



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier

3M Scotchkote Pipe Renewal Liner 2400 Part B (Activator)

Product Identification Numbers

GR-2001-3495-9 GR-2001-4113-7

1.2. Recommended use and restrictions on use

Recommended use

Coating, Internal in-situ pipe coating.

1.3. Supplier's details

ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301
Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number

+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Corrosive to metal: Category 1.
Acute Toxicity (oral): Category 4.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (single exposure): Category 1.
Acute Aquatic Toxicity: Category 1.
Chronic Aquatic Toxicity: Category 1.

2.2. Label elements

Signal word

Danger

3M Scotchkote Pipe Renewal Liner 2400 Part B (Activator)

Symbols

Corrosion | Exclamation mark | Health Hazard | Environment |

Pictograms



Hazard Statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H370	Causes damage to organs: nervous system
H410	Very toxic 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:

P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280D	Wear protective gloves, protective clothing, and eye/face protection.
P273	Avoid release to the environment.

Response:

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.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage:

P405	Store locked up.
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Disposal:

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

May cause chemical gastrointestinal burns.

SECTION 3: Composition/information on ingredients

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This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Non-Hazardous Ingredients	Mixture	65 - 75
Cyclohexanamine, 4,4'-methylenebis[N-(1-methylpropyl)-	154279-60-4	25 - 35
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7	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.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide
Hydrogen Cyanide
Oxides of Nitrogen

Condition

During Combustion
During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Clean up residue. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial or professional use only. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Keep only in original container. Store in a corrosive resistant container with a resistant inner liner. 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
Cyclohexanamine, 4,4'-methylenebis[N-(1-methylpropyl)-	154279-60-4	Manufacturer determined	TWA-PEG:0.16 mg/m ³	Sensitizer
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7	CMRG	CEIL:5 mg/m ³	

TWA-PEG - The 8-hour, TWA Provisional Exposure Guideline was established using currently available health hazard data. For more information, contact the address or phone number listed on the first page of the SDS.

ACGIH : American Conference of Governmental Industrial Hygienists

CMRG : Chemical Manufacturer's Recommended Guidelines

Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

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

8.2.2. Personal protective equipment (PPE)

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Eye/face protection

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

Full Face Shield

Indirect Vented Goggles

Skin/hand protection

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

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

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

Respiratory protection

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

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

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

Thermal hazards

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Specific Physical Form:	Thixotropic Paste
Appearance/Odor	Amine-like odor; Black color
Odor threshold	No Data Available
pH	No Data Available
Melting point/Freezing point	No Data Available
Boiling point/Initial boiling point/Boiling range	>=355 °C
Flash Point	>=180 °C [Test Method: Pensky-Martens Closed Cup]
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	<=13.3 Pa [@ 20 °C]
Vapor Density	>=1 [Ref Std: AIR=1]
Density	No Data Available
Relative Density	1.730
Water solubility	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	300 °C

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Decomposition temperature	No Data Available
Viscosity	No Data Available
Volatile Organic Compounds	0 g/l [Test Method: Estimated]
Percent volatile	0 % weight

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:

Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

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.

3M Scotchkote Pipe Renewal Liner 2400 Part B (Activator)**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:**Single exposure may cause target organ effects:**

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE 2,000 - 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 300 - 2,000 mg/kg
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Human and animal	Not sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	In Vitro	Not mutagenic

Carcinogenicity

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Name	Route	Species	Value
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

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

Name	Route	Value	Species	Test Result	Exposure Duration
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

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

For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	Inhalation	respiratory system silicosis	All data are negative	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:**

GHS Acute 1: Very toxic to aquatic life.

Chronic aquatic hazard:

GHS Chronic 1: Very toxic to aquatic life with long lasting effects.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Cyclohexanamine, 4,4'-methylenebis[N-(1-	154279-60-4	Green Algae	Experimental	96 hours	Effect Concentration 50%	0.24 mg/l

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methylpropyl)-						
Cyclohexanamine, 4,4'-methylenebis[N-(1-methylpropyl)-	154279-60-4	Water flea	Experimental	48 hours	Effect Concentration 50%	27 mg/l
Cyclohexanamine, 4,4'-methylenebis[N-(1-methylpropyl)-	154279-60-4	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	>570 mg/l
Cyclohexanamine, 4,4'-methylenebis[N-(1-methylpropyl)-	154279-60-4	Green algae	Experimental	96 hours	No obs Effect Conc	0.0079 mg/l
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Cyclohexanamine, 4,4'-methylenebis[N-(1-methylpropyl)-	154279-60-4	Experimental Biodegradation	28 days	Biological Oxygen Demand	2 % weight	OECD 301C - MITI (I)
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Cyclohexanamine, 4,4'-methylenebis[N-(1-methylpropyl)-	154279-60-4	Experimental BCF-Carp	28 days	Bioaccumulation Factor	11	OECD 305E-Bioaccum Fl-thru fis
DIMETHYL SILOXANE, REACTION PRODUCT WITH SILICA	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Marine Transport (IMDG)

UN Number: UN3259

Proper Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S.

Technical Name: None assigned.

Hazard Class/Division: 8

Subsidiary Risk: None assigned.

Packing Group: II

Limited Quantity: None assigned.

Marine Pollutant: Yes

Marine Pollutant Technical Name: None assigned.

Other Dangerous Goods Descriptions:

None assigned.

Air Transport (IATA)

UN Number: UN3259

Proper Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S.

Technical Name: None assigned.

Hazard Class/Division: 8

Subsidiary Risk: None assigned.

Packing Group: II

Limited Quantity: None assigned.

Marine Pollutant: Yes

Marine Pollutant Technical Name: None assigned.

Other Dangerous Goods Descriptions:

None assigned.

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 China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for

3M Scotchkote Pipe Renewal Liner 2400 Part B (Activator)

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

SECTION 16: Other information

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 Malaysia SDSs are available at www.3M.com.my