



Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
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SECTION 1: Identification

1.1. Product identifier

3M™ Primer 94

Product Identification Numbers

70-0075-4882-2, 70-0160-4782-4, 70-0160-5476-2, 70-0160-5477-0, 70-0160-5478-8, 75-0400-2417-8
7000001579, 7000001583, 7000001584, 7100003278, 7100155663, 7100261001

1.2. Recommended use and restrictions on use

Recommended use

Adhesion Promoter, Primer

1.3. Supplier's details

| | |
|----------------------|---|
| MANUFACTURER: | 3M |
| DIVISION: | Industrial Adhesives and Tapes 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 2.

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1A.

Aspiration Hazard: Category 1.

Reproductive Toxicity: Category 1B.

Carcinogenicity: Category 1B.

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

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

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

2.2. Label elements

Signal word

Danger

Symbols

Flame | Exclamation mark | Health Hazard |

Pictograms**Hazard Statements**

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause an allergic skin reaction.

May be fatal if swallowed and enters airways.

May cause drowsiness or dizziness.

May damage fertility or the unborn child.

May cause cancer.

Causes damage to organs:

sensory organs |

Causes damage to organs through prolonged or repeated exposure:

nervous system |

May cause damage to organs through prolonged or repeated exposure:

sensory organs |

Precautionary Statements**Prevention:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/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.

Wash contaminated clothing before reuse.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Do NOT induce vomiting.

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 cool.

Keep container tightly closed.

Store locked up in a well-ventilated place.

Disposal:

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

2% of the mixture consists of ingredients of unknown acute oral toxicity.

2% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|---------------|------------------------|
| Cyclohexane | 110-82-7 | 40 - 60 Trade Secret * |
| Xylene | 1330-20-7 | 15 - 35 Trade Secret * |
| Ethylbenzene | 100-41-4 | < 12 Trade Secret * |
| Ethyl Alcohol | 64-17-5 | 5 - 10 Trade Secret * |
| Ethyl Acetate | 141-78-6 | 1 - 5 Trade Secret * |
| Acrylate Polymer (NJTS Reg. No. 04499600-5984P) | Trade Secret* | < 5 Trade Secret * |
| Chlorinated Polyolefin | 68609-36-9 | < 2 Trade Secret * |
| Beta-(3,4-Epoxy cyclohexyl)Ethyltrimethoxy Silane | 3388-04-3 | < 1 Trade Secret * |
| Isopropyl Alcohol | 67-63-0 | < 1 Trade Secret * |
| Epoxy Resin | 25068-38-6 | < 0.5 Trade Secret * |
| Methyl Alcohol | 67-56-1 | < 0.5 Trade Secret * |
| MIBK | 108-10-1 | < 0.5 Trade Secret * |
| Toluene | 108-88-3 | < 0.5 Trade Secret * |
| Cumene | 98-82-8 | < 0.25 Trade Secret * |
| Chlorobenzene | 108-90-7 | < 0.11 Trade Secret * |
| Maleic Anhydride | 108-31-6 | < 0.1 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:

Do not induce vomiting. Get immediate medical attention.

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

Allergic skin reaction (redness, swelling, blistering, and itching). Aspiration pneumonitis (coughing, gasping, choking, burning of the mouth, and difficulty breathing). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details. Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

Hazardous Decomposition or By-Products

Substance

Aldehydes
Formaldehyde
Carbon monoxide
Carbon dioxide
Hydrogen Chloride

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. 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. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for

transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial/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 cool. Keep container tightly closed. 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 |
|------------------|------------|--------|--|---|
| Ethylbenzene | 100-41-4 | ACGIH | TWA:20 ppm | A3: Confirmed animal carcin., Ototoxicant |
| Ethylbenzene | 100-41-4 | OSHA | TWA:435 mg/m3(100 ppm) | |
| MIBK | 108-10-1 | ACGIH | TWA:20 ppm;STEL:75 ppm | A3: Confirmed animal carcin. |
| MIBK | 108-10-1 | OSHA | TWA:410 mg/m3(100 ppm) | |
| Maleic Anhydride | 108-31-6 | ACGIH | TWA(inhalable fraction and vapor):0.01 mg/m3 | A4: Not class. as human carcin, Dermal/Respiratory Sensitizer |
| Maleic Anhydride | 108-31-6 | OSHA | TWA:1 mg/m3(0.25 ppm) | |
| Toluene | 108-88-3 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin, Ototoxicant |
| Toluene | 108-88-3 | OSHA | TWA:200 ppm;CEIL:300 ppm | |
| Chlorobenzene | 108-90-7 | ACGIH | TWA:10 ppm | A3: Confirmed animal carcin. |
| Chlorobenzene | 108-90-7 | OSHA | TWA:350 mg/m3(75 ppm) | |
| Cyclohexane | 110-82-7 | ACGIH | TWA:100 ppm | |
| Cyclohexane | 110-82-7 | OSHA | TWA:1050 mg/m3(300 ppm) | |
| Xylene | 1330-20-7 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin |
| Xylene | 1330-20-7 | OSHA | TWA:435 mg/m3(100 ppm) | |

| | | | | |
|-------------------|----------|-------|--------------------------|--------------------------------|
| Ethyl Acetate | 141-78-6 | ACGIH | TWA:400 ppm | |
| Ethyl Acetate | 141-78-6 | OSHA | TWA:1400 mg/m3(400 ppm) | |
| Ethyl Alcohol | 64-17-5 | ACGIH | STEL:1000 ppm | A3: Confirmed animal carcin. |
| Ethyl Alcohol | 64-17-5 | OSHA | TWA:1900 mg/m3(1000 ppm) | |
| Methyl Alcohol | 67-56-1 | ACGIH | TWA:200 ppm;STEL:250 ppm | Danger of cutaneous absorption |
| Methyl Alcohol | 67-56-1 | OSHA | TWA:260 mg/m3(200 ppm) | |
| Isopropyl Alcohol | 67-63-0 | ACGIH | TWA:200 ppm;STEL:400 ppm | A4: Not class. as human carcin |
| Isopropyl Alcohol | 67-63-0 | OSHA | TWA:980 mg/m3(400 ppm) | |
| Cumene | 98-82-8 | ACGIH | TWA:5 ppm | A3: Confirmed animal carcin. |
| Cumene | 98-82-8 | OSHA | TWA:245 mg/m3(50 ppm) | SKIN |

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. Provide appropriate local exhaust ventilation on open containers.

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:

Safety Glasses with side shields

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

Half facepiece or full facepiece supplied-air respirator
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

Appearance

Physical state

Liquid

Color

Amber

Specific Physical Form:

Liquid

Odor

Solvent

Odor threshold

No Data Available

pH

Not Applicable

Melting point

Not Applicable

Boiling Point

170 °F

Flash Point

1 °F [*Test Method:*Closed Cup]

Evaporation rate

No Data Available

Flammability (solid, gas)

Not Applicable

Flammable Limits(LEL)

1 %

Flammable Limits(UEL)

11 %

Vapor Pressure

68 mmHg [*@* 68 °F]

Vapor Density

No Data Available

Density

0.82 g/ml

Specific Gravity

0.82 [*@* 77 °F] [*Ref Std:*WATER=1]

Solubility in Water

Negligible

Solubility- non-water

No Data Available

Partition coefficient: n-octanol/ water

No Data Available

Autoignition temperature

No Data Available

Decomposition temperature

No Data Available

Viscosity

1 - 35 centipoise [*@* 73.4 °F]

Hazardous Air Pollutants

35.2 - 45.3 % weight [*Test Method:*Calculated]

Hazardous Air Pollutants

<=15.11 lb HAPS/lb solids [*Test Method:*Calculated]

Molecular weight

No Data Available

Volatile Organic Compounds

781 g/l [*Test Method:*calculated SCAQMD rule 443.1]

[*Details:*low solids less exempts]

Percent volatile

95.3 - 97 % weight [*Test Method:*Estimated]

VOC Less H2O & Exempt Solvents

781 g/l [*Test Method:*calculated SCAQMD rule 443.1]

[*Details:*low solids less exempts]

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.

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. 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:

Chemical (Aspiration) Pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish colored skin (cyanosis), and may be fatal.

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

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

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

Prolonged or repeated exposure may cause target organ effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

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

Reproductive/Developmental Toxicity:

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

| Ingredient | CAS No. | Class Description | Regulation |
|------------------------|----------|-------------------------------|---|
| Cumene | 98-82-8 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |
| Cumene | 98-82-8 | Anticipated human carcinogen | National Toxicology Program Carcinogens |
| Ethylbenzene | 100-41-4 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |
| Methyl isobutyl ketone | 108-10-1 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

Additional Information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

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 >5,000 mg/kg |
| Cyclohexane | Dermal | Rat | LD50 > 2,000 mg/kg |
| Cyclohexane | Inhalation-Vapor (4 hours) | Rat | LC50 > 32.9 mg/l |
| Cyclohexane | Ingestion | Rat | LD50 6,200 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 |
| 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 |
| Ethyl Alcohol | Dermal | Rabbit | LD50 > 15,800 mg/kg |
| Ethyl Alcohol | Inhalation-Vapor (4 hours) | Rat | LC50 124.7 mg/l |
| Ethyl Alcohol | Ingestion | Rat | LD50 17,800 mg/kg |

| | | | |
|---|----------------------------|------------|--|
| Ethyl Acetate | Dermal | Rabbit | LD50 > 18,000 mg/kg |
| Ethyl Acetate | Inhalation-Vapor (4 hours) | Rat | LC50 70.5 mg/l |
| Ethyl Acetate | Ingestion | Rat | LD50 5,620 mg/kg |
| Chlorinated Polyolefin | Dermal | Guinea pig | LD50 > 1,000 mg/kg |
| Chlorinated Polyolefin | Ingestion | Rat | LD50 > 3,200 mg/kg |
| Isopropyl Alcohol | Dermal | Rabbit | LD50 12,870 mg/kg |
| Isopropyl Alcohol | Inhalation-Vapor (4 hours) | Rat | LC50 72.6 mg/l |
| Isopropyl Alcohol | Ingestion | Rat | LD50 4,710 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 |
| Beta-(3,4-Epoxy cyclohexyl)Ethyltrimethoxy Silane | Dermal | Rabbit | LD50 6,700 mg/kg |
| Beta-(3,4-Epoxy cyclohexyl)Ethyltrimethoxy Silane | Inhalation-Vapor (4 hours) | Rat | LC50 > 7 mg/l |
| Beta-(3,4-Epoxy cyclohexyl)Ethyltrimethoxy Silane | Ingestion | Rat | LD50 13,100 mg/kg |
| Epoxy Resin | Dermal | Rat | LD50 > 1,600 mg/kg |
| Epoxy Resin | Ingestion | Rat | LD50 > 1,000 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 |
| MIBK | Dermal | Rabbit | LD50 > 16,000 mg/kg |
| MIBK | Inhalation-Vapor (4 hours) | Rat | LC50 11 mg/l |
| MIBK | Ingestion | Rat | LD50 3,038 mg/kg |
| Cumene | Dermal | Rabbit | LD50 > 3,160 mg/kg |
| Cumene | Inhalation-Vapor (4 hours) | Rat | LC50 39.4 mg/l |
| Cumene | Ingestion | Rat | LD50 1,400 mg/kg |
| Chlorobenzene | Dermal | Rabbit | LD50 2,212 mg/kg |
| Chlorobenzene | Inhalation-Vapor (4 hours) | Rat | LC50 16.7 mg/l |
| Chlorobenzene | Ingestion | Rat | LD50 1,419 mg/kg |
| Maleic Anhydride | Dermal | Rabbit | LD50 2,620 mg/kg |
| Maleic Anhydride | Ingestion | Rat | LD50 1,030 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|-------------------------|---------------------------|
| Cyclohexane | Rabbit | Mild irritant |
| Xylene | Rabbit | Mild irritant |
| Ethylbenzene | Rabbit | Mild irritant |
| Ethyl Alcohol | Rabbit | No significant irritation |
| Ethyl Acetate | Rabbit | Minimal irritation |
| Chlorinated Polyolefin | Guinea pig | No significant irritation |
| Isopropyl Alcohol | Multiple animal species | No significant irritation |
| Methyl Alcohol | Rabbit | Mild irritant |
| Beta-(3,4-Epoxy cyclohexyl)Ethyltrimethoxy Silane | Rabbit | Minimal irritation |
| Epoxy Resin | Rabbit | Mild irritant |

| | | |
|------------------|------------------|--------------------|
| Toluene | Rabbit | Irritant |
| MIBK | Rabbit | Mild irritant |
| Cumene | Rabbit | Minimal irritation |
| Chlorobenzene | Rabbit | Irritant |
| Maleic Anhydride | Human and animal | Corrosive |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|------------------------|---------------------------|
| Cyclohexane | Rabbit | Mild irritant |
| Xylene | Rabbit | Mild irritant |
| Ethylbenzene | Rabbit | Moderate irritant |
| Ethyl Alcohol | Rabbit | Severe irritant |
| Ethyl Acetate | Rabbit | Mild irritant |
| Chlorinated Polyolefin | Professional judgement | Mild irritant |
| Isopropyl Alcohol | Rabbit | Severe irritant |
| Methyl Alcohol | Rabbit | Moderate irritant |
| Beta-(3,4-Epoxy cyclohexyl)Ethyltrimethoxy Silane | Rabbit | No significant irritation |
| Epoxy Resin | Rabbit | Moderate irritant |
| Toluene | Rabbit | Moderate irritant |
| MIBK | Rabbit | Mild irritant |
| Cumene | Rabbit | Mild irritant |
| Chlorobenzene | Rabbit | Mild irritant |
| Maleic Anhydride | Rabbit | Corrosive |

Skin Sensitization

| Name | Species | Value |
|---|-------------------------|----------------|
| Ethylbenzene | Human | Not classified |
| Ethyl Alcohol | Human | Not classified |
| Ethyl Acetate | Guinea pig | Not classified |
| Isopropyl Alcohol | Guinea pig | Not classified |
| Methyl Alcohol | Guinea pig | Not classified |
| Beta-(3,4-Epoxy cyclohexyl)Ethyltrimethoxy Silane | similar compounds | Sensitizing |
| Epoxy Resin | Human and animal | Sensitizing |
| Toluene | Guinea pig | Not classified |
| MIBK | Guinea pig | Not classified |
| Cumene | Guinea pig | Not classified |
| Chlorobenzene | Multiple animal species | Not classified |
| Maleic Anhydride | Multiple animal species | Sensitizing |

Respiratory Sensitization

| Name | Species | Value |
|------------------|---------|----------------|
| Epoxy Resin | Human | Not classified |
| Maleic Anhydride | Human | Sensitizing |

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|--|
| Cyclohexane | In Vitro | Not mutagenic |
| Cyclohexane | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Xylene | In Vitro | Not mutagenic |
| Xylene | In vivo | Not mutagenic |
| Ethylbenzene | In vivo | Not mutagenic |
| Ethylbenzene | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Ethyl Alcohol | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Ethyl Alcohol | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Ethyl Acetate | In Vitro | Not mutagenic |
| Ethyl Acetate | In vivo | Not mutagenic |
| Isopropyl Alcohol | In Vitro | Not mutagenic |
| Isopropyl Alcohol | In vivo | Not 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 |
| Beta-(3,4-Epoxy-cyclohexyl)Ethyltrimethoxy Silane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Epoxy Resin | In vivo | Not mutagenic |
| Epoxy Resin | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Toluene | In Vitro | Not mutagenic |
| Toluene | In vivo | Not mutagenic |
| MIBK | In Vitro | Not mutagenic |
| Cumene | In Vitro | Not mutagenic |
| Cumene | In vivo | Not mutagenic |
| Chlorobenzene | In Vitro | Not mutagenic |
| Maleic Anhydride | In vivo | Not mutagenic |
| Maleic Anhydride | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|---|------------|-------------------------|--|
| 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 |
| Ethyl Alcohol | Ingestion | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| Isopropyl Alcohol | Inhalation | Rat | Some positive data exist, but the data are not sufficient for classification |
| Methyl Alcohol | Inhalation | Multiple animal species | Not carcinogenic |
| Beta-(3,4-Epoxy-cyclohexyl)Ethyltrimethoxy Silane | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Epoxy Resin | 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 |
| MIBK | Inhalation | Multiple animal species | Carcinogenic |
| Cumene | Inhalation | Multiple animal species | Carcinogenic |
| Chlorobenzene | Ingestion | Multiple animal species | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|---|------------|--|-------------------------|-----------------------|--------------------------------|
| Cyclohexane | Inhalation | Not classified for female reproduction | Rat | NOAEL 24 mg/l | 2 generation |
| Cyclohexane | Inhalation | Not classified for male reproduction | Rat | NOAEL 24 mg/l | 2 generation |
| Cyclohexane | Inhalation | Not classified for development | Rat | NOAEL 6.9 mg/l | 2 generation |
| Xylene | Inhalation | Not classified for female reproduction | Human | NOAEL Not available | occupational exposure |
| Xylene | Ingestion | Not classified for development | Mouse | NOAEL Not available | during organogenesis |
| Xylene | Inhalation | Not classified for development | Multiple animal species | NOAEL Not available | during gestation |
| Ethylbenzene | Inhalation | Not classified for development | Rat | NOAEL 4.3 mg/l | prematuring & during gestation |
| Ethyl Alcohol | Inhalation | Not classified for development | Rat | NOAEL 38 mg/l | during gestation |
| Ethyl Alcohol | Ingestion | Not classified for development | Rat | NOAEL 5,200 mg/kg/day | prematuring & during gestation |
| Isopropyl Alcohol | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | 2 generation |
| Isopropyl Alcohol | Ingestion | Not classified for male reproduction | Rat | NOAEL 500 mg/kg/day | 2 generation |
| Isopropyl Alcohol | Ingestion | Not classified for development | Rat | NOAEL 400 mg/kg/day | during organogenesis |
| Isopropyl Alcohol | Inhalation | Not classified for development | Rat | LOAEL 9 mg/l | during gestation |
| Methyl Alcohol | Ingestion | Not classified for male reproduction | 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 |
| Beta-(3,4-Epoxy)cyclohexyl)Ethyltrimethoxy Silane | Ingestion | Not classified for development | Rabbit | NOAEL 0.27 mg/kg/day | during organogenesis |
| Epoxy Resin | Ingestion | Not classified for female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Epoxy Resin | Ingestion | Not classified for male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Epoxy Resin | Dermal | Not classified for development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |

| | | | | | |
|------------------|------------|--|-------------------------|-----------------------|------------------------|
| | | | | | s |
| Epoxy Resin | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | 2 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 |
| MIBK | Inhalation | Not classified for female reproduction | Multiple animal species | NOAEL 8.2 mg/l | 2 generation |
| MIBK | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| MIBK | Inhalation | Not classified for male reproduction | Multiple animal species | NOAEL 8.2 mg/l | 2 generation |
| MIBK | Inhalation | Not classified for development | Mouse | NOAEL 12.3 mg/l | during organogenesis |
| Cumene | Inhalation | Not classified for development | Rabbit | NOAEL 11.3 mg/l | during organogenesis |
| Chlorobenzene | Inhalation | Not classified for female reproduction | Rat | NOAEL 2.07 mg/l | 2 generation |
| Chlorobenzene | Ingestion | Not classified for development | Rat | NOAEL 300 mg/kg/day | during organogenesis |
| Chlorobenzene | Inhalation | Not classified for development | Rat | NOAEL 2.07 mg/l | 2 generation |
| Chlorobenzene | Inhalation | Not classified for male reproduction | Rat | NOAEL 2.07 mg/l | 2 generation |
| Maleic Anhydride | Ingestion | Not classified for female reproduction | Rat | NOAEL 55 mg/kg/day | 2 generation |
| Maleic Anhydride | Ingestion | Not classified for male reproduction | Rat | NOAEL 55 mg/kg/day | 2 generation |
| Maleic Anhydride | Ingestion | Not classified for development | Rat | NOAEL 140 mg/kg/day | during organogenesis |

Lactation

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-------------|------------|-----------------------------------|--|------------------------|---------------------|-------------------|
| Cyclohexane | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human and animal | NOAEL Not available | |
| Cyclohexane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human and animal | NOAEL Not available | |
| Cyclohexane | 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 | May cause drowsiness or | Human | NOAEL Not | |

| | | | | | | |
|-------------------|------------|-----------------------------------|--|-------------------------|---------------------|------------------------|
| | | system depression | dizziness | | available | |
| Xylene | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| Xylene | Inhalation | eyes | Not classified | Rat | NOAEL 3.5 mg/l | not available |
| Xylene | Inhalation | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | eyes | Not classified | Rat | NOAEL 250 mg/kg | not applicable |
| 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 | |
| Ethyl Alcohol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | LOAEL 9.4 mg/l | not available |
| Ethyl Alcohol | Inhalation | central nervous system depression | Not classified | Human and animal | NOAEL not available | |
| Ethyl Alcohol | Ingestion | central nervous system depression | Not classified | Multiple animal species | NOAEL not available | |
| Ethyl Alcohol | Ingestion | kidney and/or bladder | Not classified | Dog | NOAEL 3,000 mg/kg | |
| Ethyl Acetate | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Ethyl Acetate | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| Ethyl Acetate | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Isopropyl Alcohol | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Isopropyl Alcohol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| Isopropyl Alcohol | Inhalation | auditory system | Not classified | Guinea pig | NOAEL 13.4 mg/l | 24 hours |
| Isopropyl Alcohol | Ingestion | central nervous system depression | May cause drowsiness or dizziness | 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 |
| 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 |
| MIBK | Inhalation | central nervous | May cause drowsiness or | Human | LOAEL 0.1 | 2 hours |

| | | | | | | |
|------------------|------------|-----------------------------------|--|-------------------------|---------------------|-----------------------|
| | | system depression | dizziness | | mg/l | |
| MIBK | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| MIBK | Inhalation | vascular system | Not classified | Dog | NOAEL Not available | not available |
| MIBK | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Rat | LOAEL 900 mg/kg | not applicable |
| Cumene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | not available |
| Cumene | Inhalation | respiratory irritation | May cause respiratory irritation | Human | LOAEL 0.2 mg/l | occupational exposure |
| Cumene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Multiple animal species | NOAEL Not available | not available |
| Chlorobenzene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Chlorobenzene | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| Maleic Anhydride | Inhalation | respiratory irritation | May cause respiratory irritation | Human | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-------------|------------|---|--|-------------------------|-----------------------|-------------------|
| Cyclohexane | Inhalation | liver | Not classified | Rat | NOAEL 24 mg/l | 90 days |
| Cyclohexane | Inhalation | auditory system | Not classified | Rat | NOAEL 1.7 mg/l | 90 days |
| Cyclohexane | Inhalation | kidney and/or bladder | Not classified | Rabbit | NOAEL 2.7 mg/l | 10 weeks |
| Cyclohexane | Inhalation | hematopoietic system | Not classified | Mouse | NOAEL 24 mg/l | 14 weeks |
| Cyclohexane | Inhalation | peripheral nervous system | Not classified | Rat | NOAEL 8.6 mg/l | 30 weeks |
| 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 though prolonged or repeated exposure | Rat | LOAEL 7.8 mg/l | 5 days |
| Xylene | Inhalation | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Inhalation | heart endocrine system gastrointestinal tract hematopoietic system muscles kidney and/or bladder respiratory system | Not classified | Multiple animal species | NOAEL 3.5 mg/l | 13 weeks |
| Xylene | Ingestion | auditory system | Not classified | Rat | NOAEL 900 mg/kg/day | 2 weeks |
| Xylene | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 1,500 mg/kg/day | 90 days |
| Xylene | Ingestion | liver | Not classified | Multiple animal species | NOAEL Not available | |
| Xylene | Ingestion | heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system immune | Not classified | Mouse | NOAEL 1,000 mg/kg/day | 103 weeks |

| | | | | | | |
|-------------------|------------|--|--|-------------------------|-----------------------|-----------|
| | | system nervous system respiratory system | | | | |
| Ethylbenzene | Inhalation | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1.1 mg/l | 2 years |
| Ethylbenzene | Inhalation | liver | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 1.1 mg/l | 103 weeks |
| Ethylbenzene | Inhalation | hematopoietic system | Not classified | Rat | NOAEL 3.4 mg/l | 28 days |
| Ethylbenzene | Inhalation | auditory system | Not classified | Rat | NOAEL 2.4 mg/l | 5 days |
| Ethylbenzene | Inhalation | endocrine system | Not classified | Mouse | NOAEL 3.3 mg/l | 103 weeks |
| Ethylbenzene | Inhalation | gastrointestinal tract | Not classified | Rat | NOAEL 3.3 mg/l | 2 years |
| Ethylbenzene | Inhalation | bone, teeth, nails, and/or hair muscles | Not classified | Multiple animal species | NOAEL 4.2 mg/l | 90 days |
| Ethylbenzene | Inhalation | heart immune system respiratory system | Not classified | Multiple animal species | NOAEL 3.3 mg/l | 2 years |
| Ethylbenzene | Ingestion | liver kidney and/or bladder | Not classified | Rat | NOAEL 680 mg/kg/day | 6 months |
| Ethyl Alcohol | Inhalation | liver | Some positive data exist, but the data are not sufficient for classification | Rabbit | LOAEL 124 mg/l | 365 days |
| Ethyl Alcohol | Inhalation | hematopoietic system immune system | Not classified | Rat | NOAEL 25 mg/l | 14 days |
| Ethyl Alcohol | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 8,000 mg/kg/day | 4 months |
| Ethyl Alcohol | Ingestion | kidney and/or bladder | Not classified | Dog | NOAEL 3,000 mg/kg/day | 7 days |
| Ethyl Acetate | Inhalation | endocrine system liver nervous system | Not classified | Rat | NOAEL 0.043 mg/l | 90 days |
| Ethyl Acetate | Inhalation | hematopoietic system | Not classified | Rabbit | LOAEL 16 mg/l | 40 days |
| Ethyl Acetate | Ingestion | hematopoietic system liver kidney and/or bladder | Not classified | Rat | NOAEL 3,600 mg/kg/day | 90 days |
| Isopropyl Alcohol | Inhalation | kidney and/or bladder | Not classified | Rat | NOAEL 12.3 mg/l | 24 months |
| Isopropyl Alcohol | Inhalation | nervous system | Not classified | Rat | NOAEL 12 mg/l | 13 weeks |
| Isopropyl Alcohol | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 400 mg/kg/day | 12 weeks |
| Methyl Alcohol | Inhalation | liver | Not classified | Rat | NOAEL 6.55 mg/l | 4 weeks |
| Methyl Alcohol | Inhalation | respiratory system | Not classified | Rat | NOAEL 13.1 mg/l | 6 weeks |
| Methyl Alcohol | Ingestion | liver nervous system | Not classified | Rat | NOAEL 2,500 mg/kg/day | 90 days |
| Epoxy Resin | Dermal | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| Epoxy Resin | Dermal | nervous system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| Epoxy Resin | Ingestion | auditory system heart endocrine | Not classified | Rat | NOAEL 1,000 | 28 days |

| | | | | | | |
|---------|------------|---|--|-------------------------|-----------------------|------------------------|
| | | system hematopoietic system liver eyes kidney and/or bladder | | | mg/kg/day | |
| 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 |
| MIBK | Inhalation | liver | Not classified | Rat | NOAEL 0.41 mg/l | 13 weeks |
| MIBK | Inhalation | heart | Not classified | Multiple animal species | NOAEL 0.8 mg/l | 2 weeks |
| MIBK | Inhalation | kidney and/or bladder | Not classified | Multiple animal species | NOAEL 0.4 mg/l | 90 days |
| MIBK | Inhalation | respiratory system | Not classified | Multiple animal species | NOAEL 4.1 mg/l | 14 weeks |
| MIBK | Inhalation | endocrine system hematopoietic system | Not classified | Multiple animal species | NOAEL 0.41 mg/l | 90 days |
| MIBK | Inhalation | nervous system | Not classified | Multiple animal species | NOAEL 0.41 mg/l | 13 weeks |
| MIBK | Ingestion | endocrine system hematopoietic system liver kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| MIBK | Ingestion | heart immune system muscles nervous system respiratory system | Not classified | Rat | NOAEL 1,040 mg/kg/day | 120 days |

| | | | | | | |
|------------------|------------|---|--|-----|---------------------|--------------|
| Cumene | Inhalation | auditory system endocrine system hematopoietic system liver nervous system eyes | Not classified | Rat | NOAEL 59 mg/l | 13 weeks |
| Cumene | Inhalation | kidney and/or bladder | Not classified | Rat | NOAEL 4.9 mg/l | 13 weeks |
| Cumene | Inhalation | respiratory system | Not classified | Rat | NOAEL 59 mg/l | 13 weeks |
| Cumene | Ingestion | kidney and/or bladder heart endocrine system hematopoietic system liver respiratory system | Not classified | Rat | NOAEL 769 mg/kg/day | 6 months |
| Chlorobenzene | Inhalation | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 0.69 mg/l | 2 generation |
| Chlorobenzene | Inhalation | liver | Not classified | Rat | NOAEL 2.1 mg/l | 2 generation |
| Chlorobenzene | Inhalation | blood | Not classified | Rat | NOAEL 0.35 mg/l | 24 weeks |
| Chlorobenzene | Ingestion | bone marrow | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 250 mg/kg/day | 13 weeks |
| Chlorobenzene | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 188 mg/kg/day | 192 days |
| Chlorobenzene | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 125 mg/kg/day | 13 weeks |
| Chlorobenzene | Ingestion | immune system | Not classified | Rat | NOAEL 750 mg/kg/day | 13 weeks |
| Maleic Anhydride | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.0011 mg/l | 6 months |
| Maleic Anhydride | Inhalation | endocrine system hematopoietic system nervous system kidney and/or bladder heart liver eyes | Not classified | Rat | NOAEL 0.0098 mg/l | 6 months |
| Maleic Anhydride | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 55 mg/kg/day | 80 days |
| Maleic Anhydride | Ingestion | liver | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 250 mg/kg/day | 183 days |
| Maleic Anhydride | Ingestion | heart nervous system | Not classified | Rat | NOAEL 600 mg/kg/day | 183 days |
| Maleic Anhydride | Ingestion | gastrointestinal tract | Not classified | Rat | NOAEL 150 mg/kg/day | 80 days |
| Maleic Anhydride | Ingestion | hematopoietic system | Not classified | Dog | NOAEL 60 mg/kg/day | 90 days |
| Maleic Anhydride | Ingestion | skin endocrine system immune system eyes respiratory system | Not classified | Rat | NOAEL 150 mg/kg/day | 80 days |

Aspiration Hazard

| Name | Value |
|--------------|--|
| Cyclohexane | Aspiration hazard |
| Xylene | Aspiration hazard |
| Ethylbenzene | Aspiration hazard |
| Toluene | Aspiration hazard |
| MIBK | Some positive data exist, but the data are not sufficient for classification |

Cumene

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), D021 (Chlorobenzene)

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

Aspiration Hazard

Carcinogenicity

Reproductive toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

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

| Ingredient | C.A.S. No | % by Wt |
|-----------------------------|------------------|----------------------|
| Cyclohexane | 110-82-7 | Trade Secret 40 - 60 |
| Xylene | 1330-20-7 | Trade Secret 15 - 35 |
| Xylene (Benzene, dimethyl-) | 1330-20-7 | Trade Secret 15 - 35 |
| Ethylbenzene | 100-41-4 | Trade Secret < 12 |
| Cumene | 98-82-8 | Trade Secret < 0.25 |
| MIBK | 108-10-1 | Trade Secret < 0.5 |

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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: 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: | 06-8243-5 | Version Number: | 32.16 |
| Issue Date: | 01/30/24 | Supersedes Date: | 11/06/23 |

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