Safety Data Sheet

Document Group:	33-5983-3	**Version Number:**	1.00
Issue Date:	02/09/2015	**Supercedes Date:**	Initial Issue

IDENTIFICATION

1.1. Product identifier
3M™ Impact Resistant Structural Adhesive PNs 07333, 57333

Product identification numbers
60-4550-8333-1 60-4550-8345-5 HB-0044-0462-8

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Two-part color changing adhesive with optimized shear, peel and impact performance.

1.3 Supplier's details

Division:	Automotive Aftermarket
ADDRESS:	Rodovia Anhanguera, Km 110 - 13181-900 - Sumaré - SP - Brazil
Telephone:	8000132333
E Mail:	falecoma3M@mmm.com
Website:	www.3M.com.br

1.4. Emergency telephone number
(19) 3838 7333

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

33-5988-2, 33-5984-1

TRANSPORT INFORMATION

This product is a kit that consists of two or more different regulated materials packed in the same outer packaging (ship unit). The transportation classifications of the individual components appear in Section 14 of the attached SDSs.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M Brazil SDSs are available at www.3M.com.br

Safety Data Sheet

Document Group:	33-5988-2	**Version Number:**	1.00
Issue Date:	02/09/2015	**Supercedes Date:**	Initial Issue

SECTION 1: Identification

1.1. Product identifier
3M™ Impact Resistant Structural Adhesive (Part B) PNs 07333, 57333

LB-K100-1574-0 LB-K100-1574-1

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Base side of two-part color changing adhesive with optimized shear, peel and impact performance.

1.3 Supplier's details
Division: Automotive Aftermarket
ADDRESS: Rodovia Anhanguera, Km 110 - 13181-900 - Sumaré - SP - Brazil
Telephone: 8000132333
E Mail: falecoma3M@mmm.com
Website: www.3M.com.br

1.4. Emergency telephone number
(19) 3838 7333

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Serious Eye Damage/Irritation: Category 2A.
Skin Corrosion/Irritation: Category 3.
Skin Sensitizer: Category 1.
Germ Cell Mutagenicity: Category 2.
Acute Aquatic Toxicity: Category 2.
Chronic Aquatic Toxicity: Category 3.

2.2. Label elements
SIGNAL WORD
Warning

Symbols
Exclamation mark | Health Hazard |

Pictograms

HAZARD STATEMENTS

H319	Causes serious eye irritation.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H401	Toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

General:

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.

Prevention:

P280E	Wear protective gloves.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

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

22% of the mixture consists of ingredients of unknown hazards to the aquatic environment.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	60 - 100
Synthetic Rubber (04499600-7202)	Trade Secret	1.5 - 20.5
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	0.1 - 5
Treated Inorganic Filler (04499600-7204)	Trade Secret	1 - 5
Benzoic Acid, C9-C11-Branched Alkyl Esters	131298-44-7	1 - 5
Inorganic Filler (04499600-7205)	Trade Secret	1 - 5
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	1 - 5
Treated Filler (04499600-7203)	Trade Secret	1 - 5
Phenolphthalein	77-09-8	< 1

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

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

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

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

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

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. 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. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Avoid breathing 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.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	CMRG	TWA:5 ppm	
Inorganic Filler (04499600-7205)	Trade Secret	CMRG	TWA(as respirable dust):3 mg/m3	
Inorganic Filler (04499600-7205)	Trade Secret	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Treated Filler (04499600-7203)	Trade Secret	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	
Treated Inorganic Filler (04499600-7204)	Trade Secret	CMRG	CEIL:5 mg/m3	
Treated Inorganic Filler (04499600-7204)	Trade Secret	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Brazil OELs : Brazil. (NR - 15, Annex 11) Hazardous Chemical Agents for which Occupational Exposure and Inspection Limits have been Established
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
ppm: parts per million
mg/m3: milligrams per cubic metre
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.

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

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance/Odor	Silver Grey Thick Paste (Very Slight Acrylic Smell)
Boiling point/Initial boiling point/Boiling range	35 ºC
Flash Point	103.9 ºC
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Vapor Pressure	666.6 Pa
Density	1.138 g/ml
Relative Density	1.138
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Viscosity	100,000 - 500 Pa-s
Volatile Organic Compounds	0 % weight
Volatile Organic Compounds	0 g/l
VOC Less H2O & Exempt Solvents	0 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

Sparks and/or flames

10.5. Incompatible materials
Strong acids
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
Aldehydes	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

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

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

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

Additional Health Effects:

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

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	Ingestion		No data available; calculated ATE > 5,000 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Treated Filler (04499600-7203)	Dermal	Rat	LD50 > 2,000 mg/kg
Treated Filler (04499600-7203)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Treated Filler (04499600-7203)	Ingestion	Rat	LD50 6,450 mg/kg
Treated Inorganic Filler (04499600-7204)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Treated Inorganic Filler (04499600-7204)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Treated Inorganic Filler (04499600-7204)	Ingestion	Rat	LD50 > 5,110 mg/kg
Benzoic Acid, C9-C11-Branched Alkyl Esters	Dermal	Rabbit	LD50 > 2,000 mg/kg
Benzoic Acid, C9-C11-Branched Alkyl Esters	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Benzoic Acid, C9-C11-Branched Alkyl Esters	Ingestion	Rat	LD50 > 5,000 mg/kg
Inorganic Filler (04499600-7205)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Inorganic Filler (04499600-7205)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Inorganic Filler (04499600-7205)	Ingestion	Rat	LD50 > 5,110 mg/kg
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Dermal	Rabbit	LD50 4,000 mg/kg
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Rat	LD50 7,010 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Dermal	Rabbit	LD50 2,500 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 2,450 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Mild irritant
Treated Filler (04499600-7203)	Rabbit	No significant irritation
Treated Inorganic Filler (04499600-7204)	Rabbit	No significant irritation
Inorganic Filler (04499600-7205)	Rabbit	No significant irritation
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Rabbit	Mild irritant
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgement	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Moderate irritant
Treated Filler (04499600-7203)	Rabbit	No significant irritation
Treated Inorganic Filler (04499600-7204)	Rabbit	No significant irritation
Inorganic Filler (04499600-7205)	Rabbit	No significant irritation
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Rabbit	Corrosive
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgement	Mild irritant

Skin Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human and animal	Sensitizing
Treated Inorganic Filler (04499600-7204)	Human and animal	Not sensitizing
Inorganic Filler (04499600-7205)	Human and animal	Not sensitizing
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Guinea pig	Some positive data exist, but the data are not sufficient for classification
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	similar compounds	Sensitizing

Respiratory Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Treated Inorganic Filler (04499600-7204)	In Vitro	Not mutagenic
Inorganic Filler (04499600-7205)	In Vitro	Not mutagenic
3-(Trimethoxysilyl)Propyl Glycidyl Ether	In vivo	Not mutagenic
3-(Trimethoxysilyl)Propyl Glycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Treated Inorganic Filler (04499600-7204)	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Inorganic Filler (04499600-7205)	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
Treated Filler (04499600-7203)	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Treated Inorganic Filler (04499600-7204)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Treated Inorganic Filler (04499600-7204)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497	1 generation

				mg/kg/day	
Treated Inorganic Filler (04499600-7204)	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Inorganic Filler (04499600-7205)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Inorganic Filler (04499600-7205)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Inorganic Filler (04499600-7205)	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 3,000 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Treated Filler (04499600-7203)	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	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
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	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
Treated Filler (04499600-7203)	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Treated Inorganic Filler (04499600-7204)	Inhalation	respiratory system | silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Inorganic Filler (04499600-7205)	Inhalation	respiratory system | silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
3-(Trimethoxysilyl)Propyl Glycidyl Ether	Ingestion	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | nervous system | kidney and/or bladder | respiratory system	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

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labeling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
GHS Acute 2: Toxic to aquatic life.

Chronic aquatic hazard:
GHS Chronic 3: Harmful to aquatic life with long lasting effects

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
1,4-Bis[(2,3-Epoxypropoxy) Methyl]Cyclohexane	14228-73-0	Water flea	Estimated	48 hours	Effect Concentration 50%	22 mg/l
1,4-Bis[(2,3-Epoxypropoxy) Methyl]Cyclohexane	14228-73-0	Ricefish	Estimated	96 hours	Lethal Concentration 50%	13 mg/l
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	Green algae	Experimental	96 hours	Effect Concentration 50%	350 mg/l
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	Common Carp	Experimental	96 hours	Lethal Concentration 50%	55 mg/l
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	Water flea	Experimental	48 hours	Effect Concentration 50%	473 mg/l
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	Ricefish	Experimental	96 hours	Lethal Concentration 50%	1.41 mg/l
1,4-Bis[(2,3-Epoxypropoxy) Methyl]Cyclohexane	14228-73-0	Green algae	Estimated	72 hours	Effect Concentration 50%	>93 mg/l
1,4-Bis[(2,3-	14228-73-0	Green algae	Estimated	72 hours	No obs Effect	29 mg/l

Epoxypropoxy) Methyl]Cyclohexane					Conc	
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	Green algae	Experimental	96 hours	No obs Effect Conc	130 mg/l
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	Water flea	Experimental	21 days	No obs Effect Conc	>=100 mg/l
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	Water flea	Experimental	21 days	No obs Effect Conc	0.3 mg/l
Treated Filler (04499600-7203)	Trade Secret	Rainbow Trout	Experimental	21 days	No obs Effect Conc	>100 mg/l
Treated Inorganic Filler (04499600-7204)	Trade Secret		Data not available or insufficient for classification			
Inorganic Filler (04499600-7205)	Trade Secret		Data not available or insufficient for classification			
Phenolphthalein	77-09-8		Data not available or insufficient for classification			
Benzoic Acid, C9-C11-Branched Alkyl Esters	131298-44-7	Water flea	Experimental	48 hours	Effect Concentration 50%	0.54 mg/l
Treated Filler (04499600-7203)	Trade Secret	Western Mosquitofish	Experimental	96 hours	Lethal Concentration 50%	>100 mg/l

12.2. Persistence and degradability

Material	**CAS No.**	**Test Type**	**Duration**	**Study Type**	**Test Result**	**Protocol**
1,4-Bis[(2,3-Epoxypropoxy) Methyl]Cyclohexane	14228-73-0	Estimated Hydrolysis		Hydrolytic half-life	7 days (t 1/2)	Other methods
Inorganic Filler (04499600-7205)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t 1/2)	Other methods
Treated Filler	Trade Secret	Data not	N/A	N/A	N/A	N/A

(04499600-7203)		available or insufficient for classification				
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	Laboratory Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
Treated Inorganic Filler (04499600-7204)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Estimated Biodegradation	28 days	Biological Oxygen Demand	4 % weight	OECD 301C - MITI (I)
Phenolphthalein	77-09-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Benzoic Acid, C9-C11-Branched Alkyl Esters	131298-44-7	Estimated Chemical Degradation		Photolytic half-life (in air)	2.2 days (t 1/2)	Other methods
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 % weight	Other methods
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	Laboratory Biodegradation	28 days	Biological Oxygen Demand	0 % weight	OECD 301C - MITI (I)
Benzoic Acid, C9-C11-Branched Alkyl Esters	131298-44-7	Experimental Aquatic Biodegrad. - Aerobic	28 days	Biological Oxygen Demand	67 % weight	OECD 301C - MITI (I)

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Treated Inorganic Filler (04499600-7204)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Estimated BCF - Other		Bioaccumulation Factor	3	Est: Bioconcentration factor
Inorganic Filler (04499600-7205)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3-(Trimethoxysil	2530-83-8	Data not available or	N/A	N/A	N/A	N/A

yl)Propyl Glycidyl Ether		insufficient for classification				
Treated Filler (04499600-7203)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	Laboratory BCF - Other	28 days	Bioaccumulation Factor	<42	Other methods
Phenolphthalein	77-09-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Benzoic Acid, C9-C11-Branched Alkyl Esters	131298-44-7	Estimated Bioconcentration		Bioaccumulation Factor	466	Est: Bioconcentration factor

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available

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. Dispose of waste product in a permitted industrial waste facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

Not hazardous for transportation.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

SECTION 15: Regulatory information

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

Global inventory status
All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Industrial Safety and Health Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA.

Carcinogenicity

Ingredient	C.A.S. No.	Class Description	Regulation
Cadmium	7440439	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Cadmium	7440439	Known human carcinogen	National Toxicology Program Carcinogens
CADMIUM COMPOUNDS	S~CD~C	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
CADMIUM COMPOUNDS	S~CD~C	Known human carcinogen	National Toxicology Program Carcinogens
CHROMIUM (HEXAVALENT COMPOUNDS)	S~CR6~C	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
CHROMIUM (HEXAVALENT COMPOUNDS)	S~CR6~C	Known human carcinogen	National Toxicology Program Carcinogens
Lead	7439921	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Lead	7439921	Anticipated human carcinogen	National Toxicology Program Carcinogens
LEAD COMPOUNDS	S~PB~C	Anticipated human carcinogen	National Toxicology Program Carcinogens
Phenolphthalein	77-09-8	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Phenolphthalein	77-09-8	Anticipated human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	SEQ677	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	SEQ677	Known human carcinogen	National Toxicology Program Carcinogens

SECTION 16: Other information

NFPA Hazard Classification
Health: 3 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

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

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M Brazil SDSs are available at www.3M.com.br

Safety Data Sheet

Document Group:	33-5984-1	**Version Number:**	1.00
Issue Date:	02/09/2015	**Supercedes Date:**	Initial Issue

SECTION 1: Identification

1.1. Product identifier
3M™ Impact Resistant Structural Adhesive Part A, PNs 07333, 57333

LB-K100-1573-6 LB-K100-1573-7

1.2. Recommended use and restrictions on use

Recommended use
Automotive, Accelerator for two-part color changing adhesive with optimized shear, peel and impact performance.

1.3 Supplier's details
Division: Automotive Aftermarket
ADDRESS: Rodovia Anhanguera, Km 110 - 13181-900 - Sumaré - SP - Brazil
Telephone: 8000132333
E Mail: falecoma3M@mmm.com
Website: www.3M.com.br

1.4. Emergency telephone number
(19) 3838 7333

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Acute Toxicity (oral): Category 4.
Acute Toxicity (dermal): Category 5.
Acute Toxicity (inhalation): Category 5.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1B.
Skin Sensitizer: Category 1.

2.2. Label elements
SIGNAL WORD
Danger

Symbols
Corrosion | Exclamation mark |

Pictograms

HAZARD STATEMENTS

H302	Harmful if swallowed.
H313	May be harmful in contact with skin.
H318	Causes serious eye damage.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H333	May be harmful if inhaled.

PRECAUTIONARY STATEMENTS

General:

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280D	Wear protective gloves, protective clothing, and eye/face protection.
P280A	Wear eye/face protection.
P280E	Wear protective gloves.

Response:

P304 + P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

P405	Store locked up.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Other hazards

Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

May cause chemical gastrointestinal burns.

26% of the mixture consists of ingredients of unknown acute oral toxicity.
26% of the mixture consists of ingredients of unknown acute dermal toxicity.
82% of the mixture consists of ingredients of unknown acute inhalation toxicity.
26% of the mixture consists of ingredients of unknown hazards to the aquatic environment.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Epoxy Copolymer (04499600-7155)	Trade Secret	20 - 40
Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	10 - 30
Acrylic Copolymer	Trade Secret	0 - 5
Aluminum	7429-90-5	5 - 15
Methylenedi(Cyclohexylamine)	1761-71-3	1 - 10
Synthetic Rubber (04499600-7150)	Trade Secret	1 - 10
Treated Filler (04499600-7152)	Trade Secret	3 - 7
Surface Treated Inorganic Filler (04499600-7151)	Trade Secret	1 - 5
Mineral Filler (04499600-7156)	Trade Secret	0 - 3
Tris(2,4,6-Dimethylaminomonomethyl)phenol	90-72-2	< 5
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	0 - 3
Polyamide Resin (04499600-7154)	Trade Secret	< 2
Inorganic Filler (04499600-7153)	Trade Secret	1 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Skin Contact:
Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye Contact:
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:
Rinse mouth. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. 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.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
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. Place in a closed container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Keep out of reach of children. 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.)

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	ACGIH	CEIL:0.1 mg/m3	Skin Notation
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	Brazil OELs	CEIL:0.1 mg/m3	Skin Notation
Aluminum	7429-90-5	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Aluminum	7429-90-5	Brazil OELs	TWA(respirable fraction)(8 hours):1 mg/m3	
Aluminum	7429-90-5	OSHA	TWA(as Al respirable dust):5 mg/m3;TWA(as Al total dust):15 mg/m3	
Tris(2,4,6-Dimethylaminomonomethyl)phenol	90-72-2	CMRG	TWA:5 ppm	
Inorganic Filler (04499600-7153)	Trade Secret	Manufacturer determined	TWA(as dust):10 mg/m3	
Inorganic Filler (04499600-7153)	Trade	ACGIH	TWA(as fiber):0.2 fiber/cc	A2: Suspected human

	Secret			carcin.
Inorganic Filler (04499600-7153)	Trade Secret	Brazil OELs	TWA(as fiber)(8 hours):0.2 fiber/cc	
Surface Treated Inorganic Filler (04499600-7151)	Trade Secret	CMRG	CEIL:5 mg/m3	
Surface Treated Inorganic Filler (04499600-7151)	Trade Secret	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Treated Filler (04499600-7152)	Trade Secret	OSHA	TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Brazil OELs : Brazil. (NR - 15, Annex 11) Hazardous Chemical Agents for which Occupational Exposure and Inspection Limits have been Established
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
ppm: parts per million
mg/m3: milligrams per cubic metre
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.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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

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: Boots - Nitrile
Apron – Nitrile

Respiratory protection

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

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

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Specific Physical Form:	Paste
Appearance/Odor	Silver Grey Thick Paste (Very Slight Acrylic Smell)
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	*No Data Available*
Flash Point	103.9 ºC [*Test Method:* Closed Cup]
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Vapor Pressure	666.6 Pa
Density	*No Data Available*
Relative Density	1.23 [*Ref Std:* WATER=1]
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	55 - 80 Pa-s
Volatile Organic Compounds	1.8 % weight [*Test Method:* calculated per CARB title 2]
Volatile Organic Compounds	21 g/l [*Test Method:* calculated SCAQMD rule 443.1]
Percent volatile	1.8 % weight
VOC Less H2O & Exempt Solvents	21 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 oxidizing agents

10.6. Hazardous decomposition products

Substance	Condition
Aldehydes	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:
May be harmful if inhaled. Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

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 additional health effects (see below).

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

May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Muscular Effects: Signs/symptoms may include generalized muscle weakness, paralysis and atrophy.

Additional Information:
Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

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
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Dermal	Rabbit	LD50 2,500 mg/kg
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Ingestion	Rat	LD50 3,160 mg/kg
Aluminum	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminum	Ingestion		LD50 estimated to be > 5,000 mg/kg
Aluminum	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.888 mg/l
Methylenedi(Cyclohexylamine)	Dermal	Rabbit	LD50 2,110 mg/kg
Methylenedi(Cyclohexylamine)	Ingestion	Rat	LD50 350 mg/kg
Synthetic Rubber (04499600-7150)	Dermal	Rabbit	LD50 > 3,000 mg/kg
Synthetic Rubber (04499600-7150)	Ingestion	Rat	LD50 > 15,300 mg/kg
Surface Treated Inorganic Filler (04499600-7151)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Surface Treated Inorganic Filler (04499600-7151)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Surface Treated Inorganic Filler (04499600-7151)	Ingestion	Rat	LD50 > 5,110 mg/kg
Treated Filler (04499600-7152)	Dermal	Rat	LD50 > 2,000 mg/kg
Treated Filler (04499600-7152)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Treated Filler (04499600-7152)	Ingestion	Rat	LD50 6,450 mg/kg
Mineral Filler (04499600-7156)	Dermal		LD50 estimated to be > 5,000 mg/kg
Mineral Filler (04499600-7156)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Tris(2,4,6-Dimethylaminomonomethyl)phenol	Dermal	Rat	LD50 1,280 mg/kg
Tris(2,4,6-Dimethylaminomonomethyl)phenol	Ingestion	Rat	LD50 1,000 mg/kg
m-Xylene-.alpha.alpha'.Diamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
m-Xylene-.alpha.alpha'.Diamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.2 mg/l
m-Xylene-.alpha.alpha'.Diamine	Ingestion	Rat	LD50 980 mg/kg
Inorganic Filler (04499600-7153)	Dermal		LD50 estimated to be > 5,000 mg/kg
Inorganic Filler (04499600-7153)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Rabbit	Corrosive
Aluminum	Rabbit	No significant irritation
Methylenedi(Cyclohexylamine)	Rabbit	Corrosive
Surface Treated Inorganic Filler (04499600-7151)	Rabbit	No significant irritation
Treated Filler (04499600-7152)	Rabbit	No significant irritation
Tris(2,4,6-Dimethylaminomonomethyl)phenol	Rabbit	Corrosive
m-Xylene-.alpha.alpha'.Diamine	Rat	Corrosive
Inorganic Filler (04499600-7153)	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Bis(3-Aminopropyl) Ether of Diethylene Glycol	similar health hazards	Corrosive
Aluminum	Rabbit	No significant irritation
Methylenedi(Cyclohexylamine)	Rabbit	Corrosive
Surface Treated Inorganic Filler (04499600-7151)	Rabbit	No significant irritation
Treated Filler (04499600-7152)	Rabbit	No significant irritation
Tris(2,4,6-Dimethylaminomonomethyl)phenol	Rabbit	Corrosive
m-Xylene-.alpha.alpha'.Diamine	Rabbit	Corrosive

Inorganic Filler (04499600-7153)	Professional judgement	No significant irritation

Skin Sensitization

Name	Species	Value
Aluminum	Guinea pig	Not sensitizing
Methylenedi(Cyclohexylamine)	Guinea pig	Sensitizing
Synthetic Rubber (04499600-7150)	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Surface Treated Inorganic Filler (04499600-7151)	Human and animal	Not sensitizing
Tris(2,4,6-Dimethylaminomonomethyl)phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification
m-Xylene-.alpha.alpha'.Diamine	Guinea pig	Sensitizing

Respiratory Sensitization

Name	Species	Value
Aluminum	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Aluminum	In Vitro	Not mutagenic
Surface Treated Inorganic Filler (04499600-7151)	In Vitro	Not mutagenic
Mineral Filler (04499600-7156)	In Vitro	Not mutagenic
Tris(2,4,6-Dimethylaminomonomethyl)phenol	In Vitro	Not mutagenic
m-Xylene-.alpha.alpha'.Diamine	In Vitro	Not mutagenic
m-Xylene-.alpha.alpha'.Diamine	In vivo	Not mutagenic
Inorganic Filler (04499600-7153)	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Surface Treated Inorganic Filler (04499600-7151)	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Inorganic Filler (04499600-7153)	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
Surface Treated Inorganic Filler (04499600-7151)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Surface Treated Inorganic Filler (04499600-7151)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Surface Treated Inorganic Filler (04499600-7151)	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Treated Filler (04499600-7152)	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
m-Xylene-.alpha.alpha'.Diamine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 450	1 generation

				mg/kg/day	
m-Xylene-.alpha.alpha'.Diamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 450 mg/kg	1 generation
m-Xylene-.alpha.alpha'.Diamine	Ingestion	Not toxic to development	Rat	NOAEL 450 mg/kg/day	1 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Methylenedi(Cyclohexylamine)	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
Treated Filler (04499600-7152)	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes
Tris(2,4,6-Dimethylaminomonomethyl)phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
m-Xylene-.alpha.alpha'.Diamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not avaliable	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Aluminum	Inhalation	nervous system | respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Methylenedi(Cyclohexylamine)	Ingestion	liver | muscles	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 15 mg/kg/day	36 days
Surface Treated Inorganic Filler (04499600-7151)	Inhalation	respiratory system | silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Treated Filler (04499600-7152)	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Mineral Filler (04499600-7156)	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Mineral Filler (04499600-7156)	Inhalation	pulmonary fibrosis	All data are negative	Human and animal	NOAEL Not available	
Tris(2,4,6-Dimethylaminomonomethyl)phenol	Dermal	skin | liver | nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
Tris(2,4,6-Dimethylaminomonomethyl)phenol	Dermal	auditory system | hematopoietic system | eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days
m-Xylene-.alpha.alpha'.Diamine	Ingestion	endocrine system | blood | bone marrow	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	28 days
Inorganic Filler (04499600-7153)	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure

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

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labeling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	Water flea	Experimental	48 hours	Effect Concentration 50%	220 mg/l
Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	Green algae	Experimental	72 hours	Effect Concentration 50%	>500 mg/l
Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	Golden Orfe	Experimental	96 hours	Lethal Concentration 50%	>1,000 mg/l
Tris(2,4,6-Dimethylaminomonomethyl)phenol	90-72-2	Grass Shrimp	Experimental	96 hours	Lethal Concentration 50%	718 mg/l
Tris(2,4,6-Dimethylaminomonomethyl)phenol	90-72-2	Common Carp	Experimental	96 hours	Lethal Concentration 50%	175 mg/l
Treated Filler (04499600-7152)	Trade Secret	Western Mosquitofish	Experimental	96 hours	Lethal Concentration 50%	>100 mg/l
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	Water flea	Experimental	48 hours	Effect Concentration 50%	15.2 mg/l
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	Ricefish	Experimental	96 hours	Lethal Concentration 50%	87.6 mg/l
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	Green Algae	Experimental	72 hours	Effect Concentration 50%	28 mg/l
Bis(3-	4246-51-9	Green algae	Experimental	72 hours	Effect	5.4 mg/l

Aminopropyl) Ether of Diethylene Glycol					Concentration 10%	
Treated Filler (04499600-7152)	Trade Secret	Rainbow Trout	Experimental	21 days	No obs Effect Conc	>100 mg/l
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	Green Algae	Experimental	72 hours	No obs Effect Conc	9.8 mg/l
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	Water flea	Experimental	21 days	No obs Effect Conc	4.7 mg/l
Synthetic Rubber (04499600-7150)	Trade Secret		Data not available or insufficient for classification			
Aluminum	7429-90-5		Data not available or insufficient for classification			
Surface Treated Inorganic Filler (04499600-7151)	Trade Secret		Data not available or insufficient for classification			
Polyamide Resin (04499600-7154)	Trade Secret		Data not available or insufficient for classification			
Methylenedi(Cyclohexylamine)	1761-71-3		Data not available or insufficient for classification			
Inorganic Filler (04499600-7153)	Trade Secret		Data not available or insufficient for classification			
Epoxy Copolymer (04499600-7155)	Trade Secret		Data not available or insufficient for classification			
Mineral Filler (04499600-7156)	Trade Secret		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	**CAS No.**	**Test Type**	**Duration**	**Study Type**	**Test Result**	**Protocol**
Methylenedi(Cyclohexylamine)	1761-71-3	Estimated Photolysis		Photolytic half-life (in air)	3.30 hours (t 1/2)	Other methods
Polyamide Resin (04499600-	Trade Secret	Data not available or insufficient for	N/A	N/A	N/A	N/A

7154)		classification				
Epoxy Copolymer (04499600-7155)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Mineral Filler (04499600-7156)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Inorganic Filler (04499600-7153)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Aluminum	7429-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Treated Filler (04499600-7152)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Surface Treated Inorganic Filler (04499600-7151)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Synthetic Rubber (04499600-7150)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Tris(2,4,6-Dimethylaminomonomethyl)phenol	90-72-2	Experimental Biodegradation	28 days	Biological Oxygen Demand	4 % weight	OECD 301D - Closed Bottle Test
Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	Experimental Biodegradation	25 days	Carbon dioxide evolution	-8 % weight	OECD 301B - Mod. Sturm or CO2
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	Experimental Biodegradation	28 days	Carbon dioxide evolution	49 % weight	OECD 301B - Mod. Sturm or CO2

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Mineral Filler (04499600-7156)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Surface Treated Inorganic Filler (04499600-7151)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyamide Resin	Trade Secret	Data not available or	N/A	N/A	N/A	N/A

(04499600-7154)		insufficient for classification				
Epoxy Copolymer (04499600-7155)	Trade Secret	Estimated Bioconcentration		Bioaccumulation Factor	2.9	Est: Bioconcentration factor
Inorganic Filler (04499600-7153)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Aluminum	7429-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
m-Xylene-.alpha.alpha'.Diamine	1477-55-0	Experimental BCF-Carp	42 days	Bioaccumulation Factor	<2.7	OECD 305E-Bioaccum Fl-thru fis
Treated Filler (04499600-7152)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Synthetic Rubber (04499600-7150)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	Estimated Bioconcentration		Log of Octanol/H2O part. coeff	-1.46	Est: Octanol-water part. coeff
Methylenedi(Cyclohexylamine)	1761-71-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	2.03	Other methods
Tris(2,4,6-Dimethylaminomonomethyl)phenol	90-72-2	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-0.66	Other methods

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available

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. Dispose of waste product in a permitted industrial waste facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

Ground Transport (ANTT):
UN Number: UN2735
Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S.
Technical Name: (Methylenedi(Cyclohexylamine)
Hazard Class/Division: 8

Packing group: II
Risk Number: 80

Marine Transport (IMDG):

UN Number: UN2735
Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S.
Technical Name: (Methylenedi(Cyclohexylamine)

Packing group: II

Air Transport (IATA):

UN Number: UN2735
Proper Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S.
Technical Name: (Methylenedi(Cyclohexylamine)

Packing group: II

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

SECTION 15: Regulatory information

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

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA.

Carcinogenicity

Ingredient	C.A.S. No.	Class Description	Regulation
Cadmium	7440439	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Cadmium	7440439	Known human carcinogen	National Toxicology Program Carcinogens
CADMIUM COMPOUNDS	S~CD~C	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
CADMIUM COMPOUNDS	S~CD~C	Known human carcinogen	National Toxicology Program Carcinogens
CERAMIC FIBERS	SEQ754	Grp. 2B: Possible human carc.	International Agency for

			Research on Cancer
CERAMIC FIBERS	SEQ754	Anticipated human carcinogen	National Toxicology Program Carcinogens
CHROMIUM (HEXAVALENT COMPOUNDS)	S~CR6~C	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
CHROMIUM (HEXAVALENT COMPOUNDS)	S~CR6~C	Known human carcinogen	National Toxicology Program Carcinogens
Cobalt and inorganic cobalt compounds	S~CO~CE2	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
COBALT METAL	TW7440484A	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
COBALT METAL [DUST] WITHOUT TUNGSTEN CARBIDE [DUST]	TW7440484C	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
GLASS FILAMENTS	SEQ753	Anticipated human carcinogen	National Toxicology Program Carcinogens
Lead	7439921	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Lead	7439921	Anticipated human carcinogen	National Toxicology Program Carcinogens
LEAD COMPOUNDS	S~PB~C	Anticipated human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	SEQ677	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	SEQ677	Known human carcinogen	National Toxicology Program Carcinogens

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

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

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