



Safety Data Sheet

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Document Group:	28-3208-7	Version Number:	3.00
Issue Date:	08/18/14	Supersedes Date:	08/02/12

SECTION 1: Identification

1.1. Product identifier

3M India 366i Red Liquid Epoxy Part B

Product Identification Numbers

IC-2801-0074-9

1.2. Recommended use and restrictions on use

Recommended use

Coating, Part B of a Two Part Coating for Gas Pipelines

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	3M India Infrastructure Protection Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Flammable Liquid: Category 2.
Acute Toxicity (inhalation): Category 4.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1B.
Skin Sensitizer: Category 1A.
Carcinogenicity: Category 1A.
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 | Corrosion | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Highly flammable liquid and vapor.

Causes serious eye damage.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Harmful if inhaled.

May cause drowsiness or dizziness.

May cause cancer.

Causes damage to organs:
blood or blood-forming organs |
sensory organs |

Causes damage to organs through prolonged or repeated exposure:
blood or blood-forming organs |
nervous system |
respiratory system |

sensory organs |

Precautionary Statements

Prevention:

Obtain special instructions before use.

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

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

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, protective clothing, and eye/face protection.

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

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Response:

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

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

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

Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

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

Wash contaminated clothing before reuse.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF exposed or concerned: Get medical advice/attention.

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

Storage:

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.

5% of the mixture consists of ingredients of unknown acute oral toxicity.

37% of the mixture consists of ingredients of unknown acute dermal toxicity.

72% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
QUARTZ SILICA	14808-60-7	20 - 30 Trade Secret *
XYLENE	1330-20-7	20 - 30 Trade Secret *
FATTY ACIDS, C18-UNSATD., DIMERS	61788-89-4	15 - 20
BARIUM SULFATE	7727-43-7	10 - 15
BUTYL ALCOHOL	Trade Secret*	5 - 10 Trade Secret *
TRIETHYLENETETRAMINE	112-24-3	5 - 10 Trade Secret *
TALL-OIL FATTY ACIDS	61790-12-3	3 - 7
2-BUTOXYETHANOL	111-76-2	1 - 5 Trade Secret *
RHEOLOGICAL ADDITIVE	68911-87-5	< 1.5

*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. 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

Contain spill. 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 breathing of vapors created during cure cycle. Avoid skin contact with hot material. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
2-BUTOXYETHANOL	111-76-2	OSHA	TWA:240 mg/m ³ (50 ppm)	Skin Notation
2-BUTOXYETHANOL	111-76-2	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
TRIETHYLENETETRAMINE	112-24-3	AIHA	TWA:6 mg/m ³ (1 ppm)	Skin Notation
XYLENE	1330-20-7	CMRG	TWA:50 ppm;STEL:75 ppm	
XYLENE	1330-20-7	OSHA	TWA:435 mg/m ³ (100 ppm)	
XYLENE	1330-20-7	ACGIH	TWA:100 ppm;STEL:150 ppm	A4: Not class. as human carcin
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA concentration(as total dust):0.3 mg/m ³ ;TWA concentration(respirable):0.1 mg/m ³ (2.4 millions of particles/cu. ft.)	
BARIUM SULFATE	7727-43-7	ACGIH	TWA(inhalable fraction):5 mg/m ³	
BARIUM SULFATE	7727-43-7	OSHA	TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³	
BUTYL ALCOHOL	Trade Secret	OSHA	TWA:300 mg/m ³ (100 ppm)	
BUTYL ALCOHOL	Trade Secret	ACGIH	TWA:20 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

Provide ventilated enclosure for heat curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Full Face Shield
Indirect Vented Goggles

Skin/hand protection

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

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

Respiratory protection

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

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

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

Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Liquid
Odor, Color, Grade:	Alcohol odor; red color
Odor threshold	<i>No Data Available</i>
pH	<i>No Data Available</i>
Melting point	<i>Not Applicable</i>
Boiling Point	70 °C
Flash Point	23 °C
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	12 mmHg [<i>Details: at 25 degrees C</i>]
Vapor Density	<i>No Data Available</i>
Density	1.1 g/cm ³ [<i>Ref Std: WATER=1</i>]
Specific Gravity	1.3 [<i>Ref Std: WATER=1</i>]
Solubility in Water	Nil
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>Not Applicable</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	900 centipoise
Percent volatile	28 % weight

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

Combustibles
Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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:

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:

May be harmful in contact with skin.

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

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

May cause target organ effects after skin contact.

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:

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.

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

Blood Effects: Signs/symptoms may include generalized weakness and fatigue, skin pallor, changes in blood clotting time, internal bleeding, and/or hemoglobinemia.

Prolonged or repeated exposure may cause:

Silicosis: Signs/symptoms may include breathlessness, weakness, chest pain, persistent cough, increased amounts of sputum, and heart disease.

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

Blood Effects: Signs/symptoms may include generalized weakness and fatigue, skin pallor, changes in blood clotting time, internal bleeding, and/or hemoglobinemia.

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.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	C.A.S. No.	Class Description	Regulation
SILICA, CRYSTALLINE	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
QUARTZ SILICA	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE 2,000 - 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE 10 - 20 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
QUARTZ SILICA	Dermal		LD50 estimated to be > 5,000 mg/kg

QUARTZ SILICA	Ingestion		LD50 estimated to be > 5,000 mg/kg
XYLENE	Dermal	Rabbit	LD50 > 4,200 mg/kg
XYLENE	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
XYLENE	Ingestion	Rat	LD50 3,523 mg/kg
FATTY ACIDS, C18-UNSATD., DIMERS	Ingestion	Rat	LD50 > 20,400 mg/kg
BARIUM SULFATE	Ingestion	Rat	LD50 > 15,000 mg/kg
BUTYL ALCOHOL	Dermal	Rabbit	LD50 3,402 mg/kg
BUTYL ALCOHOL	Inhalation-Vapor (4 hours)	Rat	LC50 24 mg/l
BUTYL ALCOHOL	Ingestion	Rat	LD50 2,290 mg/kg
TRIETHYLENETETRAMINE	Dermal	Rabbit	LD50 550 mg/kg
TRIETHYLENETETRAMINE	Ingestion	Rat	LD50 2,500 mg/kg
2-BUTOXYETHANOL	Dermal	Rabbit	LD50 400 mg/kg
2-BUTOXYETHANOL	Inhalation-Vapor (4 hours)	Rat	LC50 2.2 mg/l
2-BUTOXYETHANOL	Ingestion	Rat	LD50 560 mg/kg
RHEOLOGICAL ADDITIVE	Inhalation-Dust/Mist (4 hours)	Not available	LC50 > 5 mg/l
RHEOLOGICAL ADDITIVE	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
QUARTZ SILICA		No significant irritation
XYLENE	Rabbit	Mild irritant
BUTYL ALCOHOL	Rabbit	Mild irritant
TRIETHYLENETETRAMINE	Rabbit	Corrosive
2-BUTOXYETHANOL	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
XYLENE	Rabbit	Mild irritant
BARIUM SULFATE	Rabbit	No significant irritation
BUTYL ALCOHOL	Rabbit	Severe irritant
TRIETHYLENETETRAMINE	Rabbit	Corrosive
2-BUTOXYETHANOL	Rabbit	Severe irritant

Skin Sensitization

Name	Species	Value
BUTYL ALCOHOL	Human	Not sensitizing
TRIETHYLENETETRAMINE	Guinea pig	Sensitizing
2-BUTOXYETHANOL	Guinea pig	Not sensitizing

Respiratory Sensitization

Name	Species	Value
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Germ Cell Mutagenicity

Name	Route	Value
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not sufficient for classification
QUARTZ SILICA	In vivo	Some positive data exist, but the data are not sufficient for classification
XYLENE	In Vitro	Not mutagenic
XYLENE	In vivo	Not mutagenic
BUTYL ALCOHOL	In vivo	Not mutagenic
BUTYL ALCOHOL	In Vitro	Some positive data exist, but the data are not sufficient for classification

2-BUTOXYETHANOL	In Vitro	Some positive data exist, but the data are not sufficient for classification
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Carcinogenicity

Name	Route	Species	Value
QUARTZ SILICA	Inhalation	Human and animal	Carcinogenic
XYLENE	Dermal	Rat	Not carcinogenic
XYLENE	Ingestion	Multiple animal species	Not carcinogenic
XYLENE	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
2-BUTOXYETHANOL	Inhalation	Multiple animal species	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
XYLENE	Ingestion	Not toxic to female reproduction	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
XYLENE	Ingestion	Not toxic to male reproduction	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
XYLENE	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
XYLENE	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	during organogenesis
XYLENE	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	during gestation
BUTYL ALCOHOL	Ingestion	Not toxic to female reproduction	Rat	NOAEL 5,000 mg/kg/day	prematuring & during gestation
BUTYL ALCOHOL	Ingestion	Not toxic to male reproduction	Rat	NOAEL 500 mg/kg/day	4 days
BUTYL ALCOHOL	Inhalation	Not toxic to male reproduction	Rat	NOAEL 18 mg/l	6 weeks
BUTYL ALCOHOL	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 10.6 mg/l	during gestation
2-BUTOXYETHANOL	Dermal	Not toxic to development	Rat	NOAEL 1,760 mg/kg/day	during gestation
2-BUTOXYETHANOL	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg/day	during organogenesis
2-BUTOXYETHANOL	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.48 mg/l	during organogenesis

Lactation

Name	Route	Species	Value
XYLENE	Ingestion	Mouse	Does not cause effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
XYLENE	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
XYLENE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
XYLENE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
XYLENE	Inhalation	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.5 mg/l	not available
XYLENE	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
XYLENE	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
XYLENE	Ingestion	eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg	not applicable
BUTYL ALCOHOL	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
BUTYL ALCOHOL	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
BUTYL ALCOHOL	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
2-BUTOXYETHANOL	Dermal	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 902 mg/kg	6 hours
2-BUTOXYETHANOL	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 72 mg/kg	not available
2-BUTOXYETHANOL	Dermal	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 451 mg/kg	6 hours
2-BUTOXYETHANOL	Dermal	blood	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available
2-BUTOXYETHANOL	Inhalation	blood	May cause damage to organs	Multiple animal species	NOAEL Not available	not available
2-BUTOXYETHANOL	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
2-BUTOXYETHANOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
2-BUTOXYETHANOL	Ingestion	blood	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
2-BUTOXYETHANOL	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	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
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
XYLENE	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
XYLENE	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days

XYLENE	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
XYLENE	Inhalation	heart endocrine system hematopoietic system muscles kidney and/or bladder respiratory system	All data are negative	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
XYLENE	Ingestion	auditory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 900 mg/kg/day	2 weeks
XYLENE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,500 mg/kg/day	90 days
XYLENE	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	
XYLENE	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system nervous system respiratory system	All data are negative	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
BARIUM SULFATE	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
BUTYL ALCOHOL	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.3 mg/l	3 months
BUTYL ALCOHOL	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
BUTYL ALCOHOL	Inhalation	liver kidney and/or bladder respiratory system	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL Not available	3 months
BUTYL ALCOHOL	Inhalation	nervous system	All data are negative	Rat	NOAEL 9.09 mg/l	13 weeks
BUTYL ALCOHOL	Ingestion	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	13 weeks
2-BUTOXYETHANOL	Dermal	blood	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available
2-BUTOXYETHANOL	Dermal	endocrine system	All data are negative	Rabbit	NOAEL 150 mg/kg/day	90 days
2-BUTOXYETHANOL	Inhalation	blood	May cause damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.12 mg/l	90 days
2-BUTOXYETHANOL	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.4 mg/l	14 weeks
2-BUTOXYETHANOL	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.15 mg/l	14 weeks
2-BUTOXYETHANOL	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Dog	LOAEL 1.9 mg/l	8 days
2-BUTOXYETHANOL	Ingestion	blood	Causes damage to organs through prolonged or repeated exposure	Multiple animal species	NOAEL Not available	not available
2-BUTOXYETHANOL	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available

Aspiration Hazard

Name	Value
XYLENE	Aspiration hazard
BUTYL ALCOHOL	Some positive data exist, but the data are not sufficient for classification

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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

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>
BUTYL ALCOHOL	Trade Secret	5 - 10
2-BUTOXYETHANOL (GLYCOL ETHERS)	111-76-2	1 - 5
XYLENE (Benzene, 1,3-dimethyl-)	1330-20-7	20 - 30
XYLENE (Benzene, 1,2-dimethyl-)	1330-20-7	20 - 30

XYLENE	1330-20-7	20 - 30
XYLENE (Benzene, 1,4-dimethyl-)	1330-20-7	20 - 30
XYLENE (Benzene, dimethyl-)	1330-20-7	20 - 30

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

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

SECTION 16: Other information

NFPA Hazard Classification

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

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

Document Group:	28-3208-7	Version Number:	3.00
Issue Date:	08/18/14	Supersedes Date:	08/02/12

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