



## Material Safety Data Sheet

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**PRODUCT NAME:** Bondo® Fiberglass Resin Kit, P.N. 401, 401C, 402, 402M, 402C, 402ES, 402T, 402Z, 404, 404C, 404Z

**MANUFACTURER:** 3M

**DIVISION:** Automotive Aftermarket

**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA

**Telephone:** 1-888-3M HELPS (1-888-364-3577)

**EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)**

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**This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:**

24-2440-6, 24-2429-9

### Revision Changes:

Kit: Component document group number(s) information was modified.

Kit: ID Number(s) information was modified.

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<b>Issue Date:</b>	01/21/14	<b>Supersedes Date:</b>	11/09/12

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Bondo® MEKP Liquid Hardener for Fiberglass Resin Kit, P.N. 401, 401C, 402, 402C, 402T, 402Z, 404, 404C, 404Z

LB-K100-0411-2, LB-K100-0414-8, LB-K100-0414-9

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Automotive, Curing Agent

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Automotive Aftermarket
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	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

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

#### 2.1. Hazard classification

Organic Peroxide: Type D.  
Acute Toxicity (oral): Category 4.  
Acute Toxicity (inhalation): Category 4.  
Serious Eye Damage/Irritation: Category 1.  
Skin Corrosion/Irritation: Category 1C.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Flame | Corrosion | Exclamation mark |

### Pictograms



### Hazard Statements

Heating may cause a fire.

Harmful if swallowed.

Causes serious eye damage.

Causes severe skin burns and eye damage.

Harmful if inhaled.

### Precautionary Statements

#### General:

Keep out of reach of children.

#### Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep away from clothing and other combustible materials.

Keep only in original container.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing, and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

#### 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.

Wash contaminated clothing before reuse.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell.

#### Storage:

Protect from sunlight.

Store at temperatures not exceeding 25C/77F. Keep cool.

Store locked up.

Store away from other materials.

#### Disposal:

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

### Notes to Physician

Not applicable

### 2.3. Hazards not otherwise classified

May cause chemical gastrointestinal burns.

64% of the mixture consists of ingredients of unknown acute inhalation toxicity.

### SECTION 3: Composition/information on ingredients

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>% by Wt</b>
Dimethyl Phthalate	131-11-3	30 - 60 Trade Secret *
Methyl Ethyl Ketone Peroxide	1338-23-4	15 - 40 Trade Secret *
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate	6846-50-0	10 - 30 Trade Secret *
Methyl Ethyl Ketone	78-93-3	1 - 5 Trade Secret *
Hydrogen Peroxide	7722-84-1	0.5 - 1.5 Trade Secret *
Water	7732-18-5	0.5 - 1.5 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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

##### **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. Do not induce vomiting. Get immediate medical attention.

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

#### 5.2. Special hazards arising from the substance or mixture

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

#### Hazardous Decomposition or By-Products

##### Substance

Carbon monoxide  
Carbon dioxide

##### Condition

During Combustion  
During Combustion

#### 5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

## 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. 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 closed 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.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

### 7.2. Conditions for safe storage including any incompatibilities

Protect from sunlight. Store at temperatures not exceeding 25C/77F. Keep cool. Keep only in original container. Store away from acids. Store away from oxidizing agents. Store away from other materials. Keep/store away from clothing and other combustible materials.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Dimethyl Phthalate	131-11-3	Amer Conf of Gov. Indust. Hyg.	TWA:5 mg/m <sup>3</sup>	
Dimethyl Phthalate	131-11-3	US Dept of Labor - OSHA	TWA:5 mg/m <sup>3</sup>	
Methyl Ethyl Ketone Peroxide	1338-23-4	Amer Conf of Gov. Indust. Hyg.	CEIL:0.2 ppm	
Hydrogen Peroxide	7722-84-1	Amer Conf of Gov. Indust.	TWA:1 ppm	

Hydrogen Peroxide	7722-84-1	Hyg. US Dept of Labor - OSHA	TWA:1.4 mg/m <sup>3</sup> (1 ppm)	
Methyl Ethyl Ketone	78-93-3	Amer Conf of Gov. Indust. Hyg.	TWA:200 ppm;STEL:300 ppm	
Methyl Ethyl Ketone	78-93-3	US Dept of Labor - OSHA	TWA:590 mg/m <sup>3</sup> (200 ppm)	

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists

American Indust. Hygiene Assoc : American Industrial Hygiene Association

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

US Dept of Labor - 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:

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.

Gloves made from the following material(s) are recommended: Butyl Rubber

Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: 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. Apron – Butyl rubber

#### Respiratory protection

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

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

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

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form: Liquid

<b>Odor, Color, Grade:</b>	Slight odor. Clear.
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>No Data Available</i>
<b>Melting point</b>	<i>No Data Available</i>
<b>Boiling Point</b>	244 °F
<b>Flash Point</b>	> 200 °F [ <i>Test Method:</i> Closed Cup] [ <i>Details:</i> No flash to boiling point.]
<b>Evaporation rate</b>	<i>No Data Available</i>
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammable Limits(LEL)</b>	<i>No Data Available</i>
<b>Flammable Limits(UEL)</b>	<i>No Data Available</i>
<b>Vapor Pressure</b>	<i>No Data Available</i>
<b>Vapor Density</b>	<i>No Data Available</i>
<b>Density</b>	1.128 g/ml
<b>Specific Gravity</b>	1.128 [ <i>Ref Std:</i> WATER=1]
<b>Solubility In Water</b>	<i>No Data Available</i>
<b>Solubility in Water</b>	Negligible
<b>Solubility- non-water</b>	<i>No Data Available</i>
<b>Partition coefficient: n-octanol/ water</b>	<i>No Data Available</i>
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Viscosity</b>	<i>No Data Available</i>
<b>Hazardous Air Pollutants</b>	43.0 % weight [ <i>Test Method:</i> Calculated]
<b>Volatile Organic Compounds</b>	903 g/l [ <i>Test Method:</i> calculated SCAQMD rule 443.1]
<b>Volatile Organic Compounds</b>	80.0 % weight [ <i>Test Method:</i> calculated per CARB title 2]
<b>Percent volatile</b>	9.7 % weight
<b>VOC Less H2O &amp; Exempt Solvents</b>	913 g/l [ <i>Test Method:</i> 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

Light  
Sparks and/or flames  
Temperatures above the boiling point

### 10.5. Incompatible materials

Strong oxidizing agents  
Alkali and alkaline earth metals  
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:

Harmful if inhaled.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause target organ effects after inhalation.

##### Skin Contact:

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

##### 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.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

##### Ingestion:

Harmful if swallowed.

Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

#### Target Organ Effects:

##### Single exposure may cause:

Dermal Effects: Signs/symptoms may include changes in skin pigmentation and/or coloration.

#### 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-		No data available; calculated ATE 15.9 mg/l

	Vapor(4 hr)		
Overall product	Ingestion		No data available; calculated ATE 1,281 mg/kg
Dimethyl Phthalate	Inhalation-Dust/Mist (4 hours)	Other	LC50 > 15.1 mg/l
Dimethyl Phthalate	Dermal	Rabbit	LD50 > 11,940 mg/kg
Dimethyl Phthalate	Ingestion	Rat	LD50 6,800 mg/kg
Methyl Ethyl Ketone Peroxide	Dermal	Rabbit	LD50 4,000 mg/kg
Methyl Ethyl Ketone Peroxide	Inhalation-Vapor (4 hours)	Rat	LC50 15.4 mg/l
Methyl Ethyl Ketone Peroxide	Ingestion	Rat	LD50 484 mg/kg
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate	Dermal	Guinea pig	LD50 > 18,800 mg/kg
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 8 mg/l
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate	Ingestion	Rat	LD50 > 3,200 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
Hydrogen Peroxide	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrogen Peroxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Hydrogen Peroxide	Ingestion	Rat	LD50 1,193 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
Dimethyl Phthalate		Data not available or insufficient for classification
Methyl Ethyl Ketone Peroxide	Rabbit	Corrosive
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate		Data not available or insufficient for classification
Methyl Ethyl Ketone	Rabbit	Minimal irritation
Hydrogen Peroxide	Rabbit	Corrosive

### Serious Eye Damage/Irritation

Name	Species	Value
Dimethyl Phthalate		Data not available or insufficient for classification
Methyl Ethyl Ketone Peroxide	Human	Corrosive
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate		Data not available or insufficient for classification
Methyl Ethyl Ketone	Rabbit	Severe irritant
Hydrogen Peroxide	Rabbit	Corrosive

### Skin Sensitization

Name	Species	Value
Dimethyl Phthalate		Data not available or insufficient for classification
Methyl Ethyl Ketone Peroxide	Human	Some positive data exist, but the data are not sufficient for classification
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate		Data not available or insufficient for classification
Methyl Ethyl Ketone		Data not available or insufficient for classification
Hydrogen Peroxide	Guinea pig	Not sensitizing

### Respiratory Sensitization

Name	Species	Value
Dimethyl Phthalate		Data not available or insufficient for classification
Methyl Ethyl Ketone Peroxide		Data not available or insufficient for classification
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate		Data not available or insufficient for classification
Methyl Ethyl Ketone		Data not available or insufficient for classification
Hydrogen Peroxide		Data not available or insufficient for classification

**Germ Cell Mutagenicity**

Name	Route	Value
Dimethyl Phthalate		Data not available or insufficient for classification
Methyl Ethyl Ketone Peroxide	In vivo	Not mutagenic
Methyl Ethyl Ketone Peroxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate		Data not available or insufficient for classification
Methyl Ethyl Ketone	In Vitro	Not mutagenic
Hydrogen Peroxide	In vivo	Not mutagenic
Hydrogen Peroxide	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
Dimethyl Phthalate			Data not available or insufficient for classification
Methyl Ethyl Ketone Peroxide	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate			Data not available or insufficient for classification
Methyl Ethyl Ketone	Inhalation	Human	Not carcinogenic
Hydrogen Peroxide	Dermal	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Hydrogen Peroxide	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Dimethyl Phthalate		Data not available or insufficient for classification			
Methyl Ethyl Ketone Peroxide	Dermal	Not toxic to female reproduction	Rat	NOAEL 70 mg/kg/day	13 weeks
Methyl Ethyl Ketone Peroxide	Ingestion	Not toxic to female reproduction	Rat	NOAEL 75 mg/kg/day	prematuring & during gestation
Methyl Ethyl Ketone Peroxide	Ingestion	Not toxic to male reproduction	Rat	NOAEL 75 mg/kg/day	28 days
Methyl Ethyl Ketone Peroxide	Dermal	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 70 mg/kg/day	13 weeks
Methyl Ethyl Ketone Peroxide	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 50 mg/kg/day	prematuring & during gestation
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate		Data not available or insufficient for classification			
Methyl Ethyl Ketone	Inhalation	Not toxic to female reproduction	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	Not toxic to male reproduction	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	LOAEL 8.8 mg/l	during gestation
Hydrogen Peroxide	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	LOAEL 5 mg/kg/day	6 months
Hydrogen Peroxide	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	LOAEL 5 mg/kg/day	6 months
Hydrogen Peroxide	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	LOAEL 5 mg/kg/day	during gestation

**Target Organ(s)**

### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dimethyl Phthalate			Data not available or insufficient for classification			
Methyl Ethyl Ketone Peroxide	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate			Data not available or insufficient for classification			
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	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	not applicable
Methyl Ethyl Ketone	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,080 mg/kg	not applicable
Hydrogen Peroxide	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	
Hydrogen Peroxide	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL Not available	poisoning and/or abuse

### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dimethyl Phthalate			Data not available or insufficient for classification			
Methyl Ethyl Ketone Peroxide	Dermal	heart   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder   respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 70 mg/kg/day	13 weeks
Methyl Ethyl Ketone Peroxide	Ingestion	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 97 mg/kg/day	7 weeks
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate			Data not available or insufficient for classification			
Methyl Ethyl Ketone	Dermal	nervous system	All data are negative	Guinea pig	NOAEL Not available	31 weeks
Methyl Ethyl Ketone	Inhalation	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Inhalation	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   muscles	All data are negative	Rat	NOAEL 14.7 mg/l	90 days
Methyl Ethyl Ketone	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	7 days
Methyl Ethyl Ketone	Ingestion	nervous system	All data are negative	Rat	NOAEL 173 mg/kg/day	90 days
Hydrogen Peroxide	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOEL 0.005 mg/kg/day	6 months
Hydrogen Peroxide	Ingestion	liver   kidney and/or	Some positive data exist, but the	Mouse	NOAEL Not	35 weeks

		bladder	data are not sufficient for classification		available	
--	--	---------	--	--	-----------	--

**Aspiration Hazard**

Name	Value
Dimethyl Phthalate	Not an aspiration hazard
Methyl Ethyl Ketone Peroxide	Not an aspiration hazard
2,2,4-Trimethyl-1,3-Pentanediol Diisobutyrate	Not an aspiration hazard
Methyl Ethyl Ketone	Not an aspiration hazard
Hydrogen Peroxide	Not an aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information****Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

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

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, Dispose of completely cured (or polymerized) material 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.

**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.

**311/312 Hazard Categories:**

Fire Hazard - Yes   Pressure Hazard - No   Reactivity Hazard - No   Immediate Hazard - Yes   Delayed Hazard - Yes

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>
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Dimethyl Phthalate

131-11-3

Trade Secret 30 - 60

## 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.

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:** 1 **Instability:** 1 **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.

### HMIS Hazard Classification

**Health:** 3 **Flammability:** 1 **Physical Hazard:** 1 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® III) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® III ratings are to be used with a fully implemented HMIS® III program. HMIS® is a registered mark of the American Coatings Association (ACA).

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## Safety Data Sheet

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<b>Document Group:</b>	24-2429-9	<b>Version Number:</b>	5.02
<b>Issue Date:</b>	05/19/14	<b>Supersedes Date:</b>	05/19/14

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Bondo® Fiberglass Resin, P.N. 401, 401C, 402, 402C, 402ES, 402T, 402Z, 404, 404C, 404Z

#### Product Identification Numbers

LB-K100-1567-8, LB-K100-1567-9, LB-K100-1568-0, LB-K100-0410-9, LB-K100-0411-0, LB-K100-0411-1, LB-K100-0537-7, LB-K100-0537-8, LB-K100-0537-9, LB-K100-0538-0, LB-K100-0538-1, LB-K100-0538-2, 41-0003-6688-4

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Automotive, Fiberglass Repair Resin

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Automotive Aftermarket
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	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

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

#### 2.1. Hazard classification

Flammable Liquid: Category 3.  
Serious Eye Damage/Irritation: Category 2B.  
Carcinogenicity: Category 2.  
Specific Target Organ Toxicity (single exposure): Category 1.  
Specific Target Organ Toxicity (central nervous system): 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

Flammable liquid and vapor.

Causes eye irritation.

May cause drowsiness or dizziness.

Suspected of causing cancer.

Causes damage to organs:

liver |

sensory organs |

Causes damage to organs through prolonged or repeated exposure:

sensory organs |

May cause damage to organs through prolonged or repeated exposure:

liver |

## Precautionary Statements

### General:

Keep out of reach of children.

### Prevention:

Obtain special instructions before use.

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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

### Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

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**

None.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Polyester Polymer	Trade Secret*	40 - 70 Trade Secret *
Styrene Monomer	100-42-5	15 - 40 Trade Secret *
Silica	7631-86-9	0.5 - 1.5 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**

See Section 11.1. Information on toxicological effects.

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

Not applicable

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

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

**5.2. Special hazards arising from the substance or mixture**

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

**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.

**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. 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**

Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with 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.

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

Avoid eye contact. Keep out of reach of children. 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. 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. 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.

**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 strong bases. Store away from oxidizing agents.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits**

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional Comments</b>
Styrene Monomer	100-42-5	Amer Conf of Gov. Indust. Hyg.	TWA:20 ppm;STEL:40 ppm	
Styrene Monomer	100-42-5	US Dept of Labor - OSHA	TWA:100 ppm;CEIL:200 ppm	
Silica	7631-86-9	Chemical Manufacturer	TWA(as respirable dust):3 mg/m3	

SILICA, AMORPHOUS	7631-86-9	Rec Guid US Dept of Labor - OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
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Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists

American Indust. Hygiene Assoc : American Industrial Hygiene Association

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

US Dept of Labor - OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

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

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Indirect Vented Goggles

#### Skin/hand protection

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

Gloves made from the following material(s) are recommended: Polyvinyl Alcohol (PVA)

#### 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

<b>General Physical Form:</b>	Liquid
<b>Specific Physical Form:</b>	Paste
<b>Odor, Color, Grade:</b>	Pungent organic odor. Light straw color.
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>No Data Available</i>
<b>Melting point</b>	<i>No Data Available</i>
<b>Boiling Point</b>	180 °F - 415 °F
<b>Flash Point</b>	88 °F [ <i>Test Method:</i> Closed Cup]
<b>Evaporation rate</b>	[ <i>Details:</i> Slower than ether.]
<b>Flammability (solid, gas)</b>	Not Applicable

Flammable Limits(LEL)	1.1 %
Flammable Limits(UEL)	No Data Available
Vapor Pressure	3.45 mmHg
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Vapor Density	No Data Available
Density	1.14 g/ml
Specific Gravity	1.14 [Ref Std: WATER=1]
Solubility In Water	No Data Available
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Hazardous Air Pollutants	33.8 % weight [Test Method: Calculated]
Volatile Organic Compounds	386 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds	33.8 % weight [Test Method: calculated per CARB title 2]
Percent volatile	33.8 % weight
Percent volatile	42.61 % volume
VOC Less H2O & Exempt Solvents	386 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 acids

Strong bases

Strong oxidizing agents

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

## 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.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause target organ effects after inhalation.

##### **Skin Contact:**

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

##### **Eye Contact:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

##### **Ingestion:**

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

May cause target organ effects after ingestion.

#### **Target Organ Effects:**

##### **Single exposure may cause:**

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

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

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

##### **Prolonged or repeated exposure may cause:**

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.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

##### **Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

<u><b>Ingredient</b></u>	<u><b>C.A.S. No.</b></u>	<u><b>Class Description</b></u>	<u><b>Regulation</b></u>
Styrene Monomer	100-42-5	Anticipated human carcinogen	National Toxicology Program Carcinogens
Styrene Monomer	100-42-5	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

<b>Name</b>	<b>Route</b>	<b>Species</b>	<b>Value</b>
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE 20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Styrene Monomer	Dermal	Rat	LD50 > 2,000 mg/kg
Styrene Monomer	Inhalation-Vapor (4 hours)	Rat	LC50 8.3 mg/l
Styrene Monomer	Ingestion	Rat	LD50 5,000 mg/kg
Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

<b>Name</b>	<b>Species</b>	<b>Value</b>
Styrene Monomer	official classification	Mild irritant
Silica	Rabbit	No significant irritation

### Serious Eye Damage/Irritation

<b>Name</b>	<b>Species</b>	<b>Value</b>
Styrene Monomer	official classification	Moderate irritant
Silica	Rabbit	No significant irritation

### Skin Sensitization

<b>Name</b>	<b>Species</b>	<b>Value</b>
Styrene Monomer	Guinea pig	Not sensitizing
Silica	Human and animal	Not sensitizing

### Respiratory Sensitization

<b>Name</b>	<b>Species</b>	<b>Value</b>

### Germ Cell Mutagenicity

<b>Name</b>	<b>Route</b>	<b>Value</b>
Styrene Monomer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Styrene Monomer	In vivo	Some positive data exist, but the data are not sufficient for classification
Silica	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Styrene Monomer	Ingestion	Mouse	Carcinogenic
Styrene Monomer	Inhalation	Human and animal	Carcinogenic
Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Styrene Monomer	Ingestion	Not toxic to female reproduction	Rat	NOAEL 21 mg/kg/day	3 generation
Styrene Monomer	Inhalation	Not toxic to female reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene Monomer	Inhalation	Not toxic to male reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene Monomer	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	60 days
Styrene Monomer	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	during gestation
Styrene Monomer	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2.1 mg/l	during gestation
Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 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
Styrene Monomer	Inhalation	auditory system	Causes damage to organs	Multiple animal species	LOAEL 4.3 mg/l	not available
Styrene Monomer	Inhalation	liver	Causes damage to organs	Mouse	LOAEL 2.1 mg/l	not available
Styrene Monomer	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Styrene Monomer	Inhalation	endocrine system	All data are negative	Rat	NOAEL Not available	not available
Styrene Monomer	Inhalation	kidney and/or bladder	All data are negative	Multiple animal species	NOAEL 2.1 mg/l	not available

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Styrene Monomer	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	auditory system	May cause damage to organs	Multiple	NOAEL 1.3	not available

			though prolonged or repeated exposure	animal species	mg/l	
Styrene Monomer	Inhalation	liver	May cause damage to organs though prolonged or repeated exposure	Mouse	LOAEL 0.85 mg/l	13 weeks
Styrene Monomer	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 1.1 mg/l	not available
Styrene Monomer	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.85 mg/l	7 days
Styrene Monomer	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.6 mg/l	10 days
Styrene Monomer	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 0.09 mg/l	not available
Styrene Monomer	Inhalation	heart   bone, teeth, nails, and/or hair   muscles   kidney and/or bladder	All data are negative	Multiple animal species	NOAEL 4.3 mg/l	2 years
Styrene Monomer	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 500 mg/kg/day	8 weeks
Styrene Monomer	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available
Styrene Monomer	Ingestion	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 677 mg/kg/day	6 months
Styrene Monomer	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 600 mg/kg/day	470 days
Styrene Monomer	Ingestion	heart   respiratory system	All data are negative	Rat	NOAEL 35 mg/kg/day	105 weeks
Silica	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure

**Aspiration Hazard**

Name	Value

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information****Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

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

Incinerate uncured product in a permitted waste incineration facility. 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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. 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.

## **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.

#### **311/312 Hazard Categories:**

Fire Hazard - Yes   Pressure Hazard - No   Reactivity Hazard - No   Immediate Hazard - Yes   Delayed Hazard - Yes

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

<u><b>Ingredient</b></u>	<u><b>C.A.S. No</b></u>	<u><b>% by Wt</b></u>
Styrene Monomer	100-42-5	15 - 40

### **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.

Contact 3M for more information.

### **15.4. International Regulations**

Contact 3M for more information.

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

## **SECTION 16: Other information**

### **NFPA Hazard Classification**

**Health: 2 Flammability: 3 Instability: 0 Special Hazards: None**

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

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