

Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier

3M(TM) SCOTCH-WELD(TM) STRUCTURAL ADHESIVE PRIMER EC-3917

Product Identification Numbers

62-3917-5501-4	62-3917-6501-3	62-3917-6550-0	62-3917-6560-9	62-3917-7501-2
62-3917-7538-4	62-3917-7540-0	62-3917-7550-9	62-3917-8501-1	62-3917-8540-9
62-3917-8550-8	87-3300-0594-0	87-3300-0595-7	87-3300-0665-8	87-3300-0666-6

1.2. Recommended use and restrictions on use

Intended Use

Industrial use

Specific Use

Primer

Restrictions on use

Not applicable

1.3. Supplier's details

Company: 3M Canada Company

Division: Automotive and Aerospace Solutions Division

Address: 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1

Telephone: (800) 364-3577 **Website:** www.3M.ca

1.4. Emergency telephone number

Medical Emergency Telephone:1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Flammable Liquid: Category 2.

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 1B. Carcinogenicity: Category 1A. Germ Cell Mutagenicity: Category 2.

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 vapour.

Causes serious eye irritation. May cause an allergic skin reaction. May cause drowsiness or dizziness. May damage fertility or the unborn child. May cause cancer. Suspected of causing genetic defects.

Causes damage to organs: kidney/urinary tract

Causes damage to organs through prolonged or repeated exposure: respiratory system | May cause damage to organs through prolonged or repeated exposure: kidney/urinary tract |

Precautionary statements

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. Use explosion-proof electrical/ventilating/lighting equipment. Do not breathe dust/fume/gas/mist/vapours/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 exposed skin 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 or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF exposed or concerned: Get medical advice/attention. In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

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

Disposal:

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

2.3. Other hazards

None known.

6% of the mixture consists of ingredients of unknown acute oral toxicity.

6% of the mixture consists of ingredients of unknown acute dermal toxicity.

6% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt	Common Name
Methyl Ethyl Ketone	78-93-3	65 - 85 Trade Secret *	2-Butanone
PHENOL-FORMALDEHYDE	Trade Secret	5 - 10	Not Applicable
RESIN			
Epoxy Resin	25036-25-3	1 - 5 Trade Secret *	Phenol, 4,4'-(1-methylethylidene)bis-,
			polymer with 2,2'-[(1-
			methylethylidene)bis(4,1-
			phenyleneoxymethylene)]bis[oxirane]
Ethyl Acetate	141-78-6	< 5	Acetic acid ethyl ester
Ethyl Alcohol	64-17-5	< 5	Ethanol
STRONTIUM CHROMATE	7789-06-2	1 - 5 Trade Secret *	Chromic acid (H2CrO4), strontium salt
(VI)			(1:1)
Water	7732-18-5	< 5	Water
Phenol-Formaldehyde Polymer	9003-35-4	0.5 - 1.5 Trade Secret *	Phenol, polymer with formaldehyde
MIBK	108-10-1	<= 0.99	2-Pentanone, 4-methyl-
Toluene	108-88-3	0 - 0.99	No Data Available
Methyl Alcohol	67-56-1	< 0.2	Methanol
BARIUM CHROMATE	10294-40-3	0 - 0.11	Chromic acid (H2CrO4), barium salt (1:1)

PHENOL-FORMALDEHYDE RESIN is a non-hazardous Trade Secret material according to WHMIS criteria.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin Contact:

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

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

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

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

Allergic skin reaction (redness, swelling, blistering, and itching). 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

^{*}The actual concentration of this ingredient has been withheld as a trade secret.

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	<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 vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours 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. 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 or professional 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/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. 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
CHROMIUM (HEXAVALENT COMPOUNDS)	10294-40-3	ACGIH	TWA(as Cr(IV), inhalable fraction):0.0002 mg/m3;STEL(as Cr(IV), inhalable fraction):0.0005 mg/m3	
Chromium(6+), insoluble compounds	10294-40-3	ACGIH	TWA(as Cr):0.01 mg/m3	
Water-soluble inorganic Cr(6+) compounds	10294-40-3	ACGIH	TWA(as Cr):0.05 mg/m3	
MIBK	108-10-1	ACGIH	TWA:20 ppm;STEL:75 ppm	
Toluene	108-88-3	ACGIH	TWA:20 ppm	
Ethyl Acetate	141-78-6	ACGIH	TWA:400 ppm	
Ethyl Alcohol	64-17-5	ACGIH	STEL:1000 ppm	
Methyl Alcohol	67-56-1	ACGIH	TWA:200 ppm;STEL:250 ppm	Danger of cutaneous absorption
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	
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	Dermal/Respiratory Sensitizer
Chromium(6+), insoluble compounds	7789-06-2	ACGIH	TWA(as Cr):0.01 mg/m3	
Water-soluble inorganic Cr(6+) compounds	7789-06-2	ACGIH	TWA(as Cr):0.05 mg/m3	
Methyl Ethyl Ketone	78-93-3	ACGIH	TWA:200 ppm;STEL:300 ppm	

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for formaldehyde

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours 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

Physical state	Liquid		
Colour	Green, Yellow		
Odour	Ketones		
Odour threshold	No Data Available		
pH	Not Applicable		
Melting point/Freezing point	Not Applicable		
Boiling point	>=77 °C		
Flash Point	-8.9 °C [Test Method:Closed Cup]		
Evaporation rate	2.7 [Ref Std:ETHER=1]		
Flammability (solid, gas)	Not Applicable		
Flammable Limits(LEL)	1.8 % volume		
Flammable Limits(UEL)	19 % volume		
Vapour Pressure	13,332.2 Pa [@ 27.2 °C]		
Vapour Density and/or Relative Vapour Density	2.5 [<i>Ref Std</i> :AIR=1]		
Density	0.86 g/ml		

Relative density	0.86 [Ref Std:WATER=1]		
Water solubility	Slight (less than 10%)		
Solubility- non-water	No Data Available		
Partition coefficient: n-octanol/ water	No Data Available		
Autoignition temperature	365 °C [Details:Ethyl Alcohol]		
Decomposition temperature	No Data Available		
Viscosity/Kinematic Viscosity	2 - 5 mPa-s [@ 23 °C]		
Volatile Organic Compounds	<=750 g/l [Test Method:calculated SCAQMD rule 443.1]		
Percent volatile	<=87 %		
VOC Less H2O & Exempt Solvents	<=770 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

Substance
None known.

Condition

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:

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:

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. Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Prolonged or repeated exposure may cause target organ effects:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure. Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Reproductive/Developmental Toxicity:

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

Genotoxicity:

Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
Chromium Hexavalent Compounds	10294-40-3	Known To Be Human Carcinogen.	National Toxicology Program Carcinogens
Chromium Hexavalent Compounds	7789-06-2	Known To Be Human Carcinogen.	National Toxicology Program Carcinogens
Chromium[VI] compounds	10294-40-3	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Chromium[VI] compounds	7789-06-2	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Hexavalent chromium compounds	10294-40-3	Cancer hazard	OSHA Carcinogens
Hexavalent chromium compounds	7789-06-2	Cancer hazard	OSHA Carcinogens
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 >5,000 mg/kg

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Overall product	Inhalation- Vapor(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
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
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
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
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
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
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
Epoxy Resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1,000 mg/kg
Phenol-Formaldehyde Polymer	Dermal	Rat	LD50 > 2,000 mg/kg
Phenol-Formaldehyde Polymer	Ingestion	Rat	LD50 > 2,900 mg/kg
Methyl Alcohol Methyl Alcohol	Dermal Inhalation-		LD50 estimated to be 1,000 - 2,000 mg/kg LC50 estimated to be 10 - 20 mg/l
-	Vapor		
Methyl Alcohol	Ingestion		LD50 estimated to be 50 - 300 mg/kg
BARIUM CHROMATE	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
BARIUM CHROMATE	Ingestion	Rat	LD50 3,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

SKIII COFFOSIOII/IFFILALIOII		
Name	Species	Value
Methyl Ethyl Ketone	Rabbit	Minimal irritation
Ethyl Acetate	Rabbit	Minimal irritation
STRONTIUM CHROMATE (VI)	Professio	Mild irritant
	nal	
	judgeme	
	nt	
Ethyl Alcohol	Rabbit	No significant irritation
MIBK	Rabbit	Mild irritant
Toluene	Rabbit	Irritant
Epoxy Resin	Rabbit	Mild irritant
Phenol-Formaldehyde Polymer	Human	Mild irritant
	and	
	animal	
Methyl Alcohol	Rabbit	Mild irritant

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Serious Eye Damage/Irritation

Name	Species	Value
Methyl Ethyl Ketone	Rabbit	Severe irritant
Ethyl Acetate	Rabbit	Mild irritant
STRONTIUM CHROMATE (VI)	Rabbit	Mild irritant
Ethyl Alcohol	Rabbit	Severe irritant
MIBK	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant
Epoxy Resin	Rabbit	Moderate irritant
Phenol-Formaldehyde Polymer	Human	Moderate irritant
	and	
	animal	
Methyl Alcohol	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Ethyl Acetate	Guinea	Not classified
241)111004110	pig	The classified
STRONTIUM CHROMATE (VI)	similar compoun	Sensitizing
	ds	
Ethyl Alcohol	Human	Not classified
MIBK	Guinea	Not classified
	pig	
Toluene	Guinea	Not classified
	pig	
Epoxy Resin	Human	Sensitizing
	and	
	animal	
Phenol-Formaldehyde Polymer	Human	Sensitizing
	and	
	animal	
Methyl Alcohol	Guinea	Not classified
	pig	
BARIUM CHROMATE	similar	Not classified
	compoun	
	ds	

Respiratory Sensitization

respiratory sensitization		
Name	Species	Value
Epoxy Resin	Human	Not classified
Phenol-Formaldehyde Polymer	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Methyl Ethyl Ketone	In Vitro	Not mutagenic
Ethyl Acetate	In Vitro	Not mutagenic
Ethyl Acetate	In vivo	Not mutagenic
STRONTIUM CHROMATE (VI)	In vivo	Mutagenic
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
MIBK	In Vitro	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	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
Methyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification

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Methyl Alcohol	In vivo	Some positive data exist, but the data are not sufficient for classification
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Carcinogenicity

Name	Route	Species	Value
Methyl Ethyl Ketone	Inhalation	Human	Not carcinogenic
STRONTIUM CHROMATE (VI)	Not	similar	Carcinogenic
	Specified	compoun ds	
Ethyl Alcohol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
MIBK	Inhalation	Multiple animal species	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
Epoxy Resin	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Methyl Alcohol	Inhalation	Multiple animal species	Not carcinogenic
BARIUM CHROMATE	Not Specified	similar compoun ds	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
STRONTIUM CHROMATE (VI)	Ingestion	Toxic to female reproduction	similar compoun ds	NOAEL Not available	
STRONTIUM CHROMATE (VI)	Ingestion	Toxic to male reproduction	similar compoun ds	NOAEL Not available	
STRONTIUM CHROMATE (VI)	Ingestion	Toxic to development	similar compoun ds	NOAEL Not available	
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	premating & during gestation
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 organogenesi s
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
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 organogenesi s
Epoxy Resin	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
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 organogenesi s
Methyl Alcohol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesi s
BARIUM CHROMATE	Not Specified	Not classified for reproduction and/or development	similar compoun ds	NOAEL Not available	premating & during gestation

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 classifica tion	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	Professio nal judgeme nt	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
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	
STRONTIUM CHROMATE (VI)	Inhalation	respiratory irritation	May cause respiratory irritation	similar compoun ds	NOAEL Not available	
STRONTIUM CHROMATE (VI)	Ingestion	kidney and/or bladder	Causes damage to organs	similar compoun ds	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	

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Ethyl Alcohol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	
MIBK	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.1 mg/l	2 hours
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
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
Phenol-Formaldehyde Polymer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	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

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
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
STRONTIUM CHROMATE (VI)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	similar compoun ds	NOAEL Not available	
STRONTIUM CHROMATE (VI)	Ingestion	kidney and/or bladder	May cause damage to organs though prolonged or repeated	similar compoun	NOAEL Not available	

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			exposure	ds		
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
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
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 though 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

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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
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
Phenol-Formaldehyde Polymer	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
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
BARIUM CHROMATE	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	similar compoun ds	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value
MIBK	Some positive data exist, but the data are not sufficient for
	classification
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

No data available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Dispose of waste product in a permitted industrial waste facility. 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.

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SECTION 14: Transport Information

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

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status

Contact 3M for more information. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. 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.

SECTION 16: Other information

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

Health: 2 Flammability: 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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