



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Structural Adhesive Film AF 15

Product Identification Numbers

44-0047-6202-5, 62-1647-0805-9, 62-1647-1705-0, 62-1647-3905-4, 62-1647-5303-0, 62-1647-5305-5, 62-3335-1005-5, 62-3335-1705-0, 62-3335-5301-4, 62-3335-5305-5, 62-3335-5309-7, 87-2500-0225-7, 87-2500-0479-0
7100100938, 7000046462, 7010351979

1.2. Recommended use and restrictions on use

Recommended use

Structural Film Adhesive, Structural Film Adhesive, Structural adhesive

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

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 1B.

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

2.2. Label elements

Signal word

Danger

Symbols

Exclamation mark | Health Hazard |

Pictograms

**Hazard Statements**

May cause an allergic skin reaction.
May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure:
nervous system |
sensory organs |

Precautionary Statements**Prevention:**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
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 ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

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

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Phenol-Formaldehyde Polymer	9003-35-4	45 - 75 Trade Secret *
Acrylonitrile-Butadiene Polymer	9003-18-3	15 - 40
MEK	78-93-3	<= 4
Toluene	108-88-3	<= 4 Trade Secret *
Zinc Oxide	1314-13-2	< 2
N-Cyclohexyl-2-Benzothiazolesulfenamide	95-33-0	< 1 Trade Secret *
Inhibitor	Trade Secret*	< 0.2 Trade Secret *
Benzene	71-43-2	< 0.011 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:

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, 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). 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 ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Formaldehyde	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ammonia	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	During Combustion

5.3. Special protective actions for fire-fighters

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. Ventilate the area with fresh air. 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.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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. 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. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from amines.

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
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	
Zinc Oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3	
Zinc Oxide	1314-13-2	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3;TWA(as fume):5 mg/m3	
Benzene	71-43-2	ACGIH	TWA:0.5 ppm;STEL:2.5 ppm	A1: Confirmed human carcin., SKIN
Benzene	71-43-2	OSHA	TWA:1 ppm;TWA:10 ppm;STEL:5 ppm;CEIL:25 ppm	29 CFR 1910.1028
MEK	78-93-3	ACGIH	TWA:200 ppm;STEL:300 ppm	
MEK	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.

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

Skin/hand protection

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

Gloves made from the following material(s) are recommended: Polymer laminate

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

Respiratory protection

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

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

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

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance****Physical state**

Solid

Color

Tan

Specific Physical Form:

Film

Odor

Odorless

Odor threshold*No Data Available***pH***Not Applicable***Melting point***No Data Available***Boiling Point***Not Applicable***Flash Point**

No flash point

Evaporation rate*Not Applicable***Flammability (solid, gas)**

Not Classified

Flammable Limits(LEL)*Not Applicable***Flammable Limits(UEL)***Not Applicable***Vapor Pressure***Not Applicable***Vapor Density***Not Applicable***Density**

1.1 g/ml

Specific Gravity*No Data Available***Solubility in Water**

Nil

Solubility- non-water*No Data Available***Partition coefficient: n-octanol/ water***No Data Available***Autoignition temperature***Not Applicable***Decomposition temperature***No Data Available***Viscosity***No Data Available*

Volatile Organic Compounds	55 g/l
Percent volatile	5 %
VOC Less H2O & Exempt Solvents	55 g/l

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

10.5. Incompatible materials

Amines

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:

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.

Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:

Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

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

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

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:

Ingredient	CAS No.	Class Description	Regulation
BENZENE	71-43-2	Known To Be Human Carcinogen.	National Toxicology Program Carcinogens
BENZENE	71-43-2	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
BENZENE	71-43-2	Cancer hazard	OSHA Carcinogens

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Phenol-Formaldehyde Polymer	Dermal	Rat	LD50 > 2,000 mg/kg
Phenol-Formaldehyde Polymer	Ingestion	Rat	LD50 > 2,900 mg/kg
Acrylonitrile-Butadiene Polymer	Dermal	Rabbit	LD50 > 15,000 mg/kg
Acrylonitrile-Butadiene Polymer	Ingestion	Rat	LD50 > 30,000 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
MEK	Dermal	Rabbit	LD50 > 8,050 mg/kg
MEK	Inhalation-Vapor (4 hours)	Rat	LC50 34.5 mg/l
MEK	Ingestion	Rat	LD50 2,737 mg/kg
Zinc Oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Zinc Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Zinc Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
N-Cyclohexyl-2-Benzothiazolesulfenamide	Dermal	Rabbit	LD50 > 7,940 mg/kg
N-Cyclohexyl-2-Benzothiazolesulfenamide	Ingestion	Rat	LD50 5,300 mg/kg
Benzene	Dermal	Multiple animal species	LD50 > 8,260 mg/kg
Benzene	Inhalation-	Rat	LC50 43.8 mg/l

	Vapor (4 hours)		
Benzene	Ingestion	Rat	LD50 5,970 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Phenol-Formaldehyde Polymer	Human and animal	Mild irritant
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
Toluene	Rabbit	Irritant
MEK	Rabbit	Minimal irritation
Zinc Oxide	Human and animal	No significant irritation
N-Cyclohexyl-2-Benzothiazolesulfenamide	Rabbit	No significant irritation
Benzene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Phenol-Formaldehyde Polymer	Human and animal	Moderate irritant
Acrylonitrile-Butadiene Polymer	Professional judgement	No significant irritation
Toluene	Rabbit	Moderate irritant
MEK	Rabbit	Severe irritant
Zinc Oxide	Rabbit	Mild irritant
N-Cyclohexyl-2-Benzothiazolesulfenamide	Rabbit	Mild irritant
Benzene	Rabbit	Severe irritant

Skin Sensitization

Name	Species	Value
Phenol-Formaldehyde Polymer	Human and animal	Sensitizing
Toluene	Guinea pig	Not classified
Zinc Oxide	Guinea pig	Not classified
N-Cyclohexyl-2-Benzothiazolesulfenamide	Human	Sensitizing
Benzene	Multiple animal species	Not classified

Respiratory Sensitization

Name	Species	Value
Phenol-Formaldehyde Polymer	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

MEK	In Vitro	Not mutagenic
Zinc Oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc Oxide	In vivo	Some positive data exist, but the data are not sufficient for classification
N-Cyclohexyl-2-Benzothiazolesulfenamide	In vivo	Not mutagenic
N-Cyclohexyl-2-Benzothiazolesulfenamide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Benzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Benzene	In vivo	Mutagenic

Carcinogenicity

Name	Route	Species	Value
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
MEK	Inhalation	Human	Not carcinogenic
N-Cyclohexyl-2-Benzothiazolesulfenamide	Ingestion	Mouse	Not carcinogenic
Benzene	Dermal	Mouse	Carcinogenic
Benzene	Ingestion	Multiple animal species	Carcinogenic
Benzene	Inhalation	Human	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
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
MEK	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
Zinc Oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	prematuring & during gestation
N-Cyclohexyl-2-Benzothiazolesulfenamide	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	during organogenesis
Benzene	Inhalation	Not classified for female reproduction	Rat	NOAEL 0.96 mg/l	prematuring into lactation
Benzene	Inhalation	Not classified for development	Rat	NOAEL 0.032 mg/l	during organogenesis
Benzene	Ingestion	Toxic to male reproduction	Rat	LOAEL 50 mg/kg/day	90 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Phenol-Formaldehyde Polymer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for	Human and	NOAEL Not available	

			classification	animal		
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
MEK	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classification	NOAEL Not available	
MEK	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
MEK	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
MEK	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
MEK	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
Benzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not Available	
Benzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not Available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Phenol-Formaldehyde Polymer	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
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
Toluene	Ingestion	liver kidney and/or	Not classified	Multiple	NOAEL	13 weeks

		bladder		animal species	2,500 mg/kg/day	
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
MEK	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
MEK	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
MEK	Ingestion	liver	Not classified	Rat	NOAEL Not available	7 days
MEK	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
Zinc Oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
Zinc Oxide	Ingestion	endocrine system hematopoietic system kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months
N-Cyclohexyl-2-Benzothiazolesulfenamide	Dermal	skin hematopoietic system	Not classified	Rabbit	NOAEL 2,000 mg/kg/day	21 days
N-Cyclohexyl-2-Benzothiazolesulfenamide	Inhalation	hematopoietic system immune system respiratory system eyes kidney and/or bladder	Not classified	Rat	NOAEL 0.048 mg/l	29 days
N-Cyclohexyl-2-Benzothiazolesulfenamide	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 800 mg/kg/day	28 days
N-Cyclohexyl-2-Benzothiazolesulfenamide	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 80 mg/kg/day	28 days
N-Cyclohexyl-2-Benzothiazolesulfenamide	Ingestion	heart endocrine system gastrointestinal tract immune system nervous system	Not classified	Rat	NOAEL 800 mg/kg/day	28 days
Benzene	Inhalation	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Human and animal	NOAEL Not Available	
Benzene	Inhalation	heart endocrine system gastrointestinal tract bone, teeth, nails, and/or hair liver immune system muscles nervous system eyes kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 0.96 mg/l	90 days
Benzene	Ingestion	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 25 mg/kg/day	90 days
Benzene	Ingestion	heart endocrine system gastrointestinal tract bone, teeth, nails, and/or hair liver	Not classified	Rat	NOAEL 600 mg/kg/day	90 days

		immune system nervous system kidney and/or bladder respiratory system				
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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 completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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): D018 (Benzene), 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
Not applicable

Health Hazards
Reproductive toxicity

Respiratory or Skin Sensitization

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):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Toluene	108-88-3	Trade Secret <= 4
Zinc Oxide (ZINC COMPOUNDS)	1314-13-2	< 2

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

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.
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SECTION 16: Other information**NFPA Hazard Classification****Health:** 2 **Flammability:** 1 **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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