Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	30-2803-2	**Version number:**	1.05
Issue Date:	05/11/2025	**Supersedes date:**	04/01/2024

IDENTIFICATION

1.1. Product identifier
3M Aerospace Sealant AC-730 B-2

1.2. Recommended use and restrictions on use

Recommended use
Sealant.

1.3. Supplier's details

Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number

Company Emergency Hotline: +65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

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:

30-2761-2, 30-2782-8

TRANSPORT INFORMATION

International Regulations

UN No.: None assigned
UN Proper shipping name: None assigned
Transportation Class (IMO): None assigned
Transportation Class (IATA): None assigned
Other Dangerous Goods Descriptions (IMO): Not restricted, as per IMDG code 2.10.2.7, marine pollutant exception.
Other Dangerous Goods Descriptions (IATA): Not restricted, as per Special Provision A197, environmentally hazardous substance exception.
Packing Group: None assigned
Marine pollutant: None assigned

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3M Singapore SDSs are available at www.3m.com.sg

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Document group:	30-2761-2	**Version number:**	2.00
Issue Date:	30/08/2024	**Supersedes date:**	03/01/2024

SECTION 1: Identification

1.1. Product identifier
3M™ Aerospace Sealant AC-730 B-1/2, B-2, and B-6 Base

1.2. Recommended use and restrictions on use

Recommended use
For industrial or professional use only., Sealant.

1.3. Supplier's details
Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number
+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Chronic Aquatic Toxicity: Category 2.

2.2. Label elements
SIGNAL WORD
Not applicable.

Symbols
Environment |

Pictograms

HAZARD STATEMENTS

H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS
Prevention:
P273 Avoid release to the environment.

Response:
P391 Collect spillage.

2.3. Other hazards
None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Polysulfide rubber	68611-50-7	60 - 70
Calcium carbonate	471-34-1	20 - 30
Fatty acids, C16-18 and C18-unsatd	67701-06-8	< 2
Trizinc bis(orthophosphate)	7779-90-0	< 2
Formaldehyde, oligomeric reaction products with phenol	9003-35-4	< 1
Epoxy resin	25085-99-8	0.01 - 0.2
Zinc oxide	1314-13-2	< 0.1

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
If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, 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

Allergic skin reaction (redness, swelling, blistering, and itching).

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	Condition
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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. 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 dykes 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. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid breathing dust/fume/gas/mist/vapours/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.

7.2. Conditions for safe storage including any incompatibilities
Store away from acids. Store away from strong bases.

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	CAS Nbr	Agency	Limit type	Additional comments
Zinc oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3	

Zinc oxide	1314-13-2	Singapore PELs	TWA(as fume)(8 hours):5 mg/m3;TWA(as dust)(8 hours):10 mg/m3;STEL(as fume)(15 minutes):10 mg/m3	
DUST, INERT OR NUISANCE	471-34-1	Singapore PELs	TWA(as particulate)(8 hours):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	471-34-1	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	471-34-1	ACGIH	TWA(respirable particles):3 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order
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/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

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

When only incidental contact is anticipated, alternative glove material(s) may be used. If contact with the glove does occur, remove immediately and replace with a set of new gloves. For incidental contact, gloves made of the following material(s) may be used:Nitrile rubber.

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
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 vapours 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:	Thixotropic Paste
Color	Tan
Odor	Pungent Sulfuric
Odour threshold	*No data available.*
pH	*No data available.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	>=93.3 ºC [*Test Method:*Closed Cup]
Evaporation rate	*Not applicable.*
Flammability	Not applicable.
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*No data available.*
Vapor Density and/or Relative Vapor Density	*No data available.*
Density	1.5 g/ml
Relative density	1.5 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Kinematic Viscosity	*No data available.*
Volatile organic compounds (VOC)	3.8 g/l [*Test Method:*calculated SCAQMD rule 443.1]
VOC less H2O & exempt solvents	3.8 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Molecular weight	*Not applicable.*

Particle Characteristics	*Not applicable.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
Reducing agents.
Strong acids.
Strong bases.

10.6 Hazardous decomposition products

Substance	**Condition**

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

Eye contact
Contact with the eyes during product use is not expected to result in significant irritation.

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

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
Polysulfide rubber	Dermal	Rat	LD50 > 7,800 mg/kg
Polysulfide rubber	Ingestion	Rat	LD50 > 5,000 mg/kg
Calcium carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium carbonate	Ingestion	Rat	LD50 6,450 mg/kg
Trizinc bis(orthophosphate)	Dermal		LD50 estimated to be > 5,000 mg/kg
Trizinc bis(orthophosphate)	Ingestion	Rat	LD50 > 5,000 mg/kg
Fatty acids, C16-18 and C18-unsatd	Ingestion	Rat	LD50 > 2,000 mg/kg
Fatty acids, C16-18 and C18-unsatd	Dermal	similar compounds	LD50 > 2,000 mg/kg
Formaldehyde, oligomeric reaction products with phenol	Dermal	Rat	LD50 > 2,000 mg/kg
Formaldehyde, oligomeric reaction products with phenol	Ingestion	Rat	LD50 > 2,900 mg/kg
Epoxy resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy resin	Ingestion	Rat	LD50 > 1,000 mg/kg
Zinc oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Zinc oxide	Inhalation-	Rat	LC50 > 5.7 mg/l

	Dust/Mist (4 hours)		
Zinc oxide	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polysulfide rubber	Rabbit	No significant irritation
Calcium carbonate	Rabbit	No significant irritation
Fatty acids, C16-18 and C18-unsatd	similar compounds	No significant irritation
Formaldehyde, oligomeric reaction products with phenol	Human and animal	Mild irritant
Epoxy resin	Rabbit	Mild irritant
Zinc oxide	Human and animal	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Polysulfide rubber	Rabbit	No significant irritation
Calcium carbonate	Rabbit	No significant irritation
Fatty acids, C16-18 and C18-unsatd	similar compounds	Mild irritant
Formaldehyde, oligomeric reaction products with phenol	Human and animal	Moderate irritant
Epoxy resin	Rabbit	Moderate irritant
Zinc oxide	Rabbit	Mild irritant

Sensitization:

Skin Sensitisation

Name	Species	Value
Polysulfide rubber		Not classified
Fatty acids, C16-18 and C18-unsatd	similar compounds	Not classified
Formaldehyde, oligomeric reaction products with phenol	Human and animal	Sensitising
Epoxy resin	Human and animal	Sensitising
Zinc oxide	Guinea pig	Not classified

Respiratory Sensitisation

Name	Species	Value
Formaldehyde, oligomeric reaction products with phenol	Human	Not classified
Epoxy resin	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value

Fatty acids, C16-18 and C18-unsatd	In Vitro	Not mutagenic
Epoxy resin	In vivo	Not mutagenic
Epoxy resin	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc oxide	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Epoxy resin	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Calcium carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Epoxy resin	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy resin	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy resin	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Epoxy resin	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Zinc oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium carbonate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes
Formaldehyde, oligomeric reaction products with phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Formaldehyde, oligomeric reaction products with phenol	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Epoxy resin	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy resin	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy resin	Ingestion	auditory system | heart | endocrine system | hematopoietic system | liver | eyes |	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

		kidney and/or bladder				
Zinc oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
Zinc oxide	Ingestion	endocrine system | hematopoietic system | kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months

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 labelling, 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 2: Toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Polysulfide rubber	68611-50-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Calcium carbonate	471-34-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Calcium carbonate	471-34-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Calcium carbonate	471-34-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Calcium carbonate	471-34-1	Green algae	Experimental	72 hours	EC10	100 mg/l
Fatty acids, C16-18 and C18-unsatd	67701-06-8	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Trizinc bis(orthophosphate)	7779-90-0	Activated sludge	Estimated	3 hours	EC50	10 mg/l
Trizinc bis(orthophosphate)	7779-90-0	Green algae	Estimated	72 hours	EC50	0.083 mg/l
Trizinc bis(orthophosphate)	7779-90-0	Invertebrate	Estimated	48 hours	EC50	0.08 mg/l
Trizinc bis(orthophosphate)	7779-90-0	Rainbow trout	Estimated	96 hours	LC50	0.33 mg/l
Trizinc bis(orthophosphate)	7779-90-0	Water flea	Estimated	48 hours	EC50	0.12 mg/l
Trizinc bis(orthophosphate	7779-90-0	Diatom	Estimated	72 hours	EC50	0.04 mg/l

)						
Trizinc bis(orthophosphate)	7779-90-0	Green algae	Estimated	72 hours	NOEC	0.01 mg/l
Trizinc bis(orthophosphate)	7779-90-0	Water flea	Estimated	7 days	NOEC	0.026 mg/l
Formaldehyde, oligomeric reaction products with phenol	9003-35-4	N/A	Data not available or insufficient for classification	N/A	N/A	n/a
Epoxy resin	25085-99-8	Activated sludge	Estimated	3 hours	IC50	>100 mg/l
Epoxy resin	25085-99-8	Green algae	Estimated	72 hours	EC50	>11 mg/l
Epoxy resin	25085-99-8	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
Epoxy resin	25085-99-8	Water flea	Estimated	48 hours	EC50	1.8 mg/l
Epoxy resin	25085-99-8	Green algae	Estimated	72 hours	NOEC	4.2 mg/l
Epoxy resin	25085-99-8	Water flea	Estimated	21 days	NOEC	0.3 mg/l
Zinc oxide	1314-13-2	Activated sludge	Estimated	3 hours	EC50	6.5 mg/l
Zinc oxide	1314-13-2	Green algae	Estimated	72 hours	EC50	0.052 mg/l
Zinc oxide	1314-13-2	Rainbow trout	Estimated	96 hours	LC50	0.21 mg/l
Zinc oxide	1314-13-2	Water flea	Estimated	48 hours	EC50	0.07 mg/l
Zinc oxide	1314-13-2	Green algae	Estimated	72 hours	NOEC	0.006 mg/l
Zinc oxide	1314-13-2	Water flea	Estimated	7 days	NOEC	0.02 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polysulfide rubber	68611-50-7	Data not available-insufficient	N/A	N/A	N/A	N/A
Calcium carbonate	471-34-1	Data not available-insufficient	N/A	N/A	N/A	N/A
Fatty acids, C16-18 and C18-unsatd	67701-06-8	Analogous Compound Biodegradation	28 days	BOD	78 %BOD/ThOD	OECD 301C - MITI test (I)
Trizinc bis(orthophosphate)	7779-90-0	Data not available-insufficient	N/A	N/A	N/A	N/A
Formaldehyde, oligomeric reaction products with phenol	9003-35-4	Estimated Biodegradation	28 days	BOD	3 %BOD/ThOD	
Epoxy resin	25085-99-8	Estimated Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
Epoxy resin	25085-99-8	Estimated Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Zinc oxide	1314-13-2	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Polysulfide rubber	68611-50-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Calcium carbonate	471-34-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Fatty acids, C16-18	67701-06-8	Data not available	N/A	N/A	N/A	N/A

and C18-unsatd		or insufficient for classification				
Formaldehyde, oligomeric reaction products with phenol	9003-35-4	Estimated Bioconcentration		Bioaccumulation factor	2.57	
Epoxy resin	25085-99-8	Estimated Bioconcentration		Log Kow	3.242	
Zinc oxide	1314-13-2	Experimental BCF - Fish	56 days	Bioaccumulation factor	≤217	OECD305-Bioconcentration

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.

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

SECTION 14: Transport Information

International Regulations

UN No.: None assigned
UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned
Transportation Class (IATA): None assigned
Other Dangerous Goods Descriptions (IMO): None assigned
Other Dangerous Goods Descriptions (IATA): None assigned
Packing Group: None assigned
Marine pollutant: None assigned

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 product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

This product may contain component(s) that are regulated by the following:
Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.
Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations
Environmental Protection and Management (Hazardous Substances) Regulations: This product is subject to the requirements in the Regulations

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 Singapore SDSs are available at www.3m.com.sg

Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	30-2782-8	**Version number:**	2.00
Issue Date:	30/08/2024	**Supersedes date:**	12/01/2024

SECTION 1: Identification

1.1. Product identifier
3M Aerospace Sealant AC-730 B-2 Catalyst

1.2. Recommended use and restrictions on use

Recommended use
Hardener, Sealant for use in Aircraft Industry, For industrial or professional use only.

1.3. Supplier's details
Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number
+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2.
Reproductive Toxicity: Lactation.
Specific Target Organ Toxicity (repeated exposure): Category 1.
Acute Aquatic Toxicity: Category 1.
Chronic Aquatic Toxicity: Category 1.

2.2. Label elements
SIGNAL WORD
DANGER!

Symbols
Exclamation mark |Health Hazard | Environment |

Pictograms

HAZARD STATEMENTS

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure: nervous system | respiratory system.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P263	Avoid contact during pregnancy and while nursing.
P273	Avoid release to the environment.

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.
P391	Collect spillage.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Manganese dioxide	1313-13-9	30 - 50
Terphenyl, hydrogenated	61788-32-7	30 - 45
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	< 10
Terphenyl	26140-60-3	< 5
Water	7732-18-5	< 5
Zeolites	1318-02-1	< 5
Natural Amorphous compounds	Trade Secret	< 5
Bis(piperidinothiocarbonyl) hexasulphide	971-15-3	< 2
Sodium hydroxide	1310-73-2	< 1.2
Ferbam	14484-64-1	< 1
Lead	7439-92-1	< 0.1
Cadmium	7440-43-9	< 0.01

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

Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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	Condition
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.
Oxides of Lead	During combustion.
Oxides of sulphur.	During combustion.

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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. 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 dykes 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. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on

the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Avoid contact during pregnancy/while nursing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

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

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	CAS Nbr	Agency	Limit type	Additional comments
Sodium hydroxide	1310-73-2	ACGIH	CEIL:2 mg/m3	
Sodium hydroxide	1310-73-2	Singapore PELs	STEL(15 minutes):2 mg/m3	
MANGANESE COMPOUNDS	1313-13-9	Singapore PELs	TWA(as Mn)(8 hours):1 mg/m3	
Manganese, inorganic compounds	1313-13-9	ACGIH	TWA(as Mn, respirable fraction):0.02 mg/m3;TWA(as Mn, inhalable fraction):0.1 mg/m3	A4: Not class. as human carcin
Aluminum, insoluble compounds	1318-02-1	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Ferbam	14484-64-1	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcin
Ferbam	14484-64-1	Singapore PELs	TWA(8 hours):10 mg/m3	
Terphenyl	26140-60-3	ACGIH	CEIL:5 mg/m3	
Terphenyl	26140-60-3	Singapore PELs	STEL(15 minutes):5 mg/m3(0.53 ppm)	
Terphenyl, hydrogenated	61788-32-7	ACGIH	TWA:0.5 ppm	
Lead	7439-92-1	ACGIH	TWA(as Pb):0.05 mg/m3	A3: Confirmed animal carcin.
Lead	7439-92-1	Singapore PELs	TWA(as Pb, dust and fume)(8 hours):0.15 mg/m3	
Cadmium	7440-43-9	ACGIH	TWA(as Cd):0.01 mg/m3	A2: Suspected human carcin.
Cadmium	7440-43-9	Singapore PELs	TWA(8 hours):0.01 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order
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/vapours/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:
Safety glasses with side shields.
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: Butyl rubber.
Neoprene.
Nitrile rubber.

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 vapours 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.
Color	Dark Brown
Odor	Slight Earthy
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	*No data available.*
Flash point	>=93.3 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No data available.*
Flammability	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapor Density and/or Relative Vapor Density	>=1 [*Ref Std:*AIR=1]
Density	1.58 g/ml
Relative density	>=1.58 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*

Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Kinematic Viscosity	*No data available.*
Volatile organic compounds (VOC)	0.9 g/l [*Test Method:*calculated SCAQMD rule 443.1]
VOC less H2O & exempt solvents	1 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Molecular weight	*No data available.*

Particle Characteristics	*Not applicable.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.

10.5 Incompatible materials
Reducing agents.
Strong acids.

10.6 Hazardous decomposition products

Substance	**Condition**
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 labelling, 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. May cause additional health effects (see below).

Skin contact
May be harmful in contact with skin.
Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

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

Ingestion
May be harmful if swallowed.
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which may interfere with lactation or be harmful to breastfed children.

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 >2,000 - =5,000 mg/kg
Manganese dioxide	Dermal	Rat	LD50 2,000 mg/kg
Manganese dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.5 mg/l
Manganese dioxide	Ingestion	Rat	LD50 > 2,197 mg/kg
Terphenyl, hydrogenated	Dermal	Rabbit	LD50 > 2,000 mg/kg
Terphenyl, hydrogenated	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.7 mg/l
Terphenyl, hydrogenated	Ingestion	Rat	LD50 > 10,000 mg/kg
Terphenyl	Dermal	Rabbit	LD50 > 5,000 mg/kg
Terphenyl	Inhalation-Dust/Mist (4 hours)	Rat	LD50 > 3.8 mg/l
Terphenyl	Ingestion	Rat	LD50 2,304 mg/kg
Zeolites	Dermal	Rabbit	LD50 > 2,000 mg/kg
Zeolites	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4.57 mg/l
Zeolites	Ingestion	Rat	LD50 > 5,000 mg/kg
Bis(piperidinothiocarbonyl) hexasulphide	Ingestion	Rat	LD50 > 5,000 mg/kg
Ferbam	Dermal	Rabbit	LD50 > 4,000 mg/kg
Ferbam	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.4 mg/l
Ferbam	Ingestion	Rat	LD50 1,130 mg/kg
Lead	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Manganese dioxide	Rabbit	No significant irritation
Terphenyl, hydrogenated	Rabbit	No significant irritation
Terphenyl	Rabbit	No significant irritation
Zeolites	Rabbit	No significant irritation
Sodium hydroxide	Rabbit	Corrosive
Ferbam	Rabbit	No significant irritation
Lead	similar compounds	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Manganese dioxide	Rabbit	Mild irritant
Terphenyl, hydrogenated	Rabbit	No significant irritation
Terphenyl	Rabbit	No significant irritation
Zeolites	Rabbit	Mild irritant
Sodium hydroxide	Rabbit	Corrosive
Ferbam	Rabbit	Severe irritant
Lead	similar compounds	Mild irritant

Sensitization:

Skin Sensitisation

Name	Species	Value
Manganese dioxide	Mouse	Not classified
Terphenyl, hydrogenated	Human	Not classified
Sodium hydroxide	Human	Not classified
Ferbam	Guinea pig	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Manganese dioxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Manganese dioxide	In vivo	Some positive data exist, but the data are not sufficient for classification
Terphenyl, hydrogenated	In Vitro	Not mutagenic
Terphenyl, hydrogenated	In vivo	Not mutagenic
Terphenyl	In Vitro	Not mutagenic
Terphenyl	In vivo	Not mutagenic
Bis(piperidinothiocarbonyl) hexasulphide	In Vitro	Not mutagenic
Sodium hydroxide	In Vitro	Not mutagenic
Lead	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Ferbam	Ingestion	Rat	Not carcinogenic
Lead	Not specified.	official classification	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Manganese dioxide	Inhalation	Not classified for female reproduction	Rat	NOAEL 20 mg/m³	2 generation
Manganese dioxide	Inhalation	Not classified for male reproduction	Rabbit	LOAEL 250 mg/kg	1 days
Manganese dioxide	Ingestion	Not classified for development	Rat	LOAEL 354 mg/kg/day	premating into lactation
Manganese dioxide	Inhalation	Not classified for development	Rat	LOAEL 61 mg/m³	gestation into lactation
Terphenyl, hydrogenated	Ingestion	Not classified for female reproduction	Rat	NOAEL 81 mg/kg/day	2 generation
Terphenyl, hydrogenated	Ingestion	Not classified for male reproduction	Rat	NOAEL 62 mg/kg/day	2 generation
Terphenyl, hydrogenated	Ingestion	Not classified for development	Rat	NOAEL 500 mg/kg/day	during organogenesis
Ferbam	Ingestion	Not classified for female reproduction	Rat	NOAEL 25 mg/kg/day	3 generation
Ferbam	Ingestion	Not classified for male reproduction	Rat	NOAEL 25 mg/kg/day	3 generation
Ferbam	Ingestion	Not classified for development	Rat	NOAEL 11 mg/kg/day	during organogenesis
Lead	Not specified.	Toxic to female reproduction	Human	LOAEL 10 ug/dl blood	
Lead	Not specified.	Toxic to male reproduction	Human	LOAEL 37 ug/dl blood	
Lead	Not specified.	Toxic to development	Human	NOAEL Not available	

Lactation

Name	Route	Species	Value
Ferbam	Ingestion	Rat	Causes effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Sodium hydroxide	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	
Lead	Ingestion	nervous system	May cause damage to organs	Human	LOAEL 90 ug/dl blood	poisoning and/or abuse
Lead	Ingestion	heart	Not classified	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Manganese dioxide	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Monkey	LOAEL 1.1 mg/m3	10 months
Manganese dioxide	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Terphenyl, hydrogenated	Dermal	skin	Not classified	Rabbit	NOAEL 500 mg/kg/day	3 weeks
Terphenyl, hydrogenated	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 2,000 mg/kg/day	3 weeks
Terphenyl, hydrogenated	Inhalation	liver | hematopoietic system | eyes	Not classified	Rat	NOAEL 0.5 mg/l	13 weeks
Terphenyl, hydrogenated	Ingestion	hematopoietic	Not classified	Rat	NOAEL 120	14 weeks

		system | kidney and/or bladder | liver | eyes | respiratory system			mg/kg/day	
Lead	Inhalation	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Human	LOAEL 60 ug/dl blood	occupational exposure
Lead	Inhalation	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Human	LOAEL 50 ug/dl blood	occupational exposure
Lead	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	LOAEL 40 ug/dl blood	occupational exposure
Lead	Inhalation	gastrointestinal tract	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Lead	Inhalation	heart | endocrine system | immune system | vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Lead	Ingestion	bone, teeth, nails, and/or hair	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 20 ug/dl blood	3 months
Lead	Ingestion	eyes	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.5 mg/kg/day	20 days
Lead	Ingestion	hematopoietic system | kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Human	LOAEL 40 ug/dl blood	environmental exposure
Lead	Ingestion	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	LOAEL 11 ug/dl blood	environmental exposure
Lead	Ingestion	auditory system | heart | endocrine system | vascular system	Not classified	Human	NOAEL Not available	environmental 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 labelling, 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 Nbr	Organism	Type	Exposure	Test endpoint	Test result

Manganese dioxide	1313-13-9	Rainbow trout	Endpoint not reached	96 hours	LC50	>100 mg/l
Manganese dioxide	1313-13-9	Green algae	Experimental	72 hours	EC50	>100 mg/l
Manganese dioxide	1313-13-9	Water flea	Experimental	48 hours	EC50	>100 mg/l
Manganese dioxide	1313-13-9	Green algae	Experimental	72 hours	EC10	100 mg/l
Manganese dioxide	1313-13-9	Water flea	Experimental	8 days	NOEC	100 mg/l
Terphenyl, hydrogenated	61788-32-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Terphenyl, hydrogenated	61788-32-7	Activated sludge	Experimental	3 hours	NOEC	103 mg/l
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Terphenyl	26140-60-3	Water flea	Analogous Compound	48 hours	EC50	0.022 mg/l
Terphenyl	26140-60-3	Green algae	Experimental	72 hours	ErC50	0.102 mg/l
Terphenyl	26140-60-3	Rainbow trout	Experimental	96 hours	LC50	27 mg/l
Terphenyl	26140-60-3	Fathead minnow	Experimental	34 days	NOEC	0.064 mg/l
Terphenyl	26140-60-3	Green algae	Experimental	72 hours	NOEC	0.00322 mg/l
Terphenyl	26140-60-3	Water flea	Experimental	21 days	NOEC	0.005 mg/l
Zeolites	1318-02-1	African clawed frog	Analogous Compound	96 hours	LC50	1,800 mg/l
Zeolites	1318-02-1	Fathead minnow	Analogous Compound	96 hours	LC50	>680 mg/l
Zeolites	1318-02-1	Green algae	Analogous Compound	72 hours	EC50	130 mg/l
Zeolites	1318-02-1	Sediment organism	Analogous Compound	22 days	EC50	364.9 mg/l
Zeolites	1318-02-1	Water flea	Analogous Compound	48 hours	EC50	>100 mg/l
Zeolites	1318-02-1	Fathead minnow	Analogous Compound	30 days	NOEC	86.7 mg/l
Zeolites	1318-02-1	Green algae	Analogous Compound	72 hours	NOEC	18 mg/l
Zeolites	1318-02-1	Water flea	Analogous Compound	21 days	NOEC	32 mg/l
Zeolites	1318-02-1	Bacteria	Experimental	16 hours	EC50	950 mg/l
Zeolites	1318-02-1	Radish	Experimental	23 days	EC50	4,000 mg/kg (Dry Weight)
Bis(piperidinothiocarbonyl) hexasulphide	971-15-3	Green algae	Experimental	72 hours	EC50	>100 mg/l
Bis(piperidinothiocarbonyl) hexasulphide	971-15-3	Green algae	Experimental	72 hours	NOEC	100 mg/l
Sodium hydroxide	1310-73-2	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Ferbam	14484-64-1	Green algae	Experimental	96 hours	ErC50	2.4 mg/l
Ferbam	14484-64-1	Guppy	Experimental	96 hours	LC50	0.09 mg/l
Ferbam	14484-64-1	Water flea	Experimental	48 hours	LC50	0.09 mg/l
Ferbam	14484-64-1	Rainbow trout	Experimental	60 days	NOEC	0.00056 mg/l
Lead	7439-92-1	Fathead minnow	Analogous Compound	96 hours	LC50	0.0408 mg/l
Lead	7439-92-1	Green algae	Analogous Compound	72 hours	ErC50	0.0205 mg/l
Lead	7439-92-1	Water flea	Analogous Compound	48 hours	EC50	0.026 mg/l
Lead	7439-92-1	N/A	Analogous Compound	30 days	EC10	0.0017 mg/l
Lead	7439-92-1	Green algae	Analogous Compound	72 hours	ErC10	0.0061 mg/l
Lead	7439-92-1	Rainbow trout	Analogous Compound	578 days	NOEC	0.003 mg/l
Lead	7439-92-1	Activated sludge	Analogous Compound	24 hours	EC50	9 mg/l

Cadmium	7440-43-9	Activated sludge	Experimental	24 hours	EC50	<0.18 mg/l
Cadmium	7440-43-9	Green algae	Experimental	48 hours	ErC50	0.109 mg/l
Cadmium	7440-43-9	Rainbow trout	Experimental	96 hours	LC50	0.00264 mg/l
Cadmium	7440-43-9	Water flea	Experimental	48 hours	EC50	0.0244 mg/l
Cadmium	7440-43-9	Algae or other aquatic plants	Experimental	14 days	NOEC	0.009 mg/l
Cadmium	7440-43-9	Rainbow trout	Experimental	30 days	NOEC	0.0007 mg/l
Cadmium	7440-43-9	Water flea	Experimental	14 days	NOEC	0.001 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Manganese dioxide	1313-13-9	Data not available-insufficient	N/A	N/A	N/A	N/A
Terphenyl, hydrogenated	61788-32-7	Experimental Biodegradation	35 days	CO2 evolution	1 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Terphenyl, hydrogenated	61788-32-7	Experimental Photolysis		Photolytic half-life(in water)	86 days (t 1/2)	
Terphenyl, hydrogenated	61788-32-7	Experimental Soil Metabolism Aerobic		Half-life (t 1/2)	202 days (t 1/2)	
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	Data not available-insufficient	N/A	N/A	N/A	N/A
Terphenyl	26140-60-3	Experimental Biodegradation	14 days	BOD	0.5 %BOD/ThOD	OECD 301C - MITI test (I)
Zeolites	1318-02-1	Analogous Compound Hydrolysis		Hydrolytic half-life	60 days (t 1/2)	
Bis(piperidinothiocarbonyl) hexasulphide	971-15-3	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301F - Manometric respirometry
Sodium hydroxide	1310-73-2	Data not available-insufficient	N/A	N/A	N/A	N/A
Ferbam	14484-64-1	Analogous Compound Biodegradation	14 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
Ferbam	14484-64-1	Experimental Hydrolysis		Hydrolytic half-life	≤31 minutes (t 1/2)	
Lead	7439-92-1	Data not available-insufficient	N/A	N/A	N/A	N/A
Cadmium	7440-43-9	Data not available-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Manganese dioxide	1313-13-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terphenyl, hydrogenated	61788-32-7	Analogous Compound BCF - Fish	42 days	Bioaccumulation factor	5200	similar to OECD 305
Terphenyl, hydrogenated	61788-32-7	Experimental Bioconcentration		Log Kow	>5.3	OECD 117 log Kow HPLC method
Polyphenyls,	68956-74-1	Data not available	N/A	N/A	N/A	N/A

quater- and higher, partially hydrogenated		or insufficient for classification				
Terphenyl	26140-60-3	Analogous Compound BCF - Fish	56 days	Bioaccumulation factor	12993	OECD305-Bioconcentration
Terphenyl	26140-60-3	Estimated Bioconcentration		Log Kow	5.86	
Zeolites	1318-02-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bis(piperidinothiocarbonyl) hexasulphide	971-15-3	Estimated Bioconcentration		Bioaccumulation factor	2.8	
Sodium hydroxide	1310-73-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ferbam	14484-64-1	Experimental Bioconcentration		Log Kow	-1.597	OECD 107 log Kow shke flsk mtd
Lead	7439-92-1	Experimental BCF - Other		Bioaccumulation factor	1322	
Cadmium	7440-43-9	Experimental BCF - Mollusc	28 days	Bioaccumulation factor	3770	OECD305-Bioconcentration

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.

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

SECTION 14: Transport Information

International Regulations

UN No.: UN3082
UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transportation Class (IMO): 9-9 Miscellaneous dangerous goods
Transportation Class (IATA): 9-9 Miscellaneous dangerous goods
Other Dangerous Goods Descriptions (IMO): None assigned
Other Dangerous Goods Descriptions (IATA): None assigned
Packing Group: III
Marine pollutant: None assigned

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 Korea Chemical Control Act. 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 product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

This product may contain component(s) that are regulated by the following:
Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.
Environmental Protection and Management (Hazardous Substances) Regulations: This product is subject to the requirements in the Regulations

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 Singapore SDSs are available at www.3m.com.sg