



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Structural Adhesive Primer EC-3924B

Product Identification Numbers

62-3944-6501-7, 62-3944-6550-4, 62-3944-7501-6, 62-3944-7540-4, 62-3944-7550-3, 62-3944-8501-5, 62-3944-8540-3, 62-3944-8550-2, 62-3944-9501-4, 87-3300-0024-8, 87-3300-0596-5, 87-3300-0597-3, 87-3300-0598-1
7000046547, 7000046548, 7100027072, 7010367622, 7000000909, 7010399457, 7100067911, 7100067912

1.2. Recommended use and restrictions on use

Recommended use

Primer for adhesive, Industrial use

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive and Aerospace 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 2.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 1B.
Carcinogenicity: Category 1A.
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements

Signal word

Danger

Symbols

Flame | Corrosion | Exclamation mark | Health Hazard |

Pictograms**Hazard Statements**

Highly flammable liquid and vapor.

Causes serious eye damage.

May cause an allergic skin reaction.

May cause respiratory irritation.

May cause drowsiness or dizziness.

May damage fertility or the unborn child.

May cause cancer.

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.

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.

Immediately call a POISON CENTER or doctor/physician.

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

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

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

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Diacetone Alcohol	123-42-2	15 - 40 Trade Secret *
Methyl Ethyl Ketone	78-93-3	15 - 40 Trade Secret *
Tetrahydrofuran	109-99-9	10 - 30 Trade Secret *
1-Methoxy-2-Propanol	107-98-2	1 - 5 Trade Secret *
Epoxy Resin	25036-25-3	1 - 5 Trade Secret *
Water	7732-18-5	1 - 5
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	< 1
Phenol-Formaldehyde Polymer Glycidyl Ether	28064-14-4	< 1 Trade Secret *
Strontium Chromate (VI)	7789-06-2	< 1 Trade Secret *
Acetone	67-64-1	<= 0.99
Toluene	108-88-3	<= 0.99 Trade Secret *
Phenolic Polymer	9003-35-4	< 0.4 Trade Secret *
Methyl Alcohol	67-56-1	< 0.3 Trade Secret *

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

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

Eye Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:

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

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

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Formaldehyde	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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. 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-Propanol	107-98-2	ACGIH	TWA:50 ppm;STEL:100 ppm	A4: Not class. as human carcin
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	
Tetrahydrofuran	109-99-9	ACGIH	TWA:50 ppm;STEL:100 ppm	A3: Confirmed animal carcin., Danger of cutaneous absorption
Tetrahydrofuran	109-99-9	OSHA	TWA:590 mg/m3(200 ppm)	
Diacetone Alcohol	123-42-2	ACGIH	TWA:50 ppm	
Diacetone Alcohol	123-42-2	OSHA	TWA:240 mg/m3(50 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)	
Acetone	67-64-1	ACGIH	TWA:250 ppm;STEL:500 ppm	A4: Not class. as human carcin
Acetone	67-64-1	OSHA	TWA:2400 mg/m3(1000 ppm)	
CHROMATES	7789-06-2	OSHA	CEIL:0.1 mg/m3	
CHROMIUM (HEXAVALENT COMPOUNDS)	7789-06-2	ACGIH	TWA(as Cr(IV), inhalable fraction):0.0002 mg/m3;STEL(as Cr(IV), inhalable fraction):0.0005 mg/m3	A1: Confirmed human carcin.
CHROMIUM (HEXAVALENT COMPOUNDS)	7789-06-2	OSHA	TWA:0.005 mg/m3	29 CFR 1910.1026, SKIN
CHROMIUM (VI), WATER SOLUBLE COMPOUNDS	7789-06-2	ACGIH	TWA(as Cr(IV), inhalable fraction):0.0002 mg/m3;TWA(as Cr):0.05 mg/m3;STEL(as Cr(IV), inhalable fraction):0.0005 mg/m3	A1: Confirmed human carcin., Dermal/Respiratory Sensitizer
Chromium(6+), insoluble compounds	7789-06-2	ACGIH	TWA(as Cr):0.01 mg/m3	A1: Confirmed human carcin.
Water-soluble inorganic Cr(6+) compounds	7789-06-2	ACGIH	TWA(as Cr):0.05 mg/m3	A1: Confirmed human carcin.
Methyl Ethyl Ketone	78-93-3	ACGIH	TWA:200 ppm;STEL:300 ppm	
Methyl Ethyl Ketone	78-93-3	OSHA	TWA:590 mg/m3(200 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:

Full Face Shield

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

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

Yellow

Odor

Solvent

Odor threshold

No Data Available

pH

No Data Available

Melting point

Not Applicable

Boiling Point

≥ 66 °C

Flash Point

6.0 °F [*Test Method: Closed Cup*] [*Details: Tetrahydrofuran*]

Evaporation rate

≥ 2 [*Ref Std: ETHER=1*]

Flammability (solid, gas)

Not Applicable

Flammable Limits(LEL)

1.8 % volume

Flammable Limits(UEL)

11.8 % volume

Vapor Pressure

≤ 162 mmHg [*@ 77 °F*]

Vapor Density	2.5 [Ref Std: AIR=1]
Density	0.89 g/ml
Specific Gravity	0.89 [Ref Std: WATER=1]
Solubility in Water	Slight (less than 10%)
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	321 °C [Details: Tetrahydrofuran]
Decomposition temperature	No Data Available
Viscosity	10 centipoise [@ 73.4 °F]
Volatile Organic Compounds	<=835 g/l [Test Method: calculated SCAQMD rule 443.1]
Percent volatile	94 %
VOC Less H2O & Exempt Solvents	<=845 g/l [Test Method: calculated SCAQMD rule 443.1]

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
Strong acids

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:

Prolonged or repeated exposure may cause: Dermal Defatting: Signs/symptoms may include localized redness, itching, drying and cracking of skin. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

May cause additional health effects (see below).

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of 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.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
CR 6 CMPDS	7789-06-2	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
CR 6 CMPDS	7789-06-2	Known human carcinogen	National Toxicology Program Carcinogens
CR 6 CMPDS	7789-06-2	Cancer hazard	OSHA Carcinogens
Tetrahydrofuran	109-99-9	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Methyl Ethyl Ketone	Dermal	Rabbit	LD50 > 8,050 mg/kg
Methyl Ethyl Ketone	Inhalation-Vapor (4 hours)	Rat	LC50 34.5 mg/l
Methyl Ethyl Ketone	Ingestion	Rat	LD50 2,737 mg/kg
Diacetone Alcohol	Dermal	Rabbit	LD50 13,645 mg/kg
Diacetone Alcohol	Inhalation-Vapor (4	Rat	LC50 > 7.6 mg/l

	hours)		
Diacetone Alcohol	Ingestion	Rat	LD50 3,002 mg/kg
Tetrahydrofuran	Dermal	Rat	LD50 > 2,000 mg/kg
Tetrahydrofuran	Inhalation-Vapor (4 hours)	Rat	LC50 54 mg/l
Tetrahydrofuran	Ingestion	Rat	LD50 3,180 mg/kg
Epoxy Resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1,000 mg/kg
1-Methoxy-2-Propanol	Dermal	Rabbit	LD50 11,000-13,800 mg/kg
1-Methoxy-2-Propanol	Inhalation-Vapor (4 hours)	Rat	LC50 56 mg/l
1-Methoxy-2-Propanol	Ingestion	Rat	LD50 6,100 mg/kg
Acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
Acetone	Inhalation-Vapor (4 hours)	Rat	LC50 76 mg/l
Acetone	Ingestion	Rat	LD50 5,800 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
Phenol-Formaldehyde Polymer Glycidyl Ether	Dermal	Rabbit	LD50 > 6,000 mg/kg
Phenol-Formaldehyde Polymer Glycidyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Phenol-Formaldehyde Polymer Glycidyl Ether	Ingestion	Rat	LD50 > 4,000 mg/kg
Strontium Chromate (VI)	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Strontium Chromate (VI)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.27 mg/l
Strontium Chromate (VI)	Ingestion	Rat	LD50 3,118 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
Phenolic Polymer	Dermal	Rat	LD50 > 2,000 mg/kg
Phenolic Polymer	Ingestion	Rat	LD50 > 2,900 mg/kg
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Dermal	Rabbit	LD50 4,000 mg/kg
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Rat	LD50 7,010 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Methyl Ethyl Ketone	Rabbit	Minimal irritation
Diacetone Alcohol	Rabbit	No significant irritation
Tetrahydrofuran	Rabbit	Minimal irritation
Epoxy Resin	Rabbit	Mild irritant
1-Methoxy-2-Propanol	Not available	Minimal irritation
Acetone	Mouse	Minimal irritation
Toluene	Rabbit	Irritant
Phenol-Formaldehyde Polymer Glycidyl Ether	Rabbit	Minimal irritation
Strontium Chromate (VI)	Professional judgement	Mild irritant
Methyl Alcohol	Rabbit	Mild irritant

Phenolic Polymer	Human and animal	Mild irritant
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Methyl Ethyl Ketone	Rabbit	Severe irritant
Diacetone Alcohol	Rabbit	Severe irritant
Tetrahydrofuran	Rabbit	Corrosive
Epoxy Resin	Rabbit	Moderate irritant
1-Methoxy-2-Propanol	Not available	Mild irritant
Acetone	Rabbit	Severe irritant
Toluene	Rabbit	Moderate irritant
Phenol-Formaldehyde Polymer Glycidyl Ether	Rabbit	Mild irritant
Strontium Chromate (VI)	Rabbit	Mild irritant
Methyl Alcohol	Rabbit	Moderate irritant
Phenolic Polymer	Human and animal	Moderate irritant
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Diacetone Alcohol	Guinea pig	Not classified
Tetrahydrofuran	Human and animal	Not classified
Epoxy Resin	Human and animal	Sensitizing
1-Methoxy-2-Propanol	Guinea pig	Not classified
Toluene	Guinea pig	Not classified
Phenol-Formaldehyde Polymer Glycidyl Ether	Human and animal	Sensitizing
Strontium Chromate (VI)	similar compounds	Sensitizing
Methyl Alcohol	Guinea pig	Not classified
Phenolic Polymer	Human and animal	Sensitizing
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Guinea pig	Not classified

Respiratory Sensitization

Name	Species	Value
Epoxy Resin	Human	Not classified
Phenolic Polymer	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Methyl Ethyl Ketone	In Vitro	Not mutagenic
Diacetone Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification

Tetrahydrofuran	In Vitro	Not mutagenic
Tetrahydrofuran	In vivo	Not mutagenic
Epoxy Resin	In vivo	Not mutagenic
Epoxy Resin	In Vitro	Some positive data exist, but the data are not sufficient for classification
1-Methoxy-2-Propanol	In Vitro	Not mutagenic
Acetone	In vivo	Not mutagenic
Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Phenol-Formaldehyde Polymer Glycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Strontium Chromate (VI)	In vivo	Mutagenic
Methyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methyl Alcohol	In vivo	Some positive data exist, but the data are not sufficient for classification
3-(Trimethoxysilyl)Propyl Glycidyl Ether	In vivo	Not mutagenic
3-(Trimethoxysilyl)Propyl Glycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Methyl Ethyl Ketone	Inhalation	Human	Not carcinogenic
Tetrahydrofuran	Inhalation	Multiple animal species	Carcinogenic
Epoxy Resin	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
1-Methoxy-2-Propanol	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Acetone	Not Specified	Multiple animal species	Not carcinogenic
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
Strontium Chromate (VI)	Not Specified	similar compounds	Carcinogenic
Methyl Alcohol	Inhalation	Multiple animal species	Not carcinogenic
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Methyl Ethyl Ketone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
Diacetone Alcohol	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	prematuring into lactation
Diacetone Alcohol	Ingestion	Not classified for male reproduction	Rat	NOAEL 300 mg/kg/day	44 days
Diacetone Alcohol	Ingestion	Toxic to development	Rabbit	NOAEL 100 mg/kg/day	during gestation
Tetrahydrofuran	Ingestion	Not classified for female reproduction	Rat	NOAEL 782 mg/kg/day	2 generation

Tetrahydrofuran	Ingestion	Not classified for male reproduction	Rat	NOAEL 782 mg/kg/day	2 generation
Tetrahydrofuran	Ingestion	Not classified for development	Rat	NOAEL 305 mg/kg/day	2 generation
Tetrahydrofuran	Inhalation	Not classified for development	Mouse	NOAEL 1.8 mg/l	during gestation
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
Epoxy Resin	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
1-Methoxy-2-Propanol	Inhalation	Not classified for male reproduction	Rat	NOAEL 11 mg/l	2 generation
1-Methoxy-2-Propanol	Ingestion	Not classified for female reproduction	Mouse	NOAEL 3,328 mg/kg/day	2 generation
1-Methoxy-2-Propanol	Inhalation	Not classified for female reproduction	Rat	NOAEL 3.7 mg/l	2 generation
1-Methoxy-2-Propanol	Ingestion	Not classified for male reproduction	Mouse	NOAEL 3,328 mg/kg	2 generation
1-Methoxy-2-Propanol	Ingestion	Not classified for development	Rat	NOAEL 370 mg/kg	during gestation
1-Methoxy-2-Propanol	Inhalation	Not classified for development	Rat	NOAEL 3.7 mg/l	2 generation
Acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
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
Strontium Chromate (VI)	Ingestion	Toxic to female reproduction	similar compounds	NOAEL Not available	
Strontium Chromate (VI)	Ingestion	Toxic to male reproduction	similar compounds	NOAEL Not available	
Strontium Chromate (VI)	Ingestion	Toxic to development	similar compounds	NOAEL Not available	
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
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Methyl Ethyl Ketone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
Methyl Ethyl Ketone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Methyl Ethyl Ketone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Methyl Ethyl Ketone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
Methyl Ethyl Ketone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
Diacetone Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Diacetone Alcohol	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	
Diacetone Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Diacetone Alcohol	Ingestion	blood	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,882 mg/kg	
Diacetone Alcohol	Ingestion	liver	Not classified	Rat	NOAEL 1,882 mg/kg	not applicable
Tetrahydrofuran	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Tetrahydrofuran	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	
Tetrahydrofuran	Inhalation	respiratory system	Not classified	Rabbit	NOAEL 2.9 mg/l	4 hours
Tetrahydrofuran	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	NOAEL 180 mg/kg	not applicable
1-Methoxy-2-Propanol	Dermal	central nervous system depression	Not classified	Rabbit	NOAEL 1,800 mg/kg	13 weeks
1-Methoxy-2-Propanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
Acetone	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
Strontium Chromate (VI)	Inhalation	respiratory irritation	May cause respiratory irritation	similar compounds	NOAEL Not available	

Strontium Chromate (VI)	Ingestion	kidney and/or bladder	Causes damage to organs	similar compounds	NOAEL Not available	
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
Phenolic Polymer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Methyl Ethyl Ketone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
Methyl Ethyl Ketone	Inhalation	liver kidney and/or bladder heart endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system immune system muscles	Not classified	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
Methyl Ethyl Ketone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
Diacetone Alcohol	Inhalation	liver kidney and/or bladder	Not classified	Rat	NOAEL 4.5 mg/l	6 weeks
Diacetone Alcohol	Ingestion	endocrine system liver kidney and/or bladder hematopoietic system nervous system eyes	Not classified	Rat	NOAEL 600 mg/kg/day	13 weeks
Tetrahydrofuran	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.6 mg/l	12 weeks
Tetrahydrofuran	Inhalation	respiratory system	Not classified	Rat	NOAEL 2.9 mg/l	12 weeks
Tetrahydrofuran	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.6 mg/l	105 weeks
Tetrahydrofuran	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	2 weeks
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 system hematopoietic system liver eyes kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

1-Methoxy-2-Propanol	Dermal	kidney and/or bladder	Not classified	Rabbit	NOAEL 1,800 mg/kg/day	13 weeks
1-Methoxy-2-Propanol	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 1,000 mg/kg/day	3 weeks
1-Methoxy-2-Propanol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 3.7 mg/l	13 weeks
1-Methoxy-2-Propanol	Inhalation	liver	Not classified	Rat	NOAEL 11 mg/l	13 weeks
1-Methoxy-2-Propanol	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 2.2 mg/l	10 days
1-Methoxy-2-Propanol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 920 mg/kg/day	13 weeks
1-Methoxy-2-Propanol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 920 mg/kg/day	13 weeks
Acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks
Acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Toluene	Inhalation	auditory system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	May cause 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	Not classified	Human	NOAEL Not available	occupational exposure

		system				
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
Strontium Chromate (VI)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	similar compounds	NOAEL Not available	
Strontium Chromate (VI)	Ingestion	kidney and/or bladder	May cause damage to organs through prolonged or repeated exposure	similar compounds	NOAEL Not available	
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
Phenolic Polymer	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

Name	Value
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.

Dispose of waste product in a permitted industrial waste 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), D007 (Chromium), D035 (Methyl ethyl ketone)

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

Health Hazards

Carcinogenicity

Hazard Not Otherwise Classified (HNOC)

Reproductive toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

This material contains a chemical which requires export notification under TSCA Section 12[b]:

Ingredient (Category if applicable)

Strontium Chromate (VI) (CHROMIUM
(HEXAVALENT COMPOUNDS))

C.A.S. No

7789-06-2

Regulation

Toxic Substances Control Act (TSCA) 6
Banned or Restricted Use Chemicals

Status

Applicable

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: 3 **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.

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