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Material Safety Data Sheet

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Document id : 18-0243-8 Issue date : 09/07/2005
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Prepared by: Environmental Health and Safety Services Department, 3M Canada Company
Telephone: (519) 452-2161, Fax: (519) 452-6015, Web Site: www.3M.ca

1 Product Identification

Tradename:

04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE AND 64179 DURAMIX(TM)
LARGE METAL PANEL ADHESIVE

Product ID:

FS-9100-3579-9 62-2645-0632-0 62-2645-0633-8 62-2645-0636-1
62-2645-0638-7

Intended Use of Product:

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of the WHMIS controlled components is included. An MSDS for non-WHMIS controlled components may also be included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:

Kit component(s):

18-0366-7 04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179

DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A)
18-0394-9 04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) AND 64179
DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B)

Division:
INDUSTRIAL ADHESIVES AND TAPES



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1 Product Identification

Tradename:
04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179
DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A)
Product ID:

Intended Use of Product:

Two-part urethane adhesive/sealant.

Division:

INDUSTRIAL ADHESIVES AND TAPES

2 Composition/Information on Ingredients

Ingredient Name	CAS Number	Percentage
4,4'-DIPHENYLMETHANE DIISOCYANATE	101-68-8	30 - 60
DIPHENYLMETHANEDIISOCYANATE PREPOLYMER	68424-09-9	15 - 40
POLY(DIPHENYLMETHANE-4, 4'-DIISOCYANATE)	25686-28-6	15 - 40
DIPHENYLMETANEDIISOCYANATE PREPOLYMER	59952-43-1	1 - 5
ETHOXYLATED PROPOXYLATED GLYCEROL-MDI COPOLYMER	59675-67-1	1 - 5



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) Page 2 of 10

SILANE ESTER DERIVATIVE	24801-88-5	0.5 - 1.0
CARBON BLACK	1333-86-4	0.1 - 0.5

NOTE:

Each percentage is expressed as the ratio of the weight of the ingredient to the weight of the controlled product.

3 Hazards Identification

Critical Hazards:

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

Moderate Skin Irritation: Signs/symptoms can include localized redness, swelling, itching, and dryness.

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

Harmful by inhalation.

Prolonged or repeated exposure may cause: Allergic Respiratory Reaction: Signs/symptoms can include difficulty breathing, wheezing, cough, and tightness of chest.

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

WARNING: Contains a chemical which can cause cancer (1333-86-4) (IARC possible human carcinogen 2B)

See Sections 7 and 11 for further information.

4 First Aid Measures

Instructions for Eye Contact:

Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Instructions for Skin Contact:

Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Instructions for Inhalation:

Remove person to fresh air. If signs/symptoms develop, get medical attention.

Instructions for Ingestion:

Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) Page 3 of 10

5 Fire Fighting Measures

Flash point: ≥ 143.33 C TCC

Lower Explosive Limit (%): Not applicable

Upper Explosive Limit (%): Not applicable

Autoignition temperature: Not applicable

Suitable Extinguishing Media:

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

Exposure Hazards during Fire:

Non-flammable: ordinary combustible material.

Combustion Products from Fire:

Carbon monoxide - During Combustion;
Carbon dioxide - During Combustion;
Oxides of Nitrogen - During Combustion;
Toxic Vapour, Gas, Particulate - During Combustion;

Fire Fighting Procedures:

Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

NFPA: Health	2	
NFPA: Fire	1	
NFPA: Reactivity	1	
NFPA: Unusual Reaction Hazard		none

Special Instructions:

Not applicable.

6 Accidental Release Measures

Personal Precautions:

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill.

Spill Response:

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Place in a container approved for transportation by appropriate authorities,



but do not seal the container for 48 hours to avoid pressure build-up. Dispose of collected material as soon as possible.

7 Handling and Storage

Storage Requirements:

Avoid contact with water.

Incompatible Materials:

Store away from acids; Water; Strong bases;

Ventilation:

No data available.

8 Exposure Controls/Personal Protection

Personal Protection

Eye Protection:

Avoid eye contact with vapours, mists, or spray.

Hand Protection:

The following glove material(s) are recommended: butyl rubber; nitrile rubber;

Skin Protection:

Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Respiratory Protection:

Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapours. Select one of the following approved respirators based on airborne concentration of contaminants and in accordance with regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges.

Ingestion (Prevention):

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

Recommended Ventilation:

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Do not use in a confined area or areas with little or no air movement.

Ingredient Exposure Data

04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) Page 5 of 10

4,4'-DIPHENYLMETHANE DIISOCYANATE (101-68-8)

LD50 (rat, oral) 9200 mg/kg
LC50 (rat, inhalation/4 hours) 178 mg/m3

Exposure Limits

3M: TWA Category: FREE ISOCYANATES 0.005 ppm
3M: STEL Category: FREE ISOCYANATES 0.02 ppm
ACGIH: TWA 0.005 ppm
ACGIH: TWA 0.051 mg/m3

DIPHENYLMETHANEDIISOCYANATE PREPOLYMER (68424-09-9)

LD50 (rat, oral) No data available.
LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

POLY(DIPHENYLMETHANE-4,4'-DIISOCYANATE) (25686-28-6)

LD50 (rat, oral) No data available.
LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

DIPHENYLMETANEDIISOCYANATE PREPOLYMER (59952-43-1)

LD50 (rat, oral) No data available.
LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

ETHOXYLATED PROPOXYLATED GLYCEROL-MDI COPOLYMER (59675-67-1)

LD50 (rat, oral) No data available.
LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

SILANE ESTER DERIVATIVE (24801-88-5)

LD50 (rat, oral) 707 uL/kg
LD50 (dermal, rabbit) 1260 uL/kg
LC50 (rat, inhalation/4 hours) 360 mg/m3

Exposure Limits

No data available.

CARBON BLACK (1333-86-4)

LD50 (rat, oral) >15400 mg/kg
LC50 (rat, inhalation/4 hours) 6750 mg/m3

Exposure Limits

ACGIH: TWA 3.5 mg/m³ (Table A4)

CMRG: TWA 0.5 mg/m³



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) Page 6 of 10

9 Physical and Chemical Properties

Physical form,Color,Odour: Liquid; viscous; Black; Low or no detectable odour;

Odour Threshold: No data available.

pH: Not applicable

Boiling point/boiling range: ≥ 204.44 C

Melting point/melting range: Not available

Vapour pressure: ≤ 0.000004 mmHg at 20 C

Water Solubility: Negligible

Specific gravity: 1.11

Vapour density: ≥ 1 Air=1

Volatile organic compounds: ≤ 10 gms/liter EPA24C
 ≤ 5 gms/liter EPA24C when
mixed 1:1 with Part B

Evaporation rate: ≤ 1 Gels with exposure to
humidity.

Viscosity: 2,400 -3,700 centipoise

Percent Volatile: ≤ 1 % by weight Estimated
 ≤ 0.5 % by weight Estimated
when mixed 1:1 with Part B

10 Stability and Reactivity

Conditions to Avoid:

None known.

Materials to Avoid:

Water; Strong acids; Strong bases;

Hazardous Decomposition:

Carbon monoxide - During Combustion;

Carbon dioxide - During Combustion;

Oxides of Nitrogen - During Combustion;
Toxic Vapour, Gas, Particulate - During Combustion;
Stability and Reactivity:
Stable. Hazardous polymerization will not occur.

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04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) Page 7 of 10

11 Toxicological Information

Effects from Eye Contact:

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

Vapours released during curing may cause eye irritation.

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

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

Effects from Skin Contact:

Moderate Skin Irritation: Signs/symptoms can include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

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

Effects from Inhalation:

Harmful by inhalation.

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

Prolonged or repeated exposure may cause: Allergic Respiratory Reaction: Signs/symptoms can include difficulty breathing, wheezing, cough, and tightness of chest.

Vapours released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include

cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Effects from Ingestion:

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

Sensitization Information:

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

Prolonged or repeated exposure may cause: Allergic Respiratory Reaction: Signs/symptoms can include difficulty breathing, wheezing, cough, and tightness of chest.

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



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) Page 8 of 10

Carcinogenicity:

WARNING: Contains a chemical which can cause cancer (1333-86-4) (IARC possible human carcinogen 2B)

Mutagenicity:

No data available.

Reproductive Effects:

No data available.

Component Based Information:

No data available.

Product Based Information:

No data available.

12 Ecological Information

Environmental Data:

Ecotoxicity Data:

Not determined.

Ecofate Data:

Not determined.

13 Disposal Considerations

Product as Sold:

Cure (harden, set, or react) the product according to product instructions. Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

Product Packaging:

No data available.

Special Instructions:

Since regulations vary, consult applicable regulations or authorities before disposal.

14 Transportation Information

Transportation of Dangerous Goods

TDG Classification: Non-Regulated Material

Special Information:

Contact 3M for more information.

International Dangerous Goods Classification



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) Page 9 of 10

15 Regulatory Information

WHMIS Classification: D1A, D2A, D2B

NOTE:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Product Certifications:

The product on this MSDS, or all its components, is included on the

following countries' chemical inventories, as noted:

TSCA - Toxic Substances Control Act (USA)

AICS - Australian Inventory of Chemical Substances

16 Other Information

Reason for Reissue:

The following Sections and topics have been updated or revised:

Division name change.

Update Tradename

Revised Intended Use of Product

Section 2 - Composition/Information on Ingredients;

Section 3 - Hazards Identification - Critical Hazards;

Section 5 - Fire Fighting Measures

Section 6 - Accidental Release Measures;

Section 7 - Handling and Storage;

Section 8 - Exposure Controls/Personal Protection;

Section 9 - Physical and Chemical Properties;

Section 10 - Stability and Reactivity;

Section 11 - Toxicological Information;

Section 12 - Ecological Information

Section 13 - Disposal Considerations;

Section 15 - Regulatory Information: Product Certifications

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION 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



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART A)

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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.

---End---



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1 Product Identification

Tradename:
04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) AND 64179
DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B)
Product ID:

Intended Use of Product:

Two-part urethane adhesive/sealant.

Division:

INDUSTRIAL ADHESIVES AND TAPES

2 Composition/Information on Ingredients

Ingredient Name	CAS Number	Percentage
POLYETHER POLYOL	9082-00-2	20 - 50
PROPOXYLATED TRIMETHYLOLPROPANE	25723-16-4	15 - 40
1,4-CYCLOHEXANEDIMETHANOL	105-08-8	7 - 13
AMORPHOUS SILICA	7631-86-9	3 - 7
POTASSIUM OXIDE	12136-45-7	1 - 5
ISOPHORONE DIAMINE	2855-13-2	1 - 5
ALUMINUM OXIDE	1344-28-1	1 - 5
CALCIUM OXIDE	1305-78-8	0.5 - 1.5
SODIUM OXIDE	1313-59-3	0.5 - 1.5



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) Page 2 of 9

M-XYLENE-ALPHA,ALPHA'-DIAMINE 1477-55-0 0.1 - 1.0

NOTE:

Each percentage is expressed as the ratio of the weight of the ingredient to the weight of the controlled product.

3 Hazards Identification

Critical Hazards:

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

Moderate Skin Irritation: Signs/symptoms can include localized redness, swelling, itching, and dryness.

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

Persons previously sensitized to amines may develop a

cross-sensitization reaction to certain other amines.
See Sections 7 and 11 for further information.

4 First Aid Measures

Instructions for Eye Contact:

Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Instructions for Skin Contact:

Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Instructions for Inhalation:

Remove person to fresh air. If signs/symptoms develop, get medical attention.

Instructions for Ingestion:

Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B)

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5 Fire Fighting Measures

Flash point: ≥ 143.33 °C TCC

Lower Explosive Limit (%): Not applicable

Upper Explosive Limit (%): Not applicable

Autoignition temperature: Not applicable

Suitable Extinguishing Media:

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

Exposure Hazards during Fire:

Non-flammable: ordinary combustible material.

Combustion Products from Fire:

Carbon monoxide - During Combustion;

Carbon dioxide - During Combustion;

Oxides of Nitrogen - During Combustion;

Fire Fighting Procedures:

Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

NFPA: Health 2

NFPA: Fire 1

NFPA: Reactivity 1

NFPA: Unusual Reaction Hazard none

Special Instructions:

Not applicable.

6 Accidental Release Measures

Personal Precautions:

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill.

Spill Response:

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. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect as much of the spilled material as possible. Clean up residue with an appropriate organic solvent. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B)

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7 Handling and Storage

Storage Requirements:

No data available.

Incompatible Materials:

Store away from acids; Store away from oxidizing agents.

Ventilation:

No data available.

Use Instructions:

Avoid contact with oxidizing agents.

8 Exposure Controls/Personal Protection

Personal Protection

Eye Protection:

Avoid eye contact with vapours, mists, or spray.

Hand Protection:

The following glove material(s) are recommended: butyl rubber;

Skin Protection:

Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Respiratory Protection:

Avoid breathing of vapours, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Select one of the following approved respirators based on airborne concentration of contaminants and in accordance with regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges.

Ingestion (Prevention):

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

Recommended Ventilation:

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust for cutting, grinding, sanding or machining.

Ingredient Exposure Data

POLYETHER POLYOL (9082-00-2)

Specific Ingredient Data



(PART B)

No data available.

LD50 (rat, oral) >10 g/kg

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

PROPOXYLATED TRIMETHYLOLPROPANE (25723-16-4)

Specific Ingredient Data

No data available.

LD50 (rat, oral) No data available.

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

1,4-CYCLOHEXANEDIMETHANOL (105-08-8)

LD50 (rat, oral) 3200 mg/kg

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

AMORPHOUS SILICA (7631-86-9)

LD50 (rat, oral) 3160 mg/kg

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

CMRG: TWA 3 mg/m³ (specific form) as respirable dust

POTASSIUM OXIDE (12136-45-7)

Specific Ingredient Data

No data available.

LD50 (rat, oral) No data available.

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

ISOPHORONE DIAMINE (2855-13-2)

LD50 (rat, oral) No data available.

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

ALUMINUM OXIDE (1344-28-1)

LD50 (rat, oral) No data available.

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

ACGIH: TWA 10 mg/m³ Particulates (specific form) (Table A4)

CMRG: TWA 1 Fiber/cc MAN-MADE MINERAL FIBERS;

CALCIUM OXIDE (1305-78-8)

LD50 (rat, oral) No data available.

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

ACGIH: TWA 2 mg/m3

SODIUM OXIDE (1313-59-3)

Specific Ingredient Data



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) Page 6 of 9

No data available.

LD50 (rat, oral) No data available.

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

M-XYLENE-ALPHA,ALPHA'-DIAMINE (1477-55-0)

LD50 (rat, oral) No data available.

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

ACGIH: CEIL 0.1 mg/m3 (skin contact contributes to exposure)

9 Physical and Chemical Properties

Physical form,Color,Odour: Liquid; milky white colour;
slight ammonia-like odour;

Odour Threshold: No data available.

pH: Not applicable

Boiling point/boiling range: >=198.89 C

Melting point/melting range: Not available

Vapour pressure: Not applicable

Water Solubility: Negligible

Specific gravity: 1 -1.2

Vapour density: >=1 Air=1

Volatile organic compounds: <=10 gms/liter EPA24C
<=5 gms/liter EPA24C when
mixed 1:1 with Part A

Evaporation rate: <=1 Water=1

Viscosity: 4,000 -5,000 centipoise

Percent Volatile: <=1 % by weight Estimated
<=0.5 % by weight Estimated
when mixed 1:1 with Part A

10 Stability and Reactivity

Conditions to Avoid:

None known.

Materials to Avoid:

Strong acids; Strong oxidizing agents;

Hazardous Decomposition:

Carbon monoxide - During Combustion;

Carbon dioxide - During Combustion;

Oxides of Nitrogen - During Combustion;

Stability and Reactivity:

Stable. Hazardous polymerization will not occur.



04179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) AND 64179 DURAMIX(TM) LARGE METAL PANEL ADHESIVE (PART B) Page 7 of 9

11 Toxicological Information

Effects from Eye Contact:

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

Vapours released during curing may cause eye irritation.

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

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

Effects from Skin Contact:

Moderate Skin Irritation: Signs/symptoms can include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

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

Effects from Inhalation:

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

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

Prolonged or repeated exposure may cause:

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

Effects from Ingestion:

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

Sensitization Information:

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

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

Carcinogenicity:

No data available.

Mutagenicity:

No data available.



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Reproductive Effects:

No data available.

Component Based Information:

No data available.

Product Based Information:

No data available.

12 Ecological Information

Environmental Data:

Ecotoxicity Data:

Not determined.

Ecofate Data:
Not determined.

13 Disposal Considerations

Product as Sold:

Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

Product Packaging:

No data available.

Special Instructions:

Since regulations vary, consult applicable regulations or authorities before disposal.

14 Transportation Information

Transportation of Dangerous Goods

TDG Classification: Non-Regulated Material

Special Information:

Contact 3M for more information.

International Dangerous Goods Classification



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15 Regulatory Information

WHMIS Classification: D2B

NOTE:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS

contains all the information required by the CPR.

Product Certifications:

The product on this MSDS, or all its components, is included on the following countries' chemical inventories, as noted:

TSCA - Toxic Substances Control Act (USA)

AICS - Australian Inventory of Chemical Substances

DSL - Domestic Substances List (Canada)

16 Other Information

Reason for Reissue:

The following Sections and topics have been updated or revised:

Update Tradename

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION 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.

---End---