



Safety Data Sheet

Copyright, 2015, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group:	30-4008-6	Version Number:	2.00
Issue Date:	03/03/15	Supersedes Date:	01/31/12

Product identifier

3M™ Industrial Coating AC-502

ID Number(s):

70-0052-0327-1

Recommended use

For industrial or professional use only., Sealant

Supplier's details

MANUFACTURER:	3M
DIVISION:	Aerospace and Commercial Transportation Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

30-4128-2, 30-3995-5

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M

3M USA SDSs are available at www.3M.com



Safety Data Sheet

Copyright, 2015, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group:	30-3995-5	Version Number:	2.00
Issue Date:	03/03/15	Supersedes Date:	01/31/12

SECTION 1: Identification

1.1. Product identifier

3M™ Industrial Coating AC-502 Base

Product Identification Numbers

LC-B100-1130-9

1.2. Recommended use and restrictions on use

Recommended use

Base of 2-part kit, For industrial or professional use only.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Aerospace and Commercial Transportation 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 3.
Acute Toxicity (dermal): Category 4.
Acute Toxicity (inhalation): Category 4.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 2.
Skin Sensitizer: Category 1A.
Reproductive Toxicity: Category 2.
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

Flammable liquid and vapor.

Harmful in contact with skin.

Causes serious eye damage.

Causes skin irritation.

May cause an allergic skin reaction.

Harmful if inhaled.

May cause drowsiness or dizziness.

Suspected of damaging fertility or the unborn child.

May cause cancer.

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

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

Precautionary Statements

Prevention:

Obtain special instructions before use.

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

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

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

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

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 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.

20% of the mixture consists of ingredients of unknown acute oral toxicity.

43% of the mixture consists of ingredients of unknown acute dermal toxicity.

33% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
BARIUM CHROMATE	10294-40-3	10 - 30 Trade Secret *
2-BUTOXYETHANOL	111-76-2	10 - 30 Trade Secret *
C8 & C10 AROMATIC HYDROCARBONS	Mixture	5 - 20
TITANIUM DIOXIDE PIGMENT	Trade Secret*	1 - 10
AROMATIC HYDROCARBON	64742-95-6	5 - 10 Trade Secret *
TITANIUM DIOXIDE	13463-67-7	5 - 10 Trade Secret *
1,2,4-TRIMETHYLBENZENE	95-63-6	3 - 7 Trade Secret *
EPOXY RESIN	Trade Secret*	1 - 5 Trade Secret *
POLYAMIDE RESIN	Trade Secret*	>= 3 Trade Secret *
SILICA	7631-86-9	1 - 3 Trade Secret *
MAGNESIUM SILICATE	Trade Secret*	>= 3 Trade Secret *
CUMENE	98-82-8	0.1 - 0.5 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. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam 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

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

Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent loss of stabilizing materials. 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

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
CHROMATES	10294-40-3	OSHA	CEIL:0.1 mg/m ³	
CHROMIUM (HEXA VALENT COMPOUNDS)	10294-40-3	OSHA	TWA:0.005 mg/m ³	Skin Notation, 29 CFR 1910.1026
Chromium, insoluble salts	10294-40-3	OSHA	TWA(as Cr):1 mg/m ³	
2-BUTOXYETHANOL	111-76-2	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
2-BUTOXYETHANOL	111-76-2	OSHA	TWA:240 mg/m ³ (50 ppm)	Skin Notation
TITANIUM DIOXIDE	13463-67-7	ACGIH	TWA:10 mg/m ³	A4: Not class. as human carcin
TITANIUM DIOXIDE	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m ³	
TITANIUM DIOXIDE	13463-67-7	OSHA	TWA(as total dust):15 mg/m ³	
AROMATIC HYDROCARBON	64742-95-6	CMRG	TWA:50 ppm(245 mg/m ³)	
SILICA	7631-86-9	CMRG	TWA(as respirable dust):3 mg/m ³	
SILICA, AMORPHOUS	7631-86-9	OSHA	TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft.	
Benzene, trimethyl-	95-63-6	ACGIH	TWA:25 ppm	
CUMENE	98-82-8	ACGIH	TWA:50 ppm	
CUMENE	98-82-8	OSHA	TWA:245 mg/m ³ (50 ppm)	Skin Notation
MAGNESIUM SILICATE	Trade Secret	ACGIH	TWA(respirable fraction):2 mg/m ³	A4: Not class. as human carcin
MAGNESIUM SILICATE	Trade Secret	CMRG	TWA(as respirable dust):0.5 mg/m ³	
MAGNESIUM SILICATE	Trade Secret	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.);TWA:20 millions of particles/cu. ft.	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Full Face Shield

Indirect Vented Goggles

Skin/hand protection

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

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

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

Respiratory protection

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

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

Half facepiece or full facepiece supplied-air respirator

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Solvent odor; green liquid
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	308 - 343 °F
Flash Point	116 °F [<i>Test Method: Closed Cup</i>]
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1 %
Flammable Limits(UEL)	10 %
Vapor Pressure	3.6 mmHg
Vapor Density	>=1 [<i>Ref Std: AIR=1</i>]
Specific Gravity	1.52 [<i>Ref Std: WATER=1</i>]
Solubility In Water	<i>No Data Available</i>
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>

Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Volatile Organic Compounds	421.9 g/l [Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	421.9 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 may occur.

10.4. Conditions to avoid

Heat
Sparks and/or flames

10.5. Incompatible materials

Strong oxidizing agents
Strong acids
Strong bases
Reducing 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.

May cause additional health effects (see below).

Skin Contact:

Harmful in contact with skin. Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

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

Ingestion:

May be harmful if swallowed.

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

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

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

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 target organ effects:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

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

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Reproductive/Developmental Toxicity:

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
CR 6 CMPDS	10294-40-3	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
CR 6 CMPDS	10294-40-3	Known human carcinogen	National Toxicology Program Carcinogens
CR 6 CMPDS	10294-40-3	Cancer hazard	OSHA Carcinogens
CUMENE	98-82-8	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
CUMENE	98-82-8	Anticipated human carcinogen	National Toxicology Program Carcinogens
TITANIUM DIOXIDE	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE 1,000 - 2,000 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 2,000 - 5,000 mg/kg
BARIUM CHROMATE	Ingestion	Rat	LD50 3,000 mg/kg
MAGNESIUM SILICATE	Dermal		LD50 Not available
MAGNESIUM SILICATE	Ingestion		LD50 Not available
POLYAMIDE RESIN	Dermal	Rat	LD50 > 2,000 mg/kg
POLYAMIDE RESIN	Ingestion	Rat	LD50 > 5,000 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
AROMATIC HYDROCARBON	Dermal	Rabbit	LD50 > 2,000 mg/kg
TITANIUM DIOXIDE	Dermal	Rabbit	LD50 > 10,000 mg/kg
AROMATIC HYDROCARBON	Inhalation-Vapor (4 hours)	Rat	LC50 > 5.2 mg/l
AROMATIC HYDROCARBON	Ingestion	Rat	LD50 > 5,000 mg/kg
TITANIUM DIOXIDE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
TITANIUM DIOXIDE	Ingestion	Rat	LD50 > 10,000 mg/kg
1,2,4-TRIMETHYLBENZENE	Dermal	Rabbit	LD50 > 3,160 mg/kg
1,2,4-TRIMETHYLBENZENE	Inhalation-Vapor (4 hours)	Rat	LC50 18 mg/l
1,2,4-TRIMETHYLBENZENE	Ingestion	Rat	LD50 3,400 mg/kg
EPOXY RESIN	Dermal	Rat	LD50 > 1,600 mg/kg
EPOXY RESIN	Ingestion	Rat	LD50 > 1,000 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
CUMENE	Dermal	Rabbit	LD50 > 3,160 mg/kg
CUMENE	Inhalation-Vapor (4 hours)	Rat	LC50 39.4 mg/l
CUMENE	Ingestion	Rat	LD50 1,400 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
MAGNESIUM SILICATE	Rabbit	No significant irritation
POLYAMIDE RESIN	In vitro data	Irritant
2-BUTOXYETHANOL	Rabbit	Irritant
AROMATIC HYDROCARBON	Rabbit	Irritant
TITANIUM DIOXIDE	Rabbit	No significant irritation
1,2,4-TRIMETHYLBENZENE	Rabbit	Irritant
EPOXY RESIN	Rabbit	Mild irritant
SILICA	Rabbit	No significant irritation
CUMENE	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
MAGNESIUM SILICATE	Rabbit	No significant irritation
POLYAMIDE RESIN	Rabbit	Corrosive
2-BUTOXYETHANOL	Rabbit	Severe irritant
AROMATIC HYDROCARBON	Rabbit	Mild irritant
TITANIUM DIOXIDE	Rabbit	No significant irritation
1,2,4-TRIMETHYLBENZENE	Rabbit	Mild irritant

EPOXY RESIN	Rabbit	Moderate irritant
SILICA	Rabbit	No significant irritation
CUMENE	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
BARIUM CHROMATE	similar compounds	Some positive data exist, but the data are not sufficient for classification
POLYAMIDE RESIN	Mouse	Sensitizing
2-BUTOXYETHANOL	Guinea pig	Not sensitizing
AROMATIC HYDROCARBON	Guinea pig	Not sensitizing
TITANIUM DIOXIDE	Human and animal	Not sensitizing
1,2,4-TRIMETHYLBENZENE	Guinea pig	Not sensitizing
EPOXY RESIN	Human and animal	Sensitizing
SILICA	Human and animal	Not sensitizing
CUMENE	Guinea pig	Not sensitizing

Respiratory Sensitization

Name	Species	Value
MAGNESIUM SILICATE	Human	Not sensitizing
EPOXY RESIN	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
MAGNESIUM SILICATE	In Vitro	Not mutagenic
MAGNESIUM SILICATE	In vivo	Not mutagenic
2-BUTOXYETHANOL	In Vitro	Some positive data exist, but the data are not sufficient for classification
TITANIUM DIOXIDE	In Vitro	Not mutagenic
TITANIUM DIOXIDE	In vivo	Not mutagenic
1,2,4-TRIMETHYLBENZENE	In Vitro	Not mutagenic
EPOXY RESIN	In vivo	Not mutagenic
EPOXY RESIN	In Vitro	Some positive data exist, but the data are not sufficient for classification
SILICA	In Vitro	Not mutagenic
CUMENE	In Vitro	Not mutagenic
CUMENE	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
BARIUM CHROMATE	Not Specified	similar compounds	Carcinogenic
MAGNESIUM SILICATE	Inhalation	Rat	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
AROMATIC HYDROCARBON	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
TITANIUM DIOXIDE	Ingestion	Multiple	Not carcinogenic

		animal species	
TITANIUM DIOXIDE	Inhalation	Rat	Carcinogenic
EPOXY RESIN	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
SILICA	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
CUMENE	Inhalation	Multiple animal species	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
BARIUM CHROMATE	Not Specified	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	similar compounds	NOAEL Not available	prematuring & during gestation
MAGNESIUM SILICATE	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	during organogenesis
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
AROMATIC HYDROCARBON	Inhalation	Not toxic to female reproduction	Rat	NOAEL 1,500 ppm	2 generation
AROMATIC HYDROCARBON	Inhalation	Not toxic to male reproduction	Rat	NOAEL 1,500 ppm	2 generation
AROMATIC HYDROCARBON	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 500 ppm	2 generation
1,2,4-TRIMETHYLBENZENE	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-TRIMETHYLBENZENE	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-TRIMETHYLBENZENE	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 1.5 mg/l	during gestation
EPOXY RESIN	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
EPOXY RESIN	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
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
CUMENE	Inhalation	Not toxic to female reproduction	Rat	NOAEL 59 mg/l	13 weeks
CUMENE	Ingestion	Not toxic to male reproduction	Rat	NOAEL 769	6 months

				mg/kg/day	
CUMENE	Inhalation	Not toxic to male reproduction	Rat	NOAEL 59 mg/l	13 weeks
CUMENE	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rabbit	NOAEL 11.3 mg/l	during organogenesis

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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
AROMATIC HYDROCARBON	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
AROMATIC HYDROCARBON	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Professional judgement	NOAEL Not available	
AROMATIC HYDROCARBON	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
1,2,4-TRIMETHYLBENZENE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
1,2,4-TRIMETHYLBENZENE	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
CUMENE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
CUMENE	Inhalation	respiratory irritation	May cause respiratory irritation	Human	LOAEL 0.2 mg/l	occupational exposure
CUMENE	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
------	-------	-----------------	-------	---------	-------------	-------------------

BARIUM CHROMATE	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	similar compounds	NOAEL Not available	occupational exposure
MAGNESIUM SILICATE	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
MAGNESIUM SILICATE	Inhalation	pulmonary fibrosis respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 18 mg/m3	113 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
TITANIUM DIOXIDE	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
TITANIUM DIOXIDE	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
1,2,4-TRIMETHYLBENZENE	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.5 mg/l	3 months
1,2,4-TRIMETHYLBENZENE	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.1 mg/l	3 months
1,2,4-TRIMETHYLBENZENE	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
1,2,4-TRIMETHYLBENZENE	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-TRIMETHYLBENZENE	Inhalation	heart endocrine system immune system	All data are negative	Rat	NOAEL 1.2 mg/l	3 months
1,2,4-TRIMETHYLBENZENE	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	14 days
1,2,4-TRIMETHYLBENZENE	Ingestion	liver immune system kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	28 days
EPOXY RESIN	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
EPOXY RESIN	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
EPOXY RESIN	Ingestion	auditory system heart endocrine system hematopoietic	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

		system liver eyes kidney and/or bladder				
SILICA	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
CUMENE	Inhalation	auditory system endocrine system hematopoietic system liver nervous system eyes	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 59 mg/l	13 weeks
CUMENE	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 4.9 mg/l	13 weeks
CUMENE	Inhalation	respiratory system	All data are negative	Rat	NOAEL 59 mg/l	13 weeks
CUMENE	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 769 mg/kg/day	6 months
CUMENE	Ingestion	heart endocrine system hematopoietic system liver respiratory system	All data are negative	Rat	NOAEL 769 mg/kg/day	6 months

Aspiration Hazard

Name	Value
AROMATIC HYDROCARBON	Aspiration hazard
1,2,4-TRIMETHYLBENZENE	Aspiration hazard
CUMENE	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 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), D005 (Barium), D007 (Chromium)

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>
1,2,4-TRIMETHYLBENZENE	95-63-6	3 - 7
BARIUM CHROMATE (CHROMIUM (HEXAVALENT COMPOUNDS))	10294-40-3	10 - 30
BARIUM CHROMATE (Barium compounds, except barium sulfate)	10294-40-3	10 - 30
2-BUTOXYETHANOL (GLYCOL ETHERS)	111-76-2	10 - 30

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

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
BARIUM CHROMATE (CHROMIUM (HEXAVALENT COMPOUNDS))	10294-40-3	Toxic Substances Control Act (TSCA) 6 Banned or Restricted Use Chemicals	Applicable

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Female reproductive toxin
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Male reproductive toxin
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Carcinogen
CHROMIUM (HEXAVALENT COMPOUNDS)	None	Developmental Toxin
CUMENE	98-82-8	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product contains a chemical known to the State of California to cause cancer.

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: 2 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.

Document Group:	30-3995-5	Version Number:	2.00
Issue Date:	03/03/15	Supersedes Date:	01/31/12

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M

3M USA SDSs are available at www.3M.com



Safety Data Sheet

Copyright, 2015, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group:	30-4128-2	Version Number:	2.00
Issue Date:	03/03/15	Supersedes Date:	01/31/12

SECTION 1: Identification

1.1. Product identifier

3M™ Industrial Coating AC-502 Catalyst and Solvent

Product Identification Numbers

LC-B100-1144-2

1.2. Recommended use and restrictions on use

Recommended use

Catalyst and solvent (Kit Components), For industrial or professional use only.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Aerospace and Commercial Transportation 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 3.

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

Specific Target Organ Toxicity (repeated exposure): Category 2.

2.2. Label elements

Signal word

Warning

Symbols

Flame | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Flammable liquid and vapor.

Causes eye irritation.

May cause an allergic skin reaction.

May cause damage to organs through prolonged or repeated exposure:
nervous system |

Precautionary Statements

Prevention:

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.

Wear protective gloves and eye/face protection.

Wash thoroughly after handling.

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

Response:

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.

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

Wash contaminated clothing before reuse.

Get medical advice/attention 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 cool.

Disposal:

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

2.3. Hazards not otherwise classified

None.

36% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
4-CHLOROBENZOTRIFLUORIDE	98-56-6	50 - 60 Trade Secret *

EPOXY RESIN	Trade Secret*	15 - 30 Trade Secret *
BISPHENOL A EPOXY RESIN	Trade Secret*	5 - 20 Trade Secret *
NITROETHANE	79-24-3	1 - 15

*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:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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.

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. 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 designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam 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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
NITROETHANE	79-24-3	ACGIH	TWA:100 ppm	
NITROETHANE	79-24-3	OSHA	TWA:310 mg/m3(100 ppm)	
4-CHLOROBENZOTRIFLUORIDE	98-56-6	CMRG	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

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. 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

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
Odor, Color, Grade:	Nitroethane odor; Amber liquid
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	237 °F
Flash Point	87 °F [<i>Test Method: Closed Cup</i>]
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	0.9 %
Flammable Limits(UEL)	10.5 %
Vapor Pressure	<i>No Data Available</i>
Vapor Density	>=1 [<i>Ref Std: AIR=1</i>]
Specific Gravity	1.15 - 1.34 [<i>Ref Std: WATER=1</i>]
Solubility In Water	<i>No Data Available</i>
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>

Viscosity	No Data Available
Volatile Organic Compounds	88.3 g/l [Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	205.4 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>
Aldehydes	Not Specified

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

May be harmful if inhaled.

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

May cause additional health effects (see below).

Skin Contact:

May be harmful in contact with skin.

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:

Moderate 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 additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

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.

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 20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
4-CHLOROBENZOTRIFLUORIDE	Dermal	Rabbit	LD50 > 2,700 mg/kg
4-CHLOROBENZOTRIFLUORIDE	Inhalation-Vapor (4 hours)	Rat	LC50 33 mg/l
4-CHLOROBENZOTRIFLUORIDE	Ingestion	Rat	LD50 > 6,650 mg/kg
EPOXY RESIN	Dermal	Rat	LD50 > 1,600 mg/kg
EPOXY RESIN	Ingestion	Rat	LD50 > 1,000 mg/kg
BISPHENOL A EPOXY RESIN	Dermal	Rat	LD50 > 1,600 mg/kg
BISPHENOL A EPOXY RESIN	Ingestion	Rat	LD50 > 1,000 mg/kg
NITROETHANE	Dermal		estimated to be > 5,000 mg/kg
NITROETHANE	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
NITROETHANE	Inhalation-Vapor		estimated to be 10 - 20 mg/l
NITROETHANE	Ingestion		estimated to be 300 - 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4-CHLOROBENZOTRIFLUORIDE	Rabbit	No significant irritation
EPOXY RESIN	Rabbit	Mild irritant
BISPHENOL A EPOXY RESIN	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
4-CHLOROBENZOTRIFLUORIDE	Rabbit	No significant irritation
EPOXY RESIN	Rabbit	Moderate irritant
BISPHENOL A EPOXY RESIN	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
EPOXY RESIN	Human and animal	Sensitizing
BISPHENOL A EPOXY RESIN	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
EPOXY RESIN	Human	Some positive data exist, but the data are not sufficient for classification
BISPHENOL A EPOXY RESIN	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
4-CHLOROBENZOTRIFLUORIDE	In Vitro	Not mutagenic
4-CHLOROBENZOTRIFLUORIDE	In vivo	Not mutagenic
EPOXY RESIN	In vivo	Not mutagenic
EPOXY RESIN	In Vitro	Some positive data exist, but the data are not sufficient for classification
BISPHENOL A EPOXY RESIN	In vivo	Not mutagenic
BISPHENOL A EPOXY RESIN	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
EPOXY RESIN	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
BISPHENOL A EPOXY RESIN	Dermal	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
EPOXY RESIN	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
EPOXY RESIN	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
BISPHENOL A EPOXY RESIN	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
BISPHENOL A EPOXY RESIN	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
BISPHENOL A EPOXY RESIN	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
BISPHENOL A EPOXY RESIN	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
------	-------	-----------------	-------	---------	-------------	-------------------

4-CHLOROBENZOTRIFLUORIDE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
--------------------------	------------	------------------------	--	--	---------------------	--

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4-CHLOROBENZOTRIFLUORIDE	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.7 mg/l	28 days
4-CHLOROBENZOTRIFLUORIDE	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 7.4 mg/l	28 days
4-CHLOROBENZOTRIFLUORIDE	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.8 mg/l	90 days
4-CHLOROBENZOTRIFLUORIDE	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	90 days
EPOXY RESIN	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
EPOXY RESIN	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
EPOXY RESIN	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
BISPHENOL A EPOXY RESIN	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
BISPHENOL A EPOXY RESIN	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
BISPHENOL A EPOXY RESIN	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

For the component/components, either no data are currently available or 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.

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. 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

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

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
4-CHLOROBENZOTRIFLUORIDE	98-56-6	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

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: 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.

Document Group:	30-4128-2	Version Number:	2.00
Issue Date:	03/03/15	Supersedes Date:	01/31/12

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M

3M USA SDSs are available at www.3M.com