Safety Data Sheet

Document group:	30-3655-5	**Version number:**	2.00
Revision date:	05/06/2018	**Supersedes date:**	06/02/2018

Transportation version number: 1.00 (06/02/2018)

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
3M Aerospace Sealant AC-215 B-2

Product Identification Numbers
70-0052-2133-1

7100064888

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Sealant.

1.3. Details of the supplier of the safety data sheet

Address:	3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone:	+44 (0)1344 858 000
E Mail:	tox.uk@mmm.com
Website:	www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the MSDSs for components of this product are:

30-3453-5, 30-3099-6

TRANSPORTATION INFORMATION

70-0052-2133-1

ADR/RID: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION 375, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, III, --.
IMDG-CODE: UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, III,

IMDG-Code segregation code: NONE, EMS: --.
ICAO/IATA: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXCEPTION, III.

KIT LABEL

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Reproductive Toxicity, Category 1A - Repr. 1A; H360
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

Symbols:
GHS07 (Exclamation mark) | GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Contains:
Manganese dioxide; Lead

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H360D	May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system |
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P260B	Do not breathe dust.

P280E	Wear protective gloves.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Disposal:

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

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H360D	May damage the unborn child.

<=125 ml Precautionary statements

Prevention:

P201	Obtain special instructions before use.
P280E	Wear protective gloves.

Response:

P308 + P313	IF exposed or concerned: Get medical advice/attention.

SUPPLEMENTAL INFORMATION

Supplemental Precautionary Statements:
Restricted to professional users.

Refer to Safety Data Sheet for component % unknown values (www.3M.com/msds).

Revision information:
Kit Information: CLP Target Organ Hazard Statement information was added.
Label: CLP Ingredients - kit components information was added.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: Signal Word information was modified.

Safety Data Sheet

Document group:	30-3099-6	**Version number:**	6.00
Revision date:	20/02/2018	**Supersedes date:**	06/02/2018

Transportation version number: 1.00 (09/08/2013)

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
3M Aerospace Sealant AC-215 B-2 Catalyst

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Hardener

1.3. Details of the supplier of the safety data sheet

Address:	3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone:	+44 (0)1344 858 000
E Mail:	tox.uk@mmm.com
Website:	www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Reproductive Toxicity, Category 1A - Repr. 1A; H360
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

Symbols:
GHS07 (Exclamation mark) | GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
Manganese dioxide	1313-13-9	215-202-6	30 - 50
Lead	7439-92-1	231-100-4	< 0.1

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H360D	May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system |
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P260B	Do not breathe dust.
P280E	Wear protective gloves.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Disposal:

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

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H360D	May damage the unborn child.

<=125 ml Precautionary statements

Prevention:

P201	Obtain special instructions before use.
P280E	Wear protective gloves.

Response:

P308 + P313	IF exposed or concerned: Get medical advice/attention.

SUPPLEMENTAL INFORMATION

Supplemental Precautionary Statements:
Restricted to professional users.

15% of the mixture consists of components of unknown acute oral toxicity.

Contains 14% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Manganese dioxide	1313-13-9	215-202-6	01-2119452801-43	30 - 50	Acute Tox. 4, H332; Acute Tox. 4, H302 EUH031; STOT RE 2, H373
Terphenyl, hydrogenated	61788-32-7	262-967-7		30 - 45	Aquatic Chronic 1, H410,M=1
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	273-316-1		0 - 10	Substance not classified as hazardous
Natural Amorphous compounds	Trade Secret			0 - 5	Substance not classified as hazardous
Water	7732-18-5	231-791-2		0.5 - 5	Substance not classified as hazardous
Terphenyl	26140-60-3	247-477-3		0.5 - 5	Aquatic Acute 1, H400,M=10; Aquatic Chronic 1, H410,M=10
Bis(piperidinothiocarbonyl) hexasulphide	971-15-3	213-537-2		0.1 - 2	Substance not classified as hazardous
Sodium hydroxide	1310-73-2	215-185-5		< 1.5	Skin Corr. 1A, H314 Met. Corr. 1, H290
Polyphenyls, quater- and higher, partially hydrogenated	68412-53-3			0.1 - 1	Skin Irrit. 2, H315; Eye Dam. 1, H318
Ferbam	14484-64-1	238-484-2		0.1 - 1	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Acute 1, H400,M=10; Aquatic Chronic 1, H410,M=100 Acute Tox. 2, H330
Quartz	14808-60-7	238-878-4		< 1	STOT RE 1, H372
Lead	7439-92-1	231-100-4		< 0.1	Repr. 1A, H360FD; Lact., H362; Aquatic Acute 1, H400,M=1; Aquatic Chronic

					1, H410,M=10 STOT SE 2, H371; STOT RE 2, H373

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

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

If swallowed
Rinse mouth. If you feel unwell, get medical attention.

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

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

SECTION 5: Fire-fighting measures

5.1. 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
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
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. Advice 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 vapours, 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.

6.4. Reference to other sections
Refer to Section 8 and Section 13 for more information

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.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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	UK HSC	STEL:2 mg/m3	
Manganese, inorganic compounds	1313-13-9	UK HSC	TWA(as Mn):0.5 mg/m3	
Quartz	14808-60-7	UK HSC	TWA(respirable):0.1 mg/m3	
Terphenyl	26140-60-3	UK HSC	STEL:4.8 mg/m3(0.5 ppm)	
Lead	7439-92-1	UK HSC	TWA(as Pb):0.15 mg/m3	

UK HSC : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

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:
Indirect vented goggles.

Applicable Norms/Standards
Use eye protection conforming to EN 166

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:

Material	Thickness (mm)	Breakthrough Time
Butyl rubber.	0.5	> 8 hours
Neoprene.	0.5	> 8 hours
Nitrile rubber.	0.35	> 8 hours

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

Applicable Norms/Standards
Use gloves tested to EN 374

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.

Applicable Norms/Standards
Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Slight Odour; Black, viscous liquid
Odour threshold	*No data available.*

pH	*Not applicable.*
Boiling point/boiling range	*Not applicable.*
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	>=93.3 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
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.*
Evaporation rate	*No data available.*
Vapour density	>=1 [*Ref Std:*AIR=1]
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Density	1.58 g/ml

9.2. Other information

EU Volatile Organic Compounds	*No data available.*

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 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from

3M assessments.

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 localised 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 ATE2,000 - 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE2,000 - 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 6,800 mg/kg
Terphenyl, hydrogenated	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 11.1 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
Bis(piperidinothiocarbonyl) hexasulphide	Ingestion	Rat	LD50 > 5,000 mg/kg
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg
Polyphenyls, quater- and higher, partially hydrogenated	Ingestion	Rat	LD50 4,450
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
Sodium hydroxide	Rabbit	Corrosive
Quartz	Professional judgement	No significant irritation
Polyphenyls, quater- and higher, partially hydrogenated	Rabbit	Irritant
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
Sodium hydroxide	Rabbit	Corrosive
Polyphenyls, quater- and higher, partially hydrogenated	Rabbit	Corrosive
Ferbam	Rabbit	Severe irritant
Lead	similar compounds	Mild irritant

Skin Sensitisation

Name	Species	Value
Manganese dioxide	Mouse	Not classified
Terphenyl, hydrogenated	Human	Not classified
Sodium hydroxide	Human	Not classified
Polyphenyls, quater- and higher, partially hydrogenated	Human	Not classified
Ferbam	Guinea pig	Not classified

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is 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 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
Quartz	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In vivo	Some positive data exist, but the data are not sufficient for classification
Polyphenyls, quater- and higher, partially hydrogenated	In Vitro	Not mutagenic
Lead	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Quartz	Inhalation	Human and animal	Carcinogenic.
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	2 generation
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	Inhalation	liver	Not classified	Rat	NOAEL 0.5 mg/l	90 days
Terphenyl, hydrogenated	Ingestion	endocrine system | blood | liver | kidney and/or bladder	Not classified	Rat	NOAEL 144 mg/kg/day	14 weeks
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
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 is currently available or the data is 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 agree with the EU material classification in Section 2 and/or the ingredient

classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

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	Water flea	Experimental	48 hours	EC50	>100 mg/l
Manganese dioxide	1313-13-9	Green algae	Experimental	72 hours	EC50	>100 mg/l
Manganese dioxide	1313-13-9	Green algae	Experimental	72 hours	Effect Concentration 10%	>100 mg/l
Manganese dioxide	1313-13-9	Water flea	Experimental	8 days	NOEC	>100 mg/l
Terphenyl, hydrogenated	61788-32-7	Water flea	Estimated	21 days	NOEC	0.025 mg/l
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1		Data not available or insufficient for classification			
Terphenyl	26140-60-3	Water flea	Estimated	48 hours	EC50	0.022 mg/l
Terphenyl	26140-60-3	Water flea	Estimated	21 days	NOEC	0.01 mg/l
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	Effect Concentration 10%	>100 mg/l
Sodium hydroxide	1310-73-2		Data not available or insufficient for classification			
Ferbam	14484-64-1	Green Algae	Experimental	96 hours	EC50	2.4 mg/l
Ferbam	14484-64-1	Water flea	Experimental	48 hours	LC50	0.09 mg/l
Ferbam	14484-64-1	Guppy	Experimental	96 hours	LC50	0.09 mg/l
Ferbam	14484-64-1	Rainbow trout	Experimental	60 days	NOEC	0.00056 mg/l
Polyphenyls, quater- and higher, partially hydrogenated	68412-53-3		Data not available or insufficient for classification			
Quartz	14808-60-7		Data not available or insufficient for classification			
Lead	7439-92-1	Common Carp	Experimental	96 hours	LC50	0.44 mg/l
Lead	7439-92-1	Crustacea	Laboratory	48 hours	LC50	0.53 mg/l
Lead	7439-92-1	Algae	Experimental	72 hours	EC50	0.105 mg/l
Lead	7439-92-1	Rainbow trout	Experimental	578 days	NOEC	0.003 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 or insufficient for classification	N/A	N/A	N/A	N/A
Terphenyl, hydrogenated	61788-32-7	Experimental	28 days	BOD	6 %	OECD 301C - MITI test (I)

		Biodegradation			BOD/ThBOD	
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terphenyl	26140-60-3	Experimental Biodegradation	14 days	BOD	0.5 % weight	OECD 301C - MITI test (I)
Bis(piperidinothiocarbonyl) hexasulphide	971-15-3	Experimental Biodegradation	28 days	BOD	0 % BOD/ThBOD	OECD 301F - Manometric respirometry
Sodium hydroxide	1310-73-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ferbam	14484-64-1	Estimated Biodegradation	14 days	BOD	0 % weight	OECD 301C - MITI test (I)
Ferbam	14484-64-1	Experimental Hydrolysis		Hydrolytic half-life	≤31 minutes (t 1/2)	
Polyphenyls, quater- and higher, partially hydrogenated	68412-53-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Lead	7439-92-1	Data not available or insufficient for classification	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	Experimental BCF - Bluegill	42 days	Bioaccumulation factor	≥2400	Other methods
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terphenyl	26140-60-3	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	Estimated: Bioconcentration factor
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	-1.6	Other methods
Polyphenyls, quater- and higher, partially hydrogenated	68412-53-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Lead	7439-92-1	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. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
See Section 11.1 Information on toxicological effects

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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)
08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 14: Transportation information

Exemption: For vessels containing a net quantity of 5 l or a net mass of 5 kg or less per single or inner packaging , special provision 375 (ADR), exemption per 2.10.2.7 (IMDG) or special provision A197 (IATA) may be applied, if applicable
ADR: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S.; 9; III; (E); M6.
IATA: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S.; 9; III.
IMDG: UN3082; Environmentally Hazardous Substance, Liquid, N.O.S.; 9; III; FA ,SF.

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Ferbam	14484-64-1	Gr. 3: Not classifiable	International Agency for Research on Cancer
Lead	7439-92-1	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Quartz	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

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. The components of this product are in compliance with the chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

15.2. Chemical Safety Assessment
Not applicable

SECTION 16: Other information

List of relevant H statements

EUH031	Contact with acid liberates toxic gas.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.
H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H371	May cause damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Revision information:
Label: CLP Classification information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Target Organ Hazard Statement information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 11: Target Organs - Repeated Table information was modified.

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 United Kingdom MSDSs are available at www.3M.com/uk

Safety Data Sheet

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Transportation version number: 1.00 (12/02/2013)

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
3M Aerospace Sealant AC-215 B-1/2, AC-215 B-2 Base

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Sealant.

1.3. Details of the supplier of the safety data sheet

Address:	3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone:	+44 (0)1344 858 000
E Mail:	tox.uk@mmm.com
Website:	www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

HAZARD STATEMENTS:

H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Disposal:

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

Contains 63% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced	68611-50-7			60 - 70	Substance not classified as hazardous
Calcium Carbonate	471-34-1	207-439-9		25 - 35	Substance with a Community level exposure limit in the workplace
Titanium dioxide	13463-67-7	236-675-5	01-2119489379-17	1 - 5	Substance with a Community level exposure limit in the workplace
Diisononyl Phthalate	28553-12-0	249-079-5		0.1 - 2	Substance with a Community level exposure limit in the workplace
Terphenyl, hydrogenated	61788-32-7	262-967-7		0.1 - 2	Aquatic Chronic 1, H410,M=1
Terphenyl	26140-60-3	247-477-3		< 0.5	Aquatic Acute 1, H400,M=10; Aquatic Chronic 1, H410,M=10
Quartz	14808-60-7	238-878-4		0 - 0.5	STOT RE 1, H372

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

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
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact
No need for first aid is anticipated.

If swallowed

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

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

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

SECTION 5: Fire-fighting measures

5.1. 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.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, 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
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.

6.4. Reference to other sections
Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid breathing dust/fume/gas/mist/vapours/spray. 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. Store away from strong bases.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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
Titanium dioxide	13463-67-7	UK HSC	TWA(Inhalable):10 mg/m3;TWA(respirable):4 mg/m³	
Quartz	14808-60-7	UK HSC	TWA(respirable):0.1 mg/m3	
Terphenyl	26140-60-3	UK HSC	STEL:4.8 mg/m3(0.5 ppm)	
Diisononyl Phthalate	28553-12-0	UK HSC	TWA:5 mg/m3	
Limestone	471-34-1	UK HSC	TWA(as inhalable dust):10 mg/m3;TWA(as respirable dust):4 mg/m3;TWA(Inhalable):10 mg/m3;TWA(respirable):4 mg/m3	

UK HSC : UK Health and Safety Commission
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

Biological limit values
No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

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.

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:

Material	Thickness (mm)	Breakthrough Time

Nitrile rubber.	No data available	No data available

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:	Paste
Appearance/Odour	Sulphurous odour; Pink paste
Odour threshold	*No data available.*
pH	*No data available.*
Boiling point/boiling range	*Not applicable.*
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	>=93.3 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
Relative density	1.55 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	*No data available.*
Vapour density	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Density	1.55 g/ml

9.2. Other information

EU Volatile Organic Compounds	*No data available.*

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 polymerisation will not occur.

10.4 Conditions to avoid

Heat.

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

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
Contact with the skin during product use is not expected to result in significant irritation.

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
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2- chloroethane] and sodium sulfide (Na2(Sx)), reduced	Dermal	Rat	LD50 > 7,800 mg/kg
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2- chloroethane] and sodium sulfide (Na2(Sx)), reduced	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
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Diisononyl Phthalate	Dermal	Rabbit	LD50 > 3,160 mg/kg
Diisononyl Phthalate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Diisononyl Phthalate	Ingestion	Rat	LD50 > 10,000 mg/kg
Terphenyl, hydrogenated	Dermal	Rabbit	LD50 6,800 mg/kg
Terphenyl, hydrogenated	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 11.1 mg/l
Terphenyl, hydrogenated	Ingestion	Rat	LD50 > 10,000 mg/kg
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 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

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced	Rabbit	No significant irritation
Calcium Carbonate	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
Diisononyl Phthalate	Rabbit	No significant irritation
Terphenyl, hydrogenated	Rabbit	No significant irritation
Quartz	Professional judgement	No significant irritation
Terphenyl	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced	Rabbit	No significant irritation
Calcium Carbonate	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
Diisononyl Phthalate	Rabbit	Mild irritant
Terphenyl, hydrogenated	Rabbit	No significant irritation
Terphenyl	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced		Not classified
Titanium dioxide	Human and animal	Not classified
Diisononyl Phthalate	Human and animal	Not classified
Terphenyl, hydrogenated	Human	Not classified

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

Germ Cell Mutagenicity

Name	Route	Value
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Diisononyl Phthalate	In Vitro	Not mutagenic
Terphenyl, hydrogenated	In vivo	Not mutagenic
Quartz	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In vivo	Some positive data exist, but the data are not sufficient for classification
Terphenyl	In Vitro	Not mutagenic
Terphenyl	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.
Diisononyl Phthalate	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Quartz	Inhalation	Human and animal	Carcinogenic.

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
Diisononyl Phthalate	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
Diisononyl Phthalate	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
Diisononyl Phthalate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during organogenesis
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	2 generation

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

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
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Diisononyl Phthalate	Dermal	blood | liver | kidney and/or bladder	Not classified	Rabbit	NOAEL 2,425 mg/kg/day	6 weeks
Diisononyl Phthalate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL not available	13 weeks
Terphenyl, hydrogenated	Inhalation	liver	Not classified	Rat	NOAEL 0.5 mg/l	90 days
Terphenyl, hydrogenated	Ingestion	endocrine system | blood | liver | kidney and/or bladder	Not classified	Rat	NOAEL 144 mg/kg/day	14 weeks
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard
For the component/components, either no data is currently available or the data is 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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2- chloroethane] and sodium sulfide (Na2(Sx)), reduced	68611-50-7		Data not available or insufficient for classification			
Calcium Carbonate	471-34-1	Western Mosquitofish	Experimental	96 hours	LC50	>100 mg/l
Calcium Carbonate	471-34-1	Rainbow trout	Experimental	42 days	NOEC	>100 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
Diisononyl Phthalate	28553-12-0	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Diisononyl Phthalate	28553-12-0	Water flea	Experimental	48 hours	EC50	>100 mg/l
Diisononyl Phthalate	28553-12-0	Green algae	Experimental	72 hours	EC50	>100 mg/l

Diisononyl Phthalate	28553-12-0	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Diisononyl Phthalate	28553-12-0	Water flea	Experimental	21 days	NOEC	>100 mg/l
Terphenyl, hydrogenated	61788-32-7	Water flea	Estimated	21 days	NOEC	0.025 mg/l
Quartz	14808-60-7		Data not available or insufficient for classification			
Terphenyl	26140-60-3	Water flea	Estimated	48 hours	EC50	0.022 mg/l
Terphenyl	26140-60-3	Water flea	Estimated	21 days	NOEC	0.01 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced	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
Titanium dioxide	13463-67-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Diisononyl Phthalate	28553-12-0	Experimental Biodegradation	28 days	CO2 evolution	81 % weight	Other methods
Terphenyl, hydrogenated	61788-32-7	Experimental Biodegradation	28 days	BOD	6 % BOD/ThBOD	OECD 301C - MITI test (I)
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terphenyl	26140-60-3	Experimental Biodegradation	14 days	BOD	0.5 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propane, 1,2,3-trichloro-, polymer with 1,1'-[methylenebis(oxy)]bis[2-chloroethane] and sodium sulfide (Na2(Sx)), reduced	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
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Other methods
Diisononyl Phthalate	28553-12-0	Estimated BCF - Rainbow Tr	14 days	Bioaccumulation factor	<3	Other methods
Terphenyl, hydrogenated	61788-32-7	Experimental BCF - Bluegill	42 days	Bioaccumulation factor	≥2400	Other methods
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terphenyl	26140-60-3	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. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
See Section 11.1 Information on toxicological effects

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)
08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 14: Transportation information

ADR/IMDG/IATA: Not restricted for transport.

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Quartz	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Titanium dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Global inventory status
Contact 3M for more information. The components of this product are in compliance with the chemical notification requirements of TSCA.

15.2. Chemical Safety Assessment
Not applicable

SECTION 16: Other information

List of relevant H statements

H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
Section 3: Composition/ Information of ingredients table information was modified.
Section 9: No Data Available Statement information was deleted.
Section 9: Property description for optional properties information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

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 United Kingdom MSDSs are available at www.3M.com/uk