Safety Data Sheet

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

SECTION 1: Identification

1.1. Product identifier
3M Brand Fire Barrier CP-25WB+

Product Identification Numbers

98-0400-5380-7	98-0400-5381-5	98-0400-5382-3	98-0400-5383-1	98-0400-5406-0
98-0400-5456-5	98-0400-5562-0	98-0400-5573-7	98-0400-5610-7	98-0400-5629-7
98-0441-1101-5				

1.2. Recommended use and restrictions on use

Recommended use
Fire Protection, Industrial use

For Industrial or Professional use only

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

1.4. Emergency telephone number
+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Serious Eye Damage/Irritation: Category 2.
Germ Cell Mutagenicity: Category 2.
Reproductive Toxicity: Category 2.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |Health Hazard |

Pictograms

Hazard Statements:

H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
H361	Suspected of damaging fertility or the unborn child.

Precautionary statements
General:

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

Prevention:

P281	Use personal protective equipment as required.

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.

Storage:

P405	Store locked up.

Disposal:

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

2.3. Other hazards
This material has been tested for acute aquatic environmental toxicity and the test results are reflected in the assigned classification., This material has been tested for chronic aquatic environmental toxicity and the test results do not meet the criteria for classification.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Water	7732-18-5	10 - 30
Zinc Borate 2335	138265-88-0	10 - 30
Polymer	Trade Secret	10 - 30
Sodium Silicate	1344-09-8	10 - 19
Ethylhexyldiphenyl Phosphate	1241-94-7	3 - 7
Iron Oxide	1309-37-1	1 - 5
Polyethylene Glycol	25322-68-3	1 - 5
Oxide glass chemicals	Unknown	1 - 5
Quartz Silica	14808-60-7	< 1
POLY(OXY-1,2-	68815-56-5	< 1

ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS, DISODIUM SALTS		
Triphenyl Phosphate	115-86-6	< 1
Di-2-ethylhexylphenyl Phosphate	16368-97-1	< 1

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

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

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

4.2. Most important symptoms and effects, both acute and delayed

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
Non-combustible. Use a fire fighting agent suitable for surrounding fire.

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 Phosphorus	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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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
Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities
Keep cool. Store away from heat. Store away from areas where product may come into contact with food or pharmaceuticals. Store in a dry place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Triphenyl Phosphate	115-86-6	ACGIH	TWA:3 mg/m3	A4: Not class. as human carcin
Triphenyl Phosphate	115-86-6	Malaysia OELs	TWA(8 hours):3 mg/m3	
Iron Oxide	1309-37-1	ACGIH	TWA(respirable fraction):5 mg/m3	A4: Not class. as human carcin
Iron Oxide	1309-37-1	Malaysia OELs	TWA (proposed)(as Fe, dust and fume)(8 hours):5 mg/m3(2 ppm)	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz Silica	14808-60-7	Malaysia OELs	TWA(respirable fraction)(8 hours):0.1 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

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. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

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

Respiratory protection

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

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Specific Physical Form:	Paste
Color	Red
Odor	Odorless
Odor threshold	*No Data Available*
pH	7.5 - 8
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	100 ºC
Flash Point	No flash point
Evaporation rate	0.33 [*Ref Std:*BUOAC=1]
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	2,333.1 Pa [@ 20 ºC]
Vapor Density and/or Relative Vapor Density	*No Data Available*
Density	*No Data Available*
Relative Density	1.35 [*Ref Std:*WATER=1]
Water solubility	Complete
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Viscosity/Kinematic Viscosity	*No Data Available*

Volatile Organic Compounds	<=0.5 % weight [*Test Method:*tested per EPA method 24]
Percent volatile	*No Data Available*
VOC Less H2O & Exempt Solvents	<=6 g/l [*Test Method:*tested per EPA method 24]
Molecular weight	*No Data Available*

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 polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

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 labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

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

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

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

Ingestion:
May be harmful if swallowed.
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

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

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

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 >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Zinc Borate 2335	Dermal	Rabbit	LD50 > 5,000 mg/kg
Zinc Borate 2335	Inhalation-Dust/Mist	Rat	LC50 > 4.95 mg/l
Zinc Borate 2335	Ingestion	Rat	LD50 > 5,000 mg/kg
Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Polymer	Ingestion	Rat	LD50 > 2,000 mg/kg
Sodium Silicate	Dermal	Rabbit	LD50 > 4,640 mg/kg
Sodium Silicate	Ingestion	Rat	LD50 500 mg/kg
Ethylhexyldiphenyl Phosphate	Dermal	Rabbit	LD50 > 7,940 mg/kg
Ethylhexyldiphenyl Phosphate	Ingestion	Rat	LD50 > 24,000 mg/kg
Iron Oxide	Dermal	Not available	LD50 3,100 mg/kg
Iron Oxide	Ingestion	Not available	LD50 3,700 mg/kg
Polyethylene Glycol	Dermal	Rabbit	LD50 > 20,000 mg/kg
Polyethylene Glycol	Ingestion	Rat	LD50 32,770 mg/kg
Di-2-ethylhexylphenyl Phosphate	Ingestion	Mouse	LD50 9,333 mg/kg
Triphenyl Phosphate	Dermal	Rabbit	LD50 > 10,000 mg/kg
Triphenyl Phosphate	Ingestion	Rat	LD50 > 20,000 mg/kg
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS, DISODIUM SALTS	Ingestion	Mouse	LD50 > 540 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Zinc Borate 2335	Rabbit	No significant irritation
Polymer	Rabbit	Minimal irritation
Sodium Silicate	Rabbit	Corrosive
Iron Oxide	Rabbit	No significant irritation
Polyethylene Glycol	Rabbit	Minimal irritation
Triphenyl Phosphate	Rabbit	No significant irritation
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS,	In vitro data	Corrosive

DISODIUM SALTS		
Quartz Silica	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Zinc Borate 2335	Rabbit	Severe irritant
Polymer	Professional judgement	Mild irritant
Sodium Silicate	Rabbit	Corrosive
Iron Oxide	Rabbit	No significant irritation
Polyethylene Glycol	Rabbit	Mild irritant
Triphenyl Phosphate	Rabbit	Mild irritant
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS, DISODIUM SALTS	In vitro data	Corrosive

Sensitization:

Skin Sensitization

Name	Species	Value
Zinc Borate 2335	Guinea pig	Not classified
Sodium Silicate	Mouse	Not classified
Iron Oxide	Human	Not classified
Polyethylene Glycol	Guinea pig	Not classified
Triphenyl Phosphate	Human	Not classified
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS, DISODIUM SALTS	In vitro data	Sensitizing

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Zinc Borate 2335	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc Borate 2335	In vivo	Mutagenic
Sodium Silicate	In Vitro	Not mutagenic
Sodium Silicate	In vivo	Not mutagenic
Iron Oxide	In Vitro	Not mutagenic
Polyethylene Glycol	In Vitro	Not mutagenic
Polyethylene Glycol	In vivo	Not mutagenic
Triphenyl Phosphate	In Vitro	Not mutagenic
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS, DISODIUM SALTS	In Vitro	Not mutagenic
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value

Iron Oxide	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Polyethylene Glycol	Ingestion	Rat	Not carcinogenic
Quartz Silica	Inhalation	Human and animal	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Zinc Borate 2335	Ingestion	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	92 days
Zinc Borate 2335	Ingestion	Toxic to development	Rat	LOAEL 100 mg/kg/day	during gestation
Sodium Silicate	Ingestion	Not classified for development	Mouse	NOAEL 200 mg/kg/day	during gestation
Polyethylene Glycol	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,125 mg/kg/day	during gestation
Polyethylene Glycol	Ingestion	Not classified for male reproduction	Rat	NOAEL 5699 +/- 1341 mg/kg/day	5 days
Polyethylene Glycol	Not Specified	Not classified for reproduction and/or development		NOEL N/A	
Polyethylene Glycol	Ingestion	Not classified for development	Mouse	NOAEL 562 mg/animal/day	during gestation
Triphenyl Phosphate	Ingestion	Not classified for female reproduction	Rat	NOAEL 690 mg/kg/day	premating & during gestation
Triphenyl Phosphate	Ingestion	Not classified for male reproduction	Rat	NOAEL 690 mg/kg/day	91 days
Triphenyl Phosphate	Ingestion	Toxic to development	Rat	NOAEL 77 mg/kg/day	1 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Zinc Borate 2335	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Sodium Silicate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Polyethylene Glycol	Inhalation	respiratory irritation	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS, DISODIUM SALTS	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Zinc Borate 2335	Inhalation	immune system | respiratory system | heart | endocrine system |	Not classified	Rat	NOAEL 0.15 mg/l	2 weeks

		hematopoietic system | liver | nervous system | kidney and/or bladder				
Zinc Borate 2335	Ingestion	endocrine system | liver | kidney and/or bladder | heart | skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 375 mg/kg/day	92 days
Sodium Silicate	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	LOAEL 2,400 mg/kg/day	4 weeks
Sodium Silicate	Ingestion	endocrine system | blood	Not classified	Rat	NOAEL 804 mg/kg/day	3 months
Sodium Silicate	Ingestion	heart | liver	Not classified	Rat	NOAEL 1,259 mg/kg/day	8 weeks
Iron Oxide	Inhalation	pulmonary fibrosis | pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Polyethylene Glycol	Inhalation	respiratory system	Not classified	Rat	NOAEL 1.008 mg/l	2 weeks
Polyethylene Glycol	Ingestion	kidney and/or bladder | heart | endocrine system | hematopoietic system | liver | nervous system	Not classified	Rat	NOAEL 5,640 mg/kg/day	13 weeks
Triphenyl Phosphate	Dermal	endocrine system | hematopoietic system | liver | nervous system | kidney and/or bladder	Not classified	Rabbit	NOAEL 1,000 mg/kg/day	3 weeks
Triphenyl Phosphate	Ingestion	endocrine system | liver	Not classified	Rat	NOAEL 583 mg/kg/day	90 days
Triphenyl Phosphate	Ingestion	immune system	Not classified	Rat	NOAEL 700 mg/kg/day	120 days
Triphenyl Phosphate	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 583 mg/kg/day	90 days
Triphenyl Phosphate	Ingestion	nervous system	Not classified	Chicken	NOAEL 10,000 mg/kg/day	42 days
Quartz Silica	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 are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

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

12.1. Toxicity

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

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

Material	Organism	Type	Exposure	Test Endpoint	Test Result
3M Brand Fire Barrier CP-25WB+	Water flea	Experimental	48 hours	Aquatic Toxicity - Acute	27 mg/l
3M Brand Fire Barrier CP-25WB+	Green algae	Experimental	72 hours	Aquatic Toxicity - Chronic	2.6 mg/l

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Iron Oxide	1309-37-1	Activated sludge	Experimental	3 hours	EC50	>10,000 mg/l
Di-2-ethylhexylphenyl Phosphate	16368-97-1	Activated sludge	Analogous Compound	3 hours	EC50	>10,000 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Polymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Zinc Borate 2335	138265-88-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Sodium Silicate	1344-09-8	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Ethylhexyldiphenyl Phosphate	1241-94-7	Experimental Biodegradation	28 days	Biological Oxygen Demand	67 %BOD/ThOD	OECD 301C - MITI (I)
Iron Oxide	1309-37-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Polyethylene Glycol	25322-68-3	Experimental Biodegradation	28 days	Biological Oxygen Demand	53 %BOD/ThOD	OECD 301C - MITI (I)
Di-2-ethylhexylphenyl Phosphate	16368-97-1	Analogous Compound Biodegradation	28 days	Biological Oxygen Demand	67 %BOD/ThOD	OECD 301C - MITI (I)
Di-2-ethylhexylphenyl Phosphate	16368-97-1	Analogous Compound Hydrolysis		Hydrolytic half-life acidic pH	<24 hours (t 1/2)	OECD 111 Hydrolysis func of pH
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS, DISODIUM SALTS	68815-56-5	Experimental Biodegradation	28 days	Carbon dioxide evolution	67 %CO2 evolution/THCO2 evolution	OECD 301B - Mod. Sturm or CO2
Quartz Silica	14808-60-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Triphenyl Phosphate	115-86-6	Experimental Biodegradation	28 days	Biological Oxygen Demand	90 %BOD/ThOD	OECD 301C - MITI (I)

Triphenyl Phosphate	115-86-6	Experimental Hydrolysis		Hydrolytic half-life	19 days (t 1/2)	

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Zinc Borate 2335	138265-88-0	Estimated BCF - Fish	56 days	Bioaccumulation Factor	242	OECD305-Bioconcentration
Sodium Silicate	1344-09-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ethylhexyldiphenyl Phosphate	1241-94-7	Experimental BCF - Fish	36 days	Bioaccumulation Factor	934	
Ethylhexyldiphenyl Phosphate	1241-94-7	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	5.87	OECD 123 log Kow slow stir
Iron Oxide	1309-37-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyethylene Glycol	25322-68-3	Estimated Bioconcentration		Bioaccumulation Factor	2.3	
Di-2-ethylhexylphenyl Phosphate	16368-97-1	Modeled Bioconcentration		Bioaccumulation Factor	724	Catalogic™
Di-2-ethylhexylphenyl Phosphate	16368-97-1	Modeled Bioconcentration		Log of Octanol/H2O part. coeff	7.89	Episuite™
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(3-CARBOXY-1-OXOSULFOPROPYL)-.OMEGA.-HYDROXY-, C10-16-ALKYL ETHERS, DISODIUM SALTS	68815-56-5	Modeled Bioconcentration		Log of Octanol/H2O part. coeff	1.31	ACD/Labs ChemSketch™
Quartz Silica	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Triphenyl Phosphate	115-86-6	Experimental BCF - Fish	90 days	Bioaccumulation Factor	271	
Triphenyl Phosphate	115-86-6	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	4.59	

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

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

SECTION 14: Transport Information

Not hazardous for transportation.

Marine Transport (IMDG)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number: None assigned.
Proper Shipping Name: None assigned.
Technical Name: None assigned.
Hazard Class/Division: None assigned.
Subsidiary Risk: None assigned.
Packing Group: None assigned.
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

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

SECTION 15: Regulatory information

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

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the 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.

SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

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