



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M(TM) Scotchlite(TM) Transparent Screen Printing Ink 2913 Maroon

Product Identification Numbers

75-0300-8819-1
7000129348

1.2. Recommended use and restrictions on use

Recommended use

Ink

1.3. Supplier's details

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

2.1. Hazard classification

Flammable Liquid: Category 3.
Serious Eye Damage/Irritation: Category 2A.
Skin Corrosion/Irritation: Category 2.
Skin Sensitizer: Category 1A.
Reproductive Toxicity: Category 1B.
Specific Target Organ Toxicity (single exposure): Category 3.

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.

May damage fertility or the unborn child.

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.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

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:

Keep container tightly closed.

Keep cool.

Store locked up in a well-ventilated place.

Disposal:

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

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---------------|----------------------------|
| CYCLOHEXANONE | 108-94-1 | 25 - 35 Trade Secret * |
| 1-METHOXY-2-PROPYL ACETATE | 108-65-6 | 10 - 20 Trade Secret * |
| ETHYL 3-ETHOXYPROPIONATE | 763-69-9 | 10 - 20 Trade Secret * |
| VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER | Trade Secret* | 10 - 20 Trade Secret * |
| ETHYL ACRYLATE-METHYL METHACRYLATE POLYMER | 9010-88-2 | 5 - 10 Trade Secret * |
| POLYMERIC PLASTICIZER | Trade Secret* | 5 - 10 Trade Secret * |
| Epoxy Soybean Oil | 8013-07-8 | 1 - 5 Trade Secret * |
| ORGANIC PIGMENT (NEW JERSEY TRADE SECRET REGISTRY #04499600-5245P) | Trade Secret* | 0 - 5 Trade Secret * |
| Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate | 41556-26-7 | 0.1 - 1.0 Trade Secret * |
| ISODECYL DIPHENYL PHOSPHITE | 26544-23-0 | 0.1 - 1.0 Trade Secret * |
| Naphthenic Acid | 1338-24-5 | < 1.0 Trade Secret * |
| Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- | 104810-48-2 | 0.1 - 1.0 Trade Secret * |
| Polymeric Benzotriazole | 104810-47-1 | 0.1 - 1.0 Trade Secret * |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | 64742-94-5 | < 0.5 Trade Secret * |
| 2,3-EPOXYPROPYL NEODECANOATE | 26761-45-5 | 0.06 - 0.29 Trade Secret * |
| Methyl Methacrylate | 80-62-6 | 0 - 0.13 Trade Secret * |
| TOLUENE | 108-88-3 | 0 - 0.12 Trade Secret * |
| BARIUM NONYLPHENOATE | 28987-17-9 | < 0.1 Trade Secret * |
| METHYL 1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL SEBACATE | 82919-37-7 | < 0.1 Trade Secret * |
| Triphenyl Phosphite | 101-02-0 | < 0.05 Trade Secret * |
| Zinc Oxide | 1314-13-2 | < 0.05 |

*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. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable.

SECTION 5: Fire-fighting measures**5.1. Suitable extinguishing media**

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

5.2. Special hazards arising from the substance or mixture

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

Hazardous Decomposition or By-Products**Substance**

Carbon monoxide

Carbon dioxide

Hydrogen Chloride

Condition

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. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust 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 designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam 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 detergent and water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been

read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/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 container tightly closed. Keep cool. Protect from sunlight. Store away from heat. 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 |
|----------------------------|------------|--------|---|---|
| 1-METHOXY-2-PROPYL ACETATE | 108-65-6 | AIHA | TWA:50 ppm | |
| TOLUENE | 108-88-3 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin |
| TOLUENE | 108-88-3 | OSHA | TWA:200 ppm;CEIL:300 ppm | |
| CYCLOHEXANONE | 108-94-1 | ACGIH | TWA:20 ppm;STEL:50 ppm | A3: Confirmed animal carcin., SKIN |
| CYCLOHEXANONE | 108-94-1 | OSHA | TWA:200 mg/m3(50 ppm) | |
| Zinc Oxide | 1314-13-2 | ACGIH | TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3 | |
| Zinc Oxide | 1314-13-2 | OSHA | TWA(as fume):5 mg/m3;TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 | |
| BARIUM, SOLUBLE COMPOUNDS | 28987-17-9 | ACGIH | TWA(as Ba):0.5 mg/m3 | A4: Not class. as human carcin |
| BARIUM, SOLUBLE COMPOUNDS | 28987-17-9 | OSHA | TWA(as Ba):0.5 mg/m3 | |
| Methyl Methacrylate | 80-62-6 | ACGIH | TWA:50 ppm;STEL:100 ppm | Dermal Sensitizer, A4: Not class. as human carcin |
| Methyl Methacrylate | 80-62-6 | OSHA | TWA:410 mg/m3(100 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 organic vapors and particulates

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| General Physical Form: | Liquid |
| Specific Physical Form: | Liquid |
| Odor, Color, Grade: | Solvent Odor, Maroon Color |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | >=284 °F |
| Flash Point | 113 °F [<i>Test Method:Closed Cup</i>] |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | 1 % |
| Flammable Limits(UEL) | 8.7 % |
| Vapor Pressure | <=3.7 mmHg [<i>@ 20 °C</i>] |
| Vapor Density | > 1 [<i>Ref Std:AIR=1</i>] |
| Density | 1.07 g/ml |
| Specific Gravity | 1.07 [<i>Ref Std:WATER=1</i>] |
| Solubility in Water | Moderate |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |

| | |
|--------------------------------|---|
| Autoignition temperature | > 670 °F |
| Decomposition temperature | No Data Available |
| Viscosity | No Data Available |
| Volatile Organic Compounds | 705 g/l [Details: As manufactured] |
| Volatile Organic Compounds | 789 g/l [Details: After maximum thinning] |
| Percent volatile | 55 - 65 % |
| VOC Less H2O & Exempt Solvents | 705 g/l [Details: As manufactured] |
| VOC Less H2O & Exempt Solvents | 789 g/l [Details: After maximum thinning] |

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

Heat
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.

May cause additional health effects (see below).

Skin Contact:

May be harmful in contact with skin.

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.
Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

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

Ingestion:

May be harmful if swallowed.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Reproductive/Developmental Toxicity:

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

Toxicological Data

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

Acute Toxicity

| Name | Route | Species | Value |
|--|----------------------------|---------|--|
| Overall product | Dermal | | No data available; calculated ATE _{2,000} - 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 _{2,000} - 5,000 mg/kg |
| CYCLOHEXANONE | Dermal | Rabbit | LD ₅₀ >794, <3160 mg/kg |
| CYCLOHEXANONE | Inhalation-Vapor (4 hours) | Rat | LC ₅₀ > 6.2 mg/l |
| CYCLOHEXANONE | Ingestion | Rat | LD ₅₀ 1,296 mg/kg |
| VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER | Dermal | Rabbit | LD ₅₀ > 8,000 mg/kg |
| VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER | Ingestion | Rat | LD ₅₀ > 8,000 mg/kg |
| ETHYL 3-ETHOXYPROPIONATE | Dermal | Rabbit | LD ₅₀ 4,080 mg/kg |
| ETHYL 3-ETHOXYPROPIONATE | Inhalation-Vapor (4 hours) | Rat | LC ₅₀ > 14.4 mg/l |
| ETHYL 3-ETHOXYPROPIONATE | Ingestion | Rat | LD ₅₀ 3,200 mg/kg |
| 1-METHOXY-2-PROPYL ACETATE | Dermal | Rabbit | LD ₅₀ > 5,000 mg/kg |
| 1-METHOXY-2-PROPYL ACETATE | Inhalation-Vapor (4 hours) | Rat | LC ₅₀ > 28.8 mg/l |
| 1-METHOXY-2-PROPYL ACETATE | Ingestion | Rat | LD ₅₀ 8,532 mg/kg |
| ETHYL ACRYLATE-METHYL METHACRYLATE POLYMER | Dermal | | LD ₅₀ estimated to be > 5,000 mg/kg |
| ETHYL ACRYLATE-METHYL METHACRYLATE POLYMER | Ingestion | | LD ₅₀ estimated to be 2,000 - 5,000 mg/kg |

| | | | |
|---|--------------------------------|--------|--|
| ORGANIC PIGMENT (NEW JERSEY TRADE SECRET REGISTRY #04499600-5245P) | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| ORGANIC PIGMENT (NEW JERSEY TRADE SECRET REGISTRY #04499600-5245P) | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Epoxy Soybean Oil | Dermal | Rabbit | LD50 > 20,000 mg/kg |
| Epoxy Soybean Oil | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- | Dermal | Rat | LD50 > 2,000 mg/kg |
| Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.8 mg/l |
| Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Polymeric Benzotriazole | Dermal | Rat | LD50 > 2,000 mg/kg |
| Polymeric Benzotriazole | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.8 mg/l |
| Polymeric Benzotriazole | Ingestion | Rat | LD50 > 5,000 mg/kg |
| 2,3-EPOXYPROPYL NEODECANOATE | Dermal | Rat | LD50 > 2,000 mg/kg |
| 2,3-EPOXYPROPYL NEODECANOATE | Ingestion | Rat | LD50 > 2,000 mg/kg |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Ingestion | Rat | LD50 > 5,000 mg/kg |
| ISODECYL DIPHENYL PHOSPHITE | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| ISODECYL DIPHENYL PHOSPHITE | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.1 mg/l |
| ISODECYL DIPHENYL PHOSPHITE | Ingestion | Rat | LD50 3,840 mg/kg |
| Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate | Dermal | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate | Ingestion | Rat | LD50 3,125 mg/kg |
| TOLUENE | Dermal | Rat | LD50 12,000 mg/kg |
| TOLUENE | Inhalation-Vapor (4 hours) | Rat | LC50 30 mg/l |
| TOLUENE | Ingestion | Rat | LD50 5,550 mg/kg |
| Methyl Methacrylate | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Methyl Methacrylate | Inhalation-Vapor (4 hours) | Rat | LC50 29 mg/l |
| Methyl Methacrylate | Ingestion | Rat | LD50 7,900 mg/kg |
| METHYL 1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL SEBACATE | Dermal | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| METHYL 1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL SEBACATE | Ingestion | Rat | LD50 3,125 mg/kg |
| Zinc Oxide | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Zinc Oxide | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.7 mg/l |
| Zinc Oxide | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Triphenyl Phosphite | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| Triphenyl Phosphite | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 1.7 mg/l |
| Triphenyl Phosphite | Ingestion | Rat | LD50 1,590 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|------------------------|---------------------------|
| CYCLOHEXANONE | Rabbit | Irritant |
| VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER | Professional judgement | No significant irritation |

| | | |
|---|------------------------|---------------------------|
| ETHYL 3-ETHOXYPROPIONATE | Rabbit | No significant irritation |
| 1-METHOXY-2-PROPYL ACETATE | Rabbit | No significant irritation |
| ETHYL ACRYLATE-METHYL METHACRYLATE POLYMER | Professional judgement | No significant irritation |
| Epoxy Soybean Oil | Rabbit | No significant irritation |
| Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- | Rabbit | No significant irritation |
| Polymeric Benzotriazole | Rabbit | No significant irritation |
| 2,3-EPOXYPROPYL NEODECANOATE | Rabbit | No significant irritation |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Rabbit | Irritant |
| ISODECYL DIPHENYL PHOSPHITE | Rabbit | No significant irritation |
| Bis(1,2,2,6,6-pentamethyl-4-piperidiny)l) sebacate | Rabbit | No significant irritation |
| TOLUENE | Rabbit | Irritant |
| Methyl Methacrylate | Human and animal | Mild irritant |
| METHYL 1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL SEBACATE | Rabbit | No significant irritation |
| Zinc Oxide | Human and animal | No significant irritation |
| Triphenyl Phosphite | Rabbit | Irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|------------------------|---------------------------|
| CYCLOHEXANONE | Rabbit | Severe irritant |
| VINYL ACETATE-VINYL ALCOHOL-VINYL CHLORIDE POLYMER | Professional judgement | No significant irritation |
| ETHYL 3-ETHOXYPROPIONATE | Rabbit | Mild irritant |
| 1-METHOXY-2-PROPYL ACETATE | Rabbit | Mild irritant |
| ETHYL ACRYLATE-METHYL METHACRYLATE POLYMER | Professional judgement | No significant irritation |
| Epoxy Soybean Oil | Rabbit | No significant irritation |
| Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- | Rabbit | No significant irritation |
| Polymeric Benzotriazole | Rabbit | No significant irritation |
| 2,3-EPOXYPROPYL NEODECANOATE | Rabbit | No significant irritation |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Rabbit | Mild irritant |
| ISODECYL DIPHENYL PHOSPHITE | Rabbit | No significant irritation |
| Bis(1,2,2,6,6-pentamethyl-4-piperidiny)l) sebacate | Rabbit | No significant irritation |
| TOLUENE | Rabbit | Moderate irritant |
| Methyl Methacrylate | Rabbit | Moderate irritant |
| METHYL 1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL SEBACATE | Rabbit | No significant irritation |
| Zinc Oxide | Rabbit | Mild irritant |
| Triphenyl Phosphite | Rabbit | Moderate irritant |

Skin Sensitization

| Name | Species | Value |
|---|------------|----------------|
| CYCLOHEXANONE | Guinea pig | Not classified |
| ETHYL 3-ETHOXYPROPIONATE | Guinea pig | Not classified |
| 1-METHOXY-2-PROPYL ACETATE | Guinea pig | Not classified |
| Epoxy Soybean Oil | Guinea pig | Not classified |
| Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy- | Guinea pig | Sensitizing |
| Polymeric Benzotriazole | Guinea pig | Sensitizing |

| | | |
|---|-------------------------|----------------|
| 2,3-EPOXYPROPYL NEODECANOATE | pig Guinea pig | Sensitizing |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Guinea pig | Not classified |
| ISODECYL DIPHENYL PHOSPHITE | Multiple animal species | Sensitizing |
| Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate | Guinea pig | Sensitizing |
| TOLUENE | Guinea pig | Not classified |
| Methyl Methacrylate | Human and animal | Sensitizing |
| METHYL 1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL SEBACATE | Guinea pig | Sensitizing |
| Zinc Oxide | Guinea pig | Not classified |
| Triphenyl Phosphite | Mouse | Sensitizing |

Respiratory Sensitization

| Name | Species | Value |
|---------------------|---------|----------------|
| Methyl Methacrylate | Human | Not classified |

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|--|
| CYCLOHEXANONE | In vivo | Not mutagenic |
| CYCLOHEXANONE | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| ETHYL 3-ETHOXYPROPIONATE | In Vitro | Not mutagenic |
| 1-METHOXY-2-PROPYL ACETATE | In Vitro | Not mutagenic |
| Epoxy Soybean Oil | In Vitro | Not mutagenic |
| 2,3-EPOXYPROPYL NEODECANOATE | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 2,3-EPOXYPROPYL NEODECANOATE | In vivo | Mutagenic |
| Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate | In Vitro | Not mutagenic |
| TOLUENE | In Vitro | Not mutagenic |
| TOLUENE | In vivo | Not mutagenic |
| Methyl Methacrylate | In vivo | Not mutagenic |
| Methyl Methacrylate | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| METHYL 1,2,2,6,6-PENTAMETHYL-4-PIPERIDINYL SEBACATE | In Vitro | Not mutagenic |
| Zinc Oxide | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Zinc Oxide | In vivo | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|--|------------|-------------------------|--|
| CYCLOHEXANONE | Ingestion | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| Epoxy Soybean Oil | Ingestion | Rat | Not carcinogenic |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| TOLUENE | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| TOLUENE | Ingestion | Rat | Some positive data exist, but the data are not sufficient for classification |
| TOLUENE | Inhalation | Mouse | Some positive data exist, but the data are not sufficient for classification |

| | | | |
|---------------------|------------|------------------|------------------|
| Methyl Methacrylate | Ingestion | Rat | Not carcinogenic |
| Methyl Methacrylate | Inhalation | Human and animal | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|----------------------------|------------|--|-------------------------|-----------------------|------------------------------|
| CYCLOHEXANONE | Inhalation | Not classified for female reproduction | Rat | NOAEL 4 mg/l | 2 generation |
| CYCLOHEXANONE | Inhalation | Not classified for male reproduction | Rat | NOAEL 2 mg/l | 2 generation |
| CYCLOHEXANONE | Ingestion | Not classified for development | Mouse | LOAEL 1,100 mg/kg/day | during organogenesis |
| CYCLOHEXANONE | Inhalation | Not classified for development | Rat | NOAEL 2 mg/l | 2 generation |
| 1-METHOXY-2-PROPYL ACETATE | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | prematemg & during gestation |
| 1-METHOXY-2-PROPYL ACETATE | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | prematemg & during gestation |
| 1-METHOXY-2-PROPYL ACETATE | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | prematemg & during gestation |
| 1-METHOXY-2-PROPYL ACETATE | Inhalation | Not classified for development | Rat | NOAEL 21.6 mg/l | during organogenesis |
| Epoxy Soybean Oil | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| Epoxy Soybean Oil | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| Epoxy Soybean Oil | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| TOLUENE | Inhalation | Not classified for female reproduction | Human | NOAEL Not available | occupational exposure |
| TOLUENE | Inhalation | Not classified for male reproduction | Rat | NOAEL 2.3 mg/l | 1 generation |
| TOLUENE | Ingestion | Toxic to development | Rat | LOAEL 520 mg/kg/day | during gestation |
| TOLUENE | Inhalation | Toxic to development | Human | NOAEL Not available | poisoning and/or abuse |
| Methyl Methacrylate | Inhalation | Not classified for male reproduction | Mouse | NOAEL 36.9 mg/l | |
| Methyl Methacrylate | Inhalation | Not classified for development | Rat | NOAEL 8.3 mg/l | during organogenesis |
| Zinc Oxide | Ingestion | Not classified for reproduction and/or development | Multiple animal species | NOAEL 125 mg/kg/day | prematemg & during gestation |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---------------|------------|-----------------------------------|--|------------|---------------------|-------------------|
| 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 | May cause drowsiness or | Professio | NOAEL Not | |

| | | | | | | |
|--|------------|-----------------------------------|--|------------------------|---------------------|------------------------|
| | | system depression | dizziness | nal judgement | available | |
| 1-METHOXY-2-PROPYL ACETATE | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Professional judgement | NOAEL Not available | |
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Professional judgement | NOAEL Not available | |
| TOLUENE | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| TOLUENE | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| TOLUENE | Inhalation | immune system | Not classified | Mouse | NOAEL 0.004 mg/l | 3 hours |
| TOLUENE | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | poisoning and/or abuse |
| Methyl Methacrylate | Inhalation | respiratory irritation | May cause respiratory irritation | Human | NOAEL Not available | occupational exposure |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|----------------------------|------------|--|----------------|-------------------------|-----------------------|-------------------|
| CYCLOHEXANONE | Inhalation | liver kidney and/or bladder | Not classified | Rabbit | NOAEL 0.76 mg/l | 50 days |
| CYCLOHEXANONE | Ingestion | liver | Not classified | Mouse | NOAEL 4,800 mg/kg/day | 90 days |
| ETHYL 3-ETHOXYPROPIONATE | Inhalation | hematopoietic system | Not classified | Rat | NOAEL 6 mg/l | 90 days |
| ETHYL 3-ETHOXYPROPIONATE | Inhalation | nervous system heart liver immune system kidney and/or bladder | Not classified | Rat | NOAEL 6 mg/l | 17 days |
| ETHYL 3-ETHOXYPROPIONATE | Ingestion | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 17 days |
| ETHYL 3-ETHOXYPROPIONATE | Ingestion | hematopoietic system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| ETHYL 3-ETHOXYPROPIONATE | Ingestion | kidney and/or bladder respiratory system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 17 days |
| 1-METHOXY-2-PROPYL ACETATE | Inhalation | kidney and/or bladder | Not classified | Rat | NOAEL 16.2 mg/l | 9 days |
| 1-METHOXY-2-PROPYL ACETATE | Inhalation | olfactory system | Not classified | Mouse | LOAEL 1.62 mg/l | 9 days |
| 1-METHOXY-2-PROPYL ACETATE | Inhalation | blood | Not classified | Multiple animal species | NOAEL 16.2 mg/l | 9 days |
| 1-METHOXY-2-PROPYL ACETATE | Ingestion | endocrine system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 44 days |
| Epoxy Soybean Oil | Ingestion | liver kidney and/or bladder | Not classified | Rat | NOAEL 1,250 mg/kg/day | 2 years |
| 2,3-EPOXYPROPYL | Ingestion | hematopoietic | Not classified | Rat | NOAEL 400 | 5 weeks |

| | | | | | | |
|---------------------------------|------------|--|--|-------------------------------|-----------------------------|---------------------------|
| NEODECANOATE | | system liver | | | mg/kg/day | |
| 2,3-EPOXYPROPYL NEODECANOATE | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 40 mg/kg/day | 5 weeks |
| TOLUENE | Inhalation | auditory system nervous system eyes olfactory system | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | poisoning and/or abuse |
| TOLUENE | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 2.3 mg/l | 15 months |
| TOLUENE | Inhalation | heart liver kidney and/or bladder | Not classified | Rat | NOAEL 11.3 mg/l | 15 weeks |
| TOLUENE | Inhalation | endocrine system | Not classified | Rat | NOAEL 1.1 mg/l | 4 weeks |
| TOLUENE | Inhalation | immune system | Not classified | Mouse | NOAEL Not available | 20 days |
| TOLUENE | Inhalation | bone, teeth, nails, and/or hair | Not classified | Mouse | NOAEL 1.1 mg/l | 8 weeks |
| TOLUENE | Inhalation | hematopoietic system vascular system | Not classified | Human | NOAEL Not available | occupational exposure |
| TOLUENE | Inhalation | gastrointestinal tract | Not classified | Multiple animal species | NOAEL 11.3 mg/l | 15 weeks |
| TOLUENE | Ingestion | nervous system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 625 mg/kg/day | 13 weeks |
| TOLUENE | Ingestion | heart | Not classified | Rat | NOAEL 2,500 mg/kg/day | 13 weeks |
| TOLUENE | Ingestion | liver kidney and/or bladder | Not classified | Multiple animal species | NOAEL 2,500 mg/kg/day | 13 weeks |
| TOLUENE | Ingestion | hematopoietic system | Not classified | Mouse | NOAEL 600 mg/kg/day | 14 days |
| TOLUENE | Ingestion | endocrine system | Not classified | Mouse | NOAEL 105 mg/kg/day | 28 days |
| TOLUENE | Ingestion | immune system | Not classified | Mouse | NOAEL 105 mg/kg/day | 4 weeks |
| Methyl Methacrylate | Dermal | peripheral nervous system | Not classified | Human | NOAEL Not available | occupational exposure |
| Methyl Methacrylate | Inhalation | olfactory system | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | occupational exposure |
| Methyl Methacrylate | Inhalation | kidney and/or bladder | Not classified | Multiple animal species | NOAEL Not available | 14 weeks |
| Methyl Methacrylate | Inhalation | liver | Not classified | Mouse | NOAEL 12.3 mg/l | 14 weeks |
| Methyl Methacrylate | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Zinc Oxide | Ingestion | nervous system | Not classified | Rat | NOAEL 600 mg/kg/day | 10 days |
| Zinc Oxide | Ingestion | endocrine system hematopoietic system kidney and/or bladder | Not classified | Other | NOAEL 500 mg/kg/day | 6 months |
| Triphenyl Phosphite | Ingestion | nervous system | May cause damage to organs though prolonged or repeated exposure | Rat | NOAEL 15 mg/kg/day | 28 days |

Aspiration Hazard

| Name | Value |
|--|-------------------|
| HEAVY AROMATIC SOLVENT NAPHTHA (PETROLEUM) | Aspiration hazard |
| TOLUENE | 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), D005 (Barium), D009 (Mercury), 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.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

Health Hazards

Reproductive toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

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. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

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

SECTION 16: Other information

NFPA Hazard Classification

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

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

| | | | |
|------------------------|-----------|-------------------------|----------|
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