weeks              |

**3M™ Screen Printing UV Ink Series 9849 Lemon Yellow**

|                                 |            |   |                |     |                             |              |
|---------------------------------|------------|---|----------------|-----|-----------------------------|--------------|
| ETRAILOXANE                     |            |   |                |     | mg/l                        |              |
| OCTAMETHYLCYCLOT<br>ETRAILOXANE | Inhalation | endocrine system  <br>immune system  <br>kidney and/or<br>bladder | Not classified | Rat | NOAEL 8.5<br>mg/l           | 2 generation |
| OCTAMETHYLCYCLOT<br>ETRAILOXANE | Inhalation | hematopoietic<br>system   | Not classified | Rat | NOAEL 8.5<br>mg/l           | 13 weeks     |
| OCTAMETHYLCYCLOT<br>ETRAILOXANE | Ingestion  | liver   | Not classified | Rat | NOAEL<br>1,600<br>mg/kg/day | 2 weeks      |

**Aspiration Hazard**

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

**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. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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 chemical notification requirements of TSCA. 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: 2 Flammability: 1 Instability: 1 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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**3M Canada SDSs are available at [www.3M.ca](http://www.3M.ca)**