



## Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 20-2528-6 | <b>Version Number:</b>  | 8.00     |
| <b>Issue Date:</b>     | 03/08/16  | <b>Supersedes Date:</b> | 07/28/14 |

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Roll Coat Color 4951 Transparent Red

#### Product Identification Numbers

LE-N100-0190-5, 42-0002-1126-0, 75-0300-2574-8, 75-0301-4064-6

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

##### Recommended use

Roll Coat

#### 1.3. Supplier's details

|                      |                                         |
|----------------------|-----------------------------------------|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Traffic Safety and Security Division    |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 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.  
Serious Eye Damage/Irritation: Category 2A.  
Skin Corrosion/Irritation: Category 2.  
Skin Sensitizer: Category 1A.  
Reproductive Toxicity: Category 2.  
Carcinogenicity: Category 1A.  
Specific Target Organ Toxicity (single exposure): Category 1.  
Specific Target Organ Toxicity (central nervous system): 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 serious eye irritation.

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 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 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.

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.

**2.3. Hazards not otherwise classified**

May cause an allergic respiratory reaction in sensitive people.

40% of the mixture consists of ingredients of unknown acute oral toxicity.

40% of the mixture consists of ingredients of unknown acute dermal toxicity.

58% of the mixture consists of ingredients of unknown acute inhalation toxicity.

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

| Ingredient                                                                                                                     | C.A.S. No.    | % by Wt                  |
|--------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------|
| Oligomer 17171                                                                                                                 | Trade Secret* | 15 - 45                  |
| Heavy aromatic solvent naphtha (Petroleum)                                                                                     | 64742-94-5    | 10 - 30 Trade Secret *   |
| Light aromatic solvent naphtha (Petroleum)                                                                                     | 64742-95-6    | 5 - 13 Trade Secret *    |
| Alkyl amine polymer (New Jersey Trade Secret Registry # 04499600-5252P)                                                        | Trade Secret* | 7 - 13                   |
| 1-Methoxy-2-propyl acetate                                                                                                     | 108-65-6      | 5 - 10                   |
| Cyclohexanone                                                                                                                  | 108-94-1      | 5 - 10 Trade Secret *    |
| 1,2,4-Trimethylbenzene                                                                                                         | 95-63-6       | 1 - 5 Trade Secret *     |
| Butyl alcohol                                                                                                                  | 71-36-3       | 1 - 5 Trade Secret *     |
| Diethylene glycol butyl ether                                                                                                  | 112-34-5      | 1 - 5 Trade Secret *     |
| Xylene                                                                                                                         | 1330-20-7     | 1 - 5 Trade Secret *     |
| Organic pigment (NJ TSR # 04499600-5232P)                                                                                      | Trade Secret* | 1 - 5                    |
| Vinyl polymer (NJ TSR # 04499600-5238P)                                                                                        | Trade Secret* | 1 - 5                    |
| Organic pigment (NJ TSR # 04499600-5229P)                                                                                      | Trade Secret* | 0.5 - 1.5                |
| Diethylaminoethanol                                                                                                            | 100-37-8      | 0.1 - 1.0 Trade Secret * |
| Nickel salts of naphthenic acids                                                                                               | 61788-71-4    | 0.1 - 1.0 Trade Secret * |
| 2,3-Epoxypropyl neodecanoate                                                                                                   | 26761-45-5    | < 0.4 Trade Secret *     |
| Ethylbenzene                                                                                                                   | 100-41-4      | < 0.4 Trade Secret *     |
| Naphthalene                                                                                                                    | 91-20-3       | < 0.3 Trade Secret *     |
| 2,3,4,5-Tetrachloro-6-cyanobenzoic acid, methyl ester, reaction products with 2-methyl-1,3-benzenediamine and sodium methoxide | 106276-79-3   | < 0.2                    |
| Formaldehyde                                                                                                                   | 50-00-0       | < 0.2 Trade Secret *     |
| Methyl alcohol                                                                                                                 | 67-56-1       | < 0.2 Trade Secret *     |
| Benzene                                                                                                                        | 71-43-2       | < 0.03 Trade Secret *    |

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

\*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**

Hydrocarbons  
Carbon monoxide  
Carbon dioxide  
Hydrogen Chloride  
Oxides of Nitrogen

**Condition**

During Combustion  
During Combustion  
During Combustion  
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.

## 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                         |
|-------------------------------|------------|--------|------------------------------------------|---------------------------------------------|
| Diethylaminoethanol           | 100-37-8   | ACGIH  | TWA:2 ppm                                | Skin Notation                               |
| Diethylaminoethanol           | 100-37-8   | OSHA   | TWA:50 mg/m3(10 ppm)                     | Skin Notation                               |
| Ethylbenzene                  | 100-41-4   | ACGIH  | TWA:20 ppm                               | A3: Confirmed animal carcin.                |
| Ethylbenzene                  | 100-41-4   | OSHA   | TWA:435 mg/m3(100 ppm)                   |                                             |
| Ethylbenzene                  | 100-41-4   | CMRG   | TWA:25 ppm;STEL:75 ppm                   |                                             |
| 1-Methoxy-2-propyl acetate    | 108-65-6   | AIHA   | TWA:50 ppm                               |                                             |
| 1-Methoxy-2-propyl acetate    | 108-65-6   | CMRG   | TWA:10 mg/m3;STEL:90 ppm                 |                                             |
| Cyclohexanone                 | 108-94-1   | ACGIH  | TWA:20 ppm;STEL:50 ppm                   | A3: Confirmed animal carcin., Skin Notation |
| Cyclohexanone                 | 108-94-1   | OSHA   | TWA:200 mg/m3(50 ppm)                    |                                             |
| Diethylene glycol butyl ether | 112-34-5   | CMRG   | TWA:35 ppm                               |                                             |
| Diethylene glycol butyl ether | 112-34-5   | ACGIH  | TWA(inhalable fraction and vapor):10 ppm |                                             |
| Xylene                        | 1330-20-7  | ACGIH  | TWA:100 ppm;STEL:150 ppm                 | A4: Not class. as human carcin              |

|                                            |            |       |                                                        |                                                            |
|--------------------------------------------|------------|-------|--------------------------------------------------------|------------------------------------------------------------|
| Xylene                                     | 1330-20-7  | CMRG  | TWA:50 ppm;STEL:75 ppm                                 |                                                            |
| Xylene                                     | 1330-20-7  | OSHA  | TWA:435 mg/m3(100 ppm)                                 |                                                            |
| Formaldehyde                               | 50-00-0    | CMRG  | TWA:0.5 ppm                                            |                                                            |
| Formaldehyde                               | 50-00-0    | ACGIH | CEIL:0.3 ppm                                           | A2: Suspected human carcin., Dermal/Respiratory Sensitizer |
| Formaldehyde                               | 50-00-0    | OSHA  | TWA:0.75 ppm;STEL:2 ppm                                | 29 CFR 1910.1048                                           |
| NICKEL, SOLUBLE COMPOUNDS                  | 61788-71-4 | OSHA  | TWA(as Ni):1 mg/m3                                     |                                                            |
| Heavy aromatic solvent naphtha (Petroleum) | 64742-94-5 | CMRG  | TWA:17 ppm(100 mg/m3)                                  |                                                            |
| Kerosine (petroleum)                       | 64742-94-5 | ACGIH | TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3 | A3: Confirmed animal carcin., Skin Notation                |
| Naphtha                                    | 64742-94-5 | OSHA  | TWA:400 mg/m3(100 ppm)                                 |                                                            |
| Light aromatic solvent naphtha (Petroleum) | 64742-95-6 | CMRG  | TWA:50 ppm(245 mg/m3)                                  |                                                            |
| Methyl alcohol                             | 67-56-1    | ACGIH | TWA:200 ppm;STEL:250 ppm                               | Skin Notation                                              |
| Methyl alcohol                             | 67-56-1    | OSHA  | TWA:260 mg/m3(200 ppm)                                 |                                                            |
| Butyl alcohol                              | 71-36-3    | OSHA  | TWA:300 mg/m3(100 ppm)                                 |                                                            |
| Butyl alcohol                              | 71-36-3    | ACGIH | TWA:20 ppm                                             |                                                            |
| Benzene                                    | 71-43-2    | OSHA  | TWA:1 ppm;TWA:10 ppm;STEL:5 ppm;CEIL:25 ppm            | 29 CFR 1910.1028                                           |
| Benzene                                    | 71-43-2    | ACGIH | TWA:0.5 ppm;STEL:2.5 ppm                               | Skin Notation, A1: Confirmed human carcin.                 |
| Naphthalene                                | 91-20-3    | OSHA  | TWA:50 mg/m3(10 ppm)                                   |                                                            |
| Naphthalene                                | 91-20-3    | ACGIH | TWA:10 ppm                                             | A3: Confirmed animal carcin., Skin Notation                |
| Benzene, trimethyl-                        | 95-63-6    | ACGIH | TWA:25 ppm                                             |                                                            |

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

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 formaldehyde and particulates  
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates  
Organic vapor respirators may have short service life.

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

|                                                |                                           |
|------------------------------------------------|-------------------------------------------|
| <b>General Physical Form:</b>                  | Liquid                                    |
| <b>Specific Physical Form:</b>                 | Liquid                                    |
| <b>Odor, Color, Grade:</b>                     | Solvent odor, red, liquid                 |
| <b>Odor threshold</b>                          | No Data Available                         |
| <b>pH</b>                                      | Not Applicable                            |
| <b>Melting point</b>                           | Not Applicable                            |
| <b>Boiling Point</b>                           | >=243 °F                                  |
| <b>Flash Point</b>                             | 96 °F [Test Method: Tagliabue Closed Cup] |
| <b>Evaporation rate</b>                        | 0.23 - 1 [Ref Std: BUOAC=1]               |
| <b>Flammability (solid, gas)</b>               | Not Applicable                            |
| <b>Flammable Limits(LEL)</b>                   | 0.9 %                                     |
| <b>Flammable Limits(UEL)</b>                   | 11.7 %                                    |
| <b>Vapor Pressure</b>                          | <=5.1 mmHg [@ 68 °F]                      |
| <b>Vapor Density</b>                           | 2.6 - 5.6 [Ref Std: AIR=1]                |
| <b>Density</b>                                 | 0.81 g/ml [@ 20 °C]                       |
| <b>Specific Gravity</b>                        | 0.81 [Ref Std: WATER=1]                   |
| <b>Solubility in Water</b>                     | Negligible                                |
| <b>Solubility- non-water</b>                   | No Data Available                         |
| <b>Partition coefficient: n-octanol/ water</b> | No Data Available                         |
| <b>Autoignition temperature</b>                | 670 - 870 °F                              |
| <b>Decomposition temperature</b>               | No Data Available                         |
| <b>Viscosity</b>                               | 2,000 - 3,000 centipoise                  |
| <b>Volatile Organic Compounds</b>              | 600 - 700 g/l                             |
| <b>Percent volatile</b>                        | 60.00 % weight                            |

## 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:

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 in sensitive people: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

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.

May cause additional health effects (see below).

##### Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

##### 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.

| <b><u>Ingredient</u></b> | <b><u>CAS No.</u></b> | <b><u>Class Description</u></b> | <b><u>Regulation</u></b>                    |
|--------------------------|-----------------------|---------------------------------|---------------------------------------------|
| 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 |
| Benzene                  | 71-43-2               | Grp. 1: Carcinogenic to humans  | International Agency for Research on Cancer |
| Benzene                  | 71-43-2               | Known human carcinogen          | National Toxicology Program Carcinogens     |
| Benzene                  | 71-43-2               | Cancer hazard                   | OSHA Carcinogens                            |
| Ethylbenzene             | 100-41-4              | Grp. 2B: Possible human carc.   | International Agency for Research on Cancer |
| Formaldehyde             | 50-00-0               | Grp. 1: Carcinogenic to humans  | International Agency for Research on Cancer |
| Formaldehyde             | 50-00-0               | Known human carcinogen          | National Toxicology Program Carcinogens     |
| Formaldehyde             | 50-00-0               | Cancer hazard                   | OSHA Carcinogens                            |
| 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

| <b><u>Name</u></b>                         | <b><u>Route</u></b>        | <b><u>Species</u></b> | <b><u>Value</u></b>                             |
|--------------------------------------------|----------------------------|-----------------------|-------------------------------------------------|
| Overall product                            | Dermal                     |                       | No data available; calculated ATE > 5,000 mg/kg |
| Overall product                            | Inhalation-Vapor(4 hr)     |                       | No data available; calculated ATE 20 - 50 mg/l  |
| Overall product                            | Ingestion                  |                       | No data available; calculated ATE > 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                              |
| Light aromatic solvent naphtha (Petroleum) | Dermal                     | Rabbit                | LD50 > 2,000 mg/kg                              |
| Light aromatic solvent naphtha (Petroleum) | Inhalation-Vapor (4 hours) | Rat                   | LC50 > 5.2 mg/l                                 |
| Light aromatic solvent naphtha (Petroleum) | 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-Vapor (4 hours) | Rat                   | LC50 > 28.8 mg/l                                |
| 1-Methoxy-2-propyl acetate                 | Ingestion                  | Rat                   | LD50 8,532 mg/kg                                |
| Cyclohexanone                              | Dermal                     | Rabbit                | LD50 >794, <3160 mg/kg                          |

|                                           |                            |        |                                          |
|-------------------------------------------|----------------------------|--------|------------------------------------------|
| Cyclohexanone                             | Inhalation-Vapor (4 hours) | Rat    | LC50 > 6.2 mg/l                          |
| Cyclohexanone                             | Ingestion                  | Rat    | LD50 1,296 mg/kg                         |
| Vinyl polymer (NJ TSR # 04499600-5238P)   | Dermal                     | Rabbit | LD50 > 8,000 mg/kg                       |
| Vinyl polymer (NJ TSR # 04499600-5238P)   | Ingestion                  | Rat    | LD50 > 8,000 mg/kg                       |
| Organic pigment (NJ TSR # 04499600-5232P) | Dermal                     |        | LD50 estimated to be > 5,000 mg/kg       |
| Organic pigment (NJ TSR # 04499600-5232P) | Inhalation-Dust/Mist       |        | LC50 estimated to be > 12.5 mg/l         |
| Organic pigment (NJ TSR # 04499600-5232P) | Ingestion                  |        | LD50 estimated to be > 5,000 mg/kg       |
| Butyl alcohol                             | Dermal                     | Rabbit | LD50 3,402 mg/kg                         |
| Butyl alcohol                             | Inhalation-Vapor (4 hours) | Rat    | LC50 24 mg/l                             |
| Butyl alcohol                             | Ingestion                  | Rat    | LD50 2,290 mg/kg                         |
| Diethylene glycol butyl ether             | Dermal                     | Rabbit | LD50 2,764 mg/kg                         |
| Diethylene glycol butyl ether             | Ingestion                  | Rat    | LD50 7,292 mg/kg                         |
| 1,2,4-Trimethylbenzene                    | Dermal                     | Rabbit | LD50 > 3,160 mg/kg                       |
| 1,2,4-Trimethylbenzene                    | Inhalation-Vapor (4 hours) | Rat    | LC50 18 mg/l                             |
| 1,2,4-Trimethylbenzene                    | Ingestion                  | Rat    | LD50 3,400 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 (NJ TSR # 04499600-5229P) | Dermal                     | Rat    | LD50 > 2,000 mg/kg                       |
| Organic pigment (NJ TSR # 04499600-5229P) | Ingestion                  | Rat    | LD50 > 5,000 mg/kg                       |
| Diethylaminoethanol                       | Dermal                     | Rabbit | LD50 880 mg/kg                           |
| Diethylaminoethanol                       | Inhalation-Vapor (4 hours) | Rat    | LC50 4.5 mg/l                            |
| Diethylaminoethanol                       | Ingestion                  | Rat    | LD50 1,300 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                         |
| 2,3-Epoxypropyl neodecanoate              | Dermal                     | Rat    | LD50 > 2,000 mg/kg                       |
| 2,3-Epoxypropyl neodecanoate              | Ingestion                  | Rat    | LD50 > 2,000 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   |
| Methyl alcohol                            | Dermal                     |        | LD50 estimated to be 1,000 - 2,000 mg/kg |
| Methyl alcohol                            | Inhalation-Vapor           |        | LC50 estimated to be 10 - 20 mg/l        |
| Methyl alcohol                            | Ingestion                  |        | LD50 estimated to be 50 - 300 mg/kg      |
| Formaldehyde                              | Dermal                     | Rabbit | LD50 270 mg/kg                           |
| Formaldehyde                              | Inhalation-Gas (4 hours)   | Rat    | LC50 470 ppm                             |
| Formaldehyde                              | Ingestion                  | Rat    | LD50 800 mg/kg                           |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                                       | Species | Value                     |
|--------------------------------------------|---------|---------------------------|
| Heavy aromatic solvent naphtha (Petroleum) | Rabbit  | Irritant                  |
| Light aromatic solvent naphtha (Petroleum) | Rabbit  | Irritant                  |
| 1-Methoxy-2-propyl acetate                 | Rabbit  | No significant irritation |
| Cyclohexanone                              | Rabbit  | Irritant                  |

|                                           |                         |                           |
|-------------------------------------------|-------------------------|---------------------------|
| Vinyl polymer (NJ TSR # 04499600-5238P)   | Professional judgement  | No significant irritation |
| Organic pigment (NJ TSR # 04499600-5232P) | Professional judgement  | No significant irritation |
| Butyl alcohol                             | Rabbit                  | Mild irritant             |
| Diethylene glycol butyl ether             | Rabbit                  | Minimal irritation        |
| 1,2,4-Trimethylbenzene                    | Rabbit                  | Irritant                  |
| Xylene                                    | Rabbit                  | Mild irritant             |
| Organic pigment (NJ TSR # 04499600-5229P) | Rabbit                  | No significant irritation |
| Diethylaminoethanol                       | Rabbit                  | Corrosive                 |
| Ethylbenzene                              | Rabbit                  | Mild irritant             |
| 2,3-Epoxypropyl neodecanoate              | Rabbit                  | No significant irritation |
| Nickel salts of naphthenic acids          | Professional judgement  | Minimal irritation        |
| Naphthalene                               | Rabbit                  | Minimal irritation        |
| Methyl alcohol                            | Rabbit                  | Mild irritant             |
| Formaldehyde                              | official classification | Corrosive                 |

**Serious Eye Damage/Irritation**

| Name                                       | Species                 | Value                     |
|--------------------------------------------|-------------------------|---------------------------|
| Heavy aromatic solvent naphtha (Petroleum) | Rabbit                  | Mild irritant             |
| Light aromatic solvent naphtha (Petroleum) | Rabbit                  | Mild irritant             |
| 1-Methoxy-2-propyl acetate                 | Rabbit                  | Mild irritant             |
| Cyclohexanone                              | Rabbit                  | Severe irritant           |
| Vinyl polymer (NJ TSR # 04499600-5238P)    | Professional judgement  | No significant irritation |
| Organic pigment (NJ TSR # 04499600-5232P)  | Professional judgement  | No significant irritation |
| Butyl alcohol                              | Rabbit                  | Severe irritant           |
| Diethylene glycol butyl ether              | Rabbit                  | Corrosive                 |
| 1,2,4-Trimethylbenzene                     | Rabbit                  | Mild irritant             |
| Xylene                                     | Rabbit                  | Mild irritant             |
| Organic pigment (NJ TSR # 04499600-5229P)  | Rabbit                  | No significant irritation |
| Diethylaminoethanol                        | Rabbit                  | Corrosive                 |
| Ethylbenzene                               | Rabbit                  | Moderate irritant         |
| 2,3-Epoxypropyl neodecanoate               | Rabbit                  | No significant irritation |
| Nickel salts of naphthenic acids           | Professional judgement  | Mild irritant             |
| Naphthalene                                | Rabbit                  | No significant irritation |
| Methyl alcohol                             | Rabbit                  | Moderate irritant         |
| Formaldehyde                               | official classification | Corrosive                 |

**Skin Sensitization**

| Name                                       | Species    | Value           |
|--------------------------------------------|------------|-----------------|
| Heavy aromatic solvent naphtha (Petroleum) | Guinea pig | Not sensitizing |
| Light aromatic solvent naphtha (Petroleum) | Guinea pig | Not sensitizing |

|                                           |                   |                 |
|-------------------------------------------|-------------------|-----------------|
| 1-Methoxy-2-propyl acetate                | Guinea pig        | Not sensitizing |
| Cyclohexanone                             | Guinea pig        | Not sensitizing |
| Butyl alcohol                             | Human             | Not sensitizing |
| 1,2,4-Trimethylbenzene                    | Guinea pig        | Not sensitizing |
| Organic pigment (NJ TSR # 04499600-5229P) | Guinea pig        | Not sensitizing |
| Diethylaminoethanol                       | Guinea pig        | Not sensitizing |
| Ethylbenzene                              | Human             | Not sensitizing |
| 2,3-Epoxypropyl neodecanoate              | Guinea pig        | Sensitizing     |
| Nickel salts of naphthenic acids          | similar compounds | Sensitizing     |
| Methyl alcohol                            | Guinea pig        | Not sensitizing |
| Formaldehyde                              | Guinea pig        | Sensitizing     |

### Respiratory Sensitization

| Name         | Species | Value                                                                        |
|--------------|---------|------------------------------------------------------------------------------|
| Formaldehyde | Human   | Some positive data exist, but the data are not sufficient for classification |

### Germ Cell Mutagenicity

| Name                                      | Route    | Value                                                                        |
|-------------------------------------------|----------|------------------------------------------------------------------------------|
| 1-Methoxy-2-propyl acetate                | In Vitro | Not mutagenic                                                                |
| Cyclohexanone                             | In vivo  | Not mutagenic                                                                |
| Cyclohexanone                             | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Butyl alcohol                             | In vivo  | Not mutagenic                                                                |
| Butyl alcohol                             | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 1,2,4-Trimethylbenzene                    | In Vitro | Not mutagenic                                                                |
| Xylene                                    | In Vitro | Not mutagenic                                                                |
| Xylene                                    | In vivo  | Not mutagenic                                                                |
| Organic pigment (NJ TSR # 04499600-5229P) | In Vitro | Not mutagenic                                                                |
| Diethylaminoethanol                       | In Vitro | Not mutagenic                                                                |
| Diethylaminoethanol                       | In vivo  | Not mutagenic                                                                |
| Ethylbenzene                              | In vivo  | Not mutagenic                                                                |
| Ethylbenzene                              | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 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                                                                    |
| Methyl alcohol                            | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Methyl alcohol                            | In vivo  | Some positive data exist, but the data are not sufficient for classification |
| Formaldehyde                              | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Formaldehyde                              | In vivo  | Mutagenic                                                                    |

### Carcinogenicity

| Name                                       | Route      | Species  | Value                                                                        |
|--------------------------------------------|------------|----------|------------------------------------------------------------------------------|
| Heavy aromatic solvent naphtha (Petroleum) | Dermal     | Mouse    | Some positive data exist, but the data are not sufficient for classification |
| Light aromatic solvent naphtha (Petroleum) | Inhalation | Mouse    | Some positive data exist, but the data are not sufficient for classification |
| Cyclohexanone                              | Ingestion  | Multiple | Some positive data exist, but the data are not                               |

|                                  |               |                         |                                                                              |
|----------------------------------|---------------|-------------------------|------------------------------------------------------------------------------|
|                                  |               | animal species          | 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 |
| Ethylbenzene                     | Inhalation    | Multiple animal species | Carcinogenic                                                                 |
| Nickel salts of naphthenic acids | Not Specified | similar compounds       | Carcinogenic                                                                 |
| Naphthalene                      | Inhalation    | Multiple animal species | Carcinogenic                                                                 |
| Methyl alcohol                   | Inhalation    | Multiple animal species | Not carcinogenic                                                             |
| Formaldehyde                     | Not Specified | Human and animal        | Carcinogenic                                                                 |

## Reproductive Toxicity

### Reproductive and/or Developmental Effects

| Name                                       | Route      | Value                                                                                          | Species | Test Result           | Exposure Duration            |
|--------------------------------------------|------------|------------------------------------------------------------------------------------------------|---------|-----------------------|------------------------------|
| Light aromatic solvent naphtha (Petroleum) | Inhalation | Not toxic to female reproduction                                                               | Rat     | NOAEL 1,500 ppm       | 2 generation                 |
| Light aromatic solvent naphtha (Petroleum) | Inhalation | Not toxic to male reproduction                                                                 | Rat     | NOAEL 1,500 ppm       | 2 generation                 |
| Light aromatic solvent naphtha (Petroleum) | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification     | Rat     | NOAEL 500 ppm         | 2 generation                 |
| 1-Methoxy-2-propyl acetate                 | Ingestion  | Not toxic to female reproduction                                                               | Rat     | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 1-Methoxy-2-propyl acetate                 | Ingestion  | Not toxic to male reproduction                                                                 | Rat     | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 1-Methoxy-2-propyl acetate                 | Ingestion  | Not toxic to development                                                                       | Rat     | NOAEL 1,000 mg/kg/day | premating & during gestation |
| 1-Methoxy-2-propyl acetate                 | Inhalation | Not toxic to development                                                                       | Rat     | NOAEL 21.6 mg/l       | during organogenesis         |
| Cyclohexanone                              | Inhalation | Not toxic to female reproduction                                                               | Rat     | NOAEL 4 mg/l          | 2 generation                 |
| Cyclohexanone                              | Inhalation | Some positive male reproductive data exist, but the data are not sufficient for classification | Rat     | NOAEL 2 mg/l          | 2 generation                 |
| Cyclohexanone                              | Ingestion  | Some positive developmental data exist, but the data are not sufficient for classification     | Mouse   | LOAEL 1,100 mg/kg/day | during organogenesis         |
| Cyclohexanone                              | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification     | Rat     | NOAEL 2 mg/l          | 2 generation                 |
| Butyl alcohol                              | Ingestion  | Not toxic to female reproduction                                                               | Rat     | NOAEL 5,000 mg/kg/day | premating & during gestation |
| Butyl alcohol                              | Inhalation | Not toxic to male reproduction                                                                 | Rat     | NOAEL 18 mg/l         | 6 weeks                      |
| Butyl alcohol                              | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification     | Rat     | NOAEL 10.6 mg/l       | during gestation             |

|                        |            |                                                                                                  |                         |                       |                                |
|------------------------|------------|--------------------------------------------------------------------------------------------------|-------------------------|-----------------------|--------------------------------|
| 1,2,4-Trimethylbenzene | Inhalation | Some positive female reproductive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 1.2 mg/l        | 3 months                       |
| 1,2,4-Trimethylbenzene | Inhalation | Some positive male reproductive data exist, but the data are not sufficient for classification   | Rat                     | NOAEL 1.2 mg/l        | 3 months                       |
| 1,2,4-Trimethylbenzene | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification       | Rat                     | NOAEL 1.5 mg/l        | during gestation               |
| Xylene                 | Inhalation | Some positive female reproductive data exist, but the data are not sufficient for classification | Human                   | NOAEL Not available   | occupational exposure          |
| Xylene                 | Ingestion  | Some positive developmental data exist, but the data are not sufficient for classification       | Mouse                   | NOAEL Not available   | during organogenesis           |
| Xylene                 | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification       | Multiple animal species | NOAEL Not available   | during gestation               |
| Diethylaminoethanol    | Inhalation | Not toxic to development                                                                         | Rat                     | NOAEL 0.49 mg/l       | during organogenesis           |
| Diethylaminoethanol    | Ingestion  | Some positive male reproductive data exist, but the data are not sufficient for classification   | Rat                     | LOAEL 11 mg/kg/day    | 2 years                        |
| Diethylaminoethanol    | Ingestion  | Some positive developmental data exist, but the data are not sufficient for classification       | Rat                     | NOAEL 100 mg/kg/day   | during gestation               |
| Ethylbenzene           | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification       | Rat                     | NOAEL 4.3 mg/l        | prematuring & during gestation |
| Methyl alcohol         | Ingestion  | Some positive male reproductive data exist, but the data are not sufficient for classification   | Rat                     | NOAEL 1,600 mg/kg/day | 21 days                        |
| Methyl alcohol         | Ingestion  | Toxic to development                                                                             | Mouse                   | LOAEL 4,000 mg/kg/day | during organogenesis           |
| Methyl alcohol         | Inhalation | Toxic to development                                                                             | Mouse                   | NOAEL 1.3 mg/l        | during organogenesis           |
| Formaldehyde           | Ingestion  | Some positive male reproductive data exist, but the data are not sufficient for classification   | Rat                     | NOAEL 100 mg/kg       | not applicable                 |
| Formaldehyde           | Inhalation | Some positive developmental data exist, but the data are not sufficient for classification       | Rat                     | NOAEL 10 ppm          | during gestation               |

## Lactation

| Name   | Route     | Species | Value                                      |
|--------|-----------|---------|--------------------------------------------|
| Xylene | Ingestion | Mouse   | Does not cause 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 |
|--------------------------------------------|------------|-----------------------------------|------------------------------------------------------------------------------|-----------------------|---------------------|-------------------|
| 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 judgment | NOAEL Not available |                   |
| Heavy aromatic solvent naphtha (Petroleum) | Ingestion  | central nervous system depression | May cause drowsiness or dizziness                                            | Professional judgment | NOAEL Not available |                   |

|                                            |            |                                   |                                                                              |                         |                     |                |
|--------------------------------------------|------------|-----------------------------------|------------------------------------------------------------------------------|-------------------------|---------------------|----------------|
|                                            |            |                                   |                                                                              | nt                      |                     |                |
| Light aromatic solvent naphtha (Petroleum) | Inhalation | central nervous system depression | May cause drowsiness or dizziness                                            | Professional judgement  | NOAEL Not available |                |
| Light aromatic solvent naphtha (Petroleum) | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Professional judgement  | NOAEL Not available |                |
| Light aromatic solvent naphtha (Petroleum) | Ingestion  | central nervous system depression | May cause drowsiness or dizziness                                            | Professional judgement  | 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 |                |
| Cyclohexanone                              | Inhalation | central nervous system depression | May cause drowsiness or dizziness                                            | Guinea pig              | LOAEL 16.1 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 system depression | May cause drowsiness or dizziness                                            | Professional judgement  | NOAEL Not available |                |
| Butyl alcohol                              | Inhalation | central nervous system depression | May cause drowsiness or dizziness                                            | Human                   | NOAEL Not available |                |
| Butyl alcohol                              | Inhalation | respiratory irritation            | May cause respiratory irritation                                             | official classification | NOAEL Not available |                |
| Butyl alcohol                              | Ingestion  | central nervous system depression | May cause drowsiness or dizziness                                            | Human                   | NOAEL Not available |                |
| 1,2,4-Trimethylbenzene                     | Inhalation | central nervous system depression | May cause drowsiness or dizziness                                            | Human and animal        | NOAEL Not available |                |
| 1,2,4-Trimethylbenzene                     | Inhalation | respiratory irritation            | May cause respiratory irritation                                             | official classification | NOAEL Not available |                |
| 1,2,4-Trimethylbenzene                     | 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                              | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 3.5 mg/l      | not available  |
| Xylene                                     | Inhalation | liver                             | Some positive data exist, but the data are not sufficient for classification | 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                              | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 250 mg/kg     | not applicable |
| Organic pigment (NJ TSR # 04499600-5229P)  | Dermal     | skin                              | Some positive data exist, but the data are not sufficient for classification | Human and animal        | NOAEL not available |                |
| Organic pigment (NJ TSR # 04499600-5229P)  | Ingestion  | central nervous system depression | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL Not available | not applicable |
| Diethylaminoethanol                        | Inhalation | central nervous                   | May cause drowsiness or                                                      | Human                   | NOAEL Not           |                |

|                     |            |                                   |                                                                              |                        |                     |                        |
|---------------------|------------|-----------------------------------|------------------------------------------------------------------------------|------------------------|---------------------|------------------------|
|                     |            | system depression                 | dizziness                                                                    |                        | available           |                        |
| Diethylaminoethanol | Inhalation | respiratory irritation            | May cause respiratory irritation                                             | Rat                    | NOAEL 0.05 mg/l     | 14 weeks               |
| 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 alcohol      | Inhalation | blindness                         | Causes damage to organs                                                      | Human                  | NOAEL Not available | occupational exposure  |
| Methyl alcohol      | Inhalation | central nervous system depression | May cause drowsiness or dizziness                                            | Human                  | NOAEL Not available | not available          |
| Methyl alcohol      | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Rat                    | NOAEL Not available | 6 hours                |
| Methyl alcohol      | Ingestion  | blindness                         | Causes damage to organs                                                      | Human                  | NOAEL Not available | poisoning and/or abuse |
| Methyl alcohol      | Ingestion  | central nervous system depression | May cause drowsiness or dizziness                                            | Human                  | NOAEL Not available | poisoning and/or abuse |
| Formaldehyde        | Inhalation | respiratory system                | Causes damage to organs                                                      | Rat                    | LOAEL 128 ppm       | 6 hours                |
| Formaldehyde        | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                  | NOAEL Not available |                        |

**Specific Target Organ Toxicity - repeated exposure**

| Name                       | Route      | Target Organ(s)                                    | Value                                                                        | Species                 | Test Result           | Exposure Duration     |
|----------------------------|------------|----------------------------------------------------|------------------------------------------------------------------------------|-------------------------|-----------------------|-----------------------|
| 1-Methoxy-2-propyl acetate | Inhalation | kidney and/or bladder                              | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 16.2 mg/l       | 9 days                |
| 1-Methoxy-2-propyl acetate | Inhalation | olfactory system                                   | Some positive data exist, but the data are not sufficient for classification | Mouse                   | LOAEL 1.62 mg/l       | 9 days                |
| 1-Methoxy-2-propyl acetate | Inhalation | blood                                              | All data are negative                                                        | Multiple animal species | NOAEL 16.2 mg/l       | 9 days                |
| 1-Methoxy-2-propyl acetate | Ingestion  | endocrine system                                   | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 1,000 mg/kg/day | 44 days               |
| Cyclohexanone              | Inhalation | liver   kidney and/or bladder                      | Some positive data exist, but the data are not sufficient for classification | Rabbit                  | NOAEL 0.76 mg/l       | 50 days               |
| Cyclohexanone              | Ingestion  | liver                                              | Some positive data exist, but the data are not sufficient for classification | Mouse                   | NOAEL 4,800 mg/kg/day | 90 days               |
| Butyl alcohol              | Inhalation | blood                                              | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 0.3 mg/l        | 3 months              |
| Butyl alcohol              | Inhalation | auditory system                                    | Some positive data exist, but the data are not sufficient for classification | Human                   | NOAEL Not available   | occupational exposure |
| Butyl alcohol              | Inhalation | liver   kidney and/or bladder   respiratory system | Some positive data exist, but the data are not sufficient for classification | Guinea pig              | NOAEL Not available   | 3 months              |
| Butyl alcohol              | Inhalation | nervous system                                     | All data are negative                                                        | Rat                     | NOAEL 9.09 mg/l       | 13 weeks              |
| Butyl alcohol              | Ingestion  | blood                                              | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 500 mg/kg/day   | 13 weeks              |
| 1,2,4-Trimethylbenzene     | Inhalation | hematopoietic                                      | Some positive data exist, but the                                            | Rat                     | NOAEL 0.5             | 3 months              |

|                        |            |                                                                                                                                                |                                                                              |                         |                       |                       |
|------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------------|-----------------------|-----------------------|
|                        |            | system                                                                                                                                         | data are not sufficient for classification                                   |                         | mg/l                  |                       |
| 1,2,4-Trimethylbenzene | Inhalation | nervous system                                                                                                                                 | Some positive data exist, but the data are not sufficient for classification | Rat                     | LOAEL 0.1 mg/l        | 3 months              |
| 1,2,4-Trimethylbenzene | Inhalation | respiratory system                                                                                                                             | Some positive data exist, but the data are not sufficient for classification | Human                   | NOAEL Not available   | occupational exposure |
| 1,2,4-Trimethylbenzene | Inhalation | liver   kidney and/or bladder                                                                                                                  | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 1.2 mg/l        | 3 months              |
| 1,2,4-Trimethylbenzene | Inhalation | heart   endocrine system   immune system                                                                                                       | All data are negative                                                        | Rat                     | NOAEL 1.2 mg/l        | 3 months              |
| 1,2,4-Trimethylbenzene | Ingestion  | hematopoietic system                                                                                                                           | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 600 mg/kg/day   | 14 days               |
| 1,2,4-Trimethylbenzene | Ingestion  | liver   immune system   kidney and/or bladder                                                                                                  | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 1,000 mg/kg/day | 28 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                                                                                                                                          | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | NOAEL Not available   |                       |
| Xylene                 | Inhalation | heart   endocrine system   hematopoietic system   muscles   kidney and/or bladder   respiratory system                                         | All data are negative                                                        | Multiple animal species | NOAEL 3.5 mg/l        | 13 weeks              |
| Xylene                 | Ingestion  | auditory system                                                                                                                                | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 900 mg/kg/day   | 2 weeks               |
| Xylene                 | Ingestion  | kidney and/or bladder                                                                                                                          | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 1,500 mg/kg/day | 90 days               |
| Xylene                 | Ingestion  | liver                                                                                                                                          | Some positive data exist, but the data are not sufficient for classification | 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 | All data are negative                                                        | Mouse                   | NOAEL 1,000 mg/kg/day | 103 weeks             |
| Diethylaminoethanol    | Inhalation | liver   kidney and/or bladder                                                                                                                  | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 0.36 mg/l       | 14 weeks              |
| Diethylaminoethanol    | Inhalation | heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   respiratory system        | All data are negative                                                        | Rat                     | NOAEL 0.36 mg/l       | 14 weeks              |
| Diethylaminoethanol    | Ingestion  | nervous system                                                                                                                                 | Some positive data exist, but the data are not sufficient for classification | Dog                     | NOAEL 20 mg/kg/day    | 1 years               |
| Diethylaminoethanol    | Ingestion  | kidney and/or                                                                                                                                  | Some positive data exist, but the                                            | Rat                     | NOAEL 400             | 6 months              |

|                              |            |                                                                              |                                                                              |                         |                       |                        |
|------------------------------|------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------------|-----------------------|------------------------|
|                              |            | bladder                                                                      | data are not sufficient for classification                                   |                         | mg/kg/day             |                        |
| Diethylaminoethanol          | Ingestion  | heart   endocrine system   hematopoietic system   liver   respiratory system | All data are negative                                                        | Rat                     | NOAEL 400 mg/kg/day   | 2 years                |
| Diethylaminoethanol          | Ocular     | eyes                                                                         | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 0.36 mg/l       | 14 weeks               |
| 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                                                         | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 3.4 mg/l        | 28 days                |
| Ethylbenzene                 | Inhalation | auditory system                                                              | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 2.4 mg/l        | 5 days                 |
| Ethylbenzene                 | Inhalation | endocrine system                                                             | Some positive data exist, but the data are not sufficient for classification | Mouse                   | NOAEL 3.3 mg/l        | 103 weeks              |
| Ethylbenzene                 | Inhalation | bone, teeth, nails, and/or hair   muscles                                    | All data are negative                                                        | Multiple animal species | NOAEL 4.2 mg/l        | 90 days                |
| Ethylbenzene                 | Inhalation | heart   immune system   respiratory system                                   | All data are negative                                                        | Multiple animal species | NOAEL 3.3 mg/l        | 2 years                |
| Ethylbenzene                 | Ingestion  | liver   kidney and/or bladder                                                | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 680 mg/kg/day   | 6 months               |
| 2,3-Epoxypropyl neodecanoate | Ingestion  | hematopoietic system   liver                                                 | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 400 mg/kg/day   | 5 weeks                |
| 2,3-Epoxypropyl neodecanoate | Ingestion  | kidney and/or bladder                                                        | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 40 mg/kg/day    | 5 weeks                |
| Naphthalene                  | Dermal     | blood                                                                        | Causes damage to organs through prolonged or repeated exposure               | Human                   | NOAEL Not available   | poisoning and/or abuse |
| Naphthalene                  | Dermal     | eyes                                                                         | Some positive data exist, but the data are not sufficient for classification | 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                                                                         | Some positive data exist, but the data are not sufficient for classification | 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 through prolonged or repeated exposure            | Rabbit                  | LOAEL 500 mg/kg/day   | 15 days                |
| Methyl alcohol               | Inhalation | liver                                                                        | All data are negative                                                        | Rat                     | NOAEL 6.55 mg/l       | 4 weeks                |
| Methyl alcohol               | Inhalation | respiratory system                                                           | All data are negative                                                        | Rat                     | NOAEL 13.1 mg/l       | 6 weeks                |
| Methyl alcohol               | Ingestion  | liver   nervous system                                                       | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 2,500 mg/kg/day | 90 days                |
| Formaldehyde                 | Dermal     | respiratory system                                                           | Some positive data exist, but the data are not sufficient for classification | Mouse                   | NOAEL 80 mg/kg/day    | 60 weeks               |
| Formaldehyde                 | Inhalation | respiratory system                                                           | Causes damage to organs through                                              | Rat                     | NOAEL 0.3             | 28 months              |

|              |            |                                                                                        |                                                                              |       |                     |           |
|--------------|------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------|---------------------|-----------|
|              |            |                                                                                        | prolonged or repeated exposure                                               |       | ppm                 |           |
| Formaldehyde | Inhalation | liver                                                                                  | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL 20 ppm        | 13 weeks  |
| Formaldehyde | Inhalation | hematopoietic system                                                                   | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 15 ppm        | 3 weeks   |
| Formaldehyde | Inhalation | nervous system                                                                         | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 10 ppm        | 13 weeks  |
| Formaldehyde | Inhalation | endocrine system   immune system   muscles   kidney and/or bladder                     | All data are negative                                                        | Rat   | NOAEL 15 ppm        | 28 months |
| Formaldehyde | Inhalation | eyes   vascular system                                                                 | All data are negative                                                        | Rat   | NOAEL 14.3 ppm      | 2 years   |
| Formaldehyde | Inhalation | heart                                                                                  | All data are negative                                                        | Mouse | NOAEL 14.3 ppm      | 2 years   |
| Formaldehyde | Ingestion  | liver                                                                                  | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL 300 mg/kg/day | 2 years   |
| Formaldehyde | Ingestion  | immune system                                                                          | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL 20 mg/kg/day  | 4 weeks   |
| Formaldehyde | Ingestion  | kidney and/or bladder                                                                  | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL 15 mg/kg/day  | 24 months |
| Formaldehyde | Ingestion  | nervous system                                                                         | Some positive data exist, but the data are not sufficient for classification | Rat   | NOAEL 109 mg/kg/day | 2 years   |
| Formaldehyde | Ingestion  | heart   endocrine system   hematopoietic system   respiratory system   vascular system | All data are negative                                                        | Rat   | NOAEL 300 mg/kg/day | 2 years   |
| Formaldehyde | Ingestion  | skin   muscles   eyes                                                                  | All data are negative                                                        | Rat   | NOAEL 109 mg/kg/day | 2 years   |

### Aspiration Hazard

| Name                                       | Value                                                                        |
|--------------------------------------------|------------------------------------------------------------------------------|
| Heavy aromatic solvent naphtha (Petroleum) | Aspiration hazard                                                            |
| Light aromatic solvent naphtha (Petroleum) | Aspiration hazard                                                            |
| Butyl alcohol                              | Some positive data exist, but the data are not sufficient for classification |
| 1,2,4-Trimethylbenzene                     | Aspiration hazard                                                            |
| 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

### 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. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal 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), D018 (Benzene)

## 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.

#### 311/312 Hazard Categories:

Fire Hazard - Yes    Pressure Hazard - No    Reactivity Hazard - No    Immediate Hazard - Yes    Delayed Hazard - Yes

**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>     |
|-----------------------------------------------------|------------------|--------------------|
| Diethylene glycol butyl ether (GLYCOL ETHERS)       | 112-34-5         | 1 - 5              |
| Butyl alcohol                                       | 71-36-3          | Trade Secret 1 - 5 |
| 1,2,4-Trimethylbenzene                              | 95-63-6          | Trade Secret 1 - 5 |
| Xylene                                              | 1330-20-7        | Trade Secret 1 - 5 |
| Nickel salts of naphthenic acids (NICKEL COMPOUNDS) | 61788-71-4       | 0.1 - 1.0          |
| Ethylbenzene                                        | 100-41-4         | Trade Secret < 0.4 |
| Naphthalene                                         | 91-20-3          | Trade Secret < 0.3 |
| Formaldehyde                                        | 50-00-0          | Trade Secret < 0.2 |

### 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: 3 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.

**Document Group:** 20-2528-6  
**Issue Date:** 03/08/16

**Version Number:** 8.00  
**Supersedes Date:** 07/28/14

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