

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(TM) FireDam (TM) Spray 200- Red

Product Identification Numbers 98-0400-5588-5

1.2. Recommended use and restrictions on use

Recommended use

Fire retardant spray

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, SelangorTelephone:03-7884 2888E Mail:3mmyehsr@mmm.comWebsite: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

Not classified as hazardous according to Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

2.2. Label elements

Signal word Not applicable.

Symbols Not applicable.

Pictograms

Not applicable.

2.3. Other hazards

None known

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Water	7732-18-5	20 - 35
Limestone	1317-65-3	10 - 30
Polymer NJTS Reg. No. 04499600-7181	Trade Secret	10 - 30
Alumina Trihydrate	21645-51-2	5 - 10
Styrene-butadiene polymer	9003-55-8	5 - 10
Alcohols, C10-16, ethoxilated,	68815-56-5	< 0.2
sulfosuccinates, disodium salts		

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:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions 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 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.

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 water. 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. 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.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

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
Limestone	1317-65-3	Malaysia OELs	TWA (proposed)(8 hours):10	
			mg/m3	
Aluminum, insoluble compounds	21645-51-2	ACGIH	TWA(respirable fraction):1	A4: Not class. as human
			mg/m3	carcin
DUST, INERT OR NUISANCE	21645-51-2	Malaysia OELs	TWA (proposed)(respirable	
			particles)(8 hours):3	
			mg/m3;TWA	
			(proposed)(Inhalable	
			particulate)(8 hours):10 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: Full Face Shield Indirect Vented Goggles

Skin/hand protection

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

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

Respiratory protection

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

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

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

mor mation on basic physical and chemical properties				
Physical state	Liquid			
Color	Red			
Odor	Rubber			
Odor threshold	No Data Available			
рН	7			
Melting point/Freezing point	No Data Available			
Boiling point/Initial boiling point/Boiling range	>=100 °C			
Flash Point	No flash point			
Evaporation rate	No Data Available			
Flammability (solid, gas)	Not Applicable			
Flammable Limits(LEL)	No Data Available			
Flammable Limits(UEL)	No Data Available			
Vapor Pressure	No Data Available			
Vapor Density and/or Relative Vapor Density	No Data Available			
Density	No Data Available			
Relative Density	1.29 [<i>Ref Std</i> :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	80,000 mPa-s
Volatile Organic Compounds	No Data Available
Percent volatile	
VOC Less H2O & Exempt Solvents	<=3 g/l [<i>Test Method</i> :tested per EPA method 24]
Molecular weight	Not Applicable

Nanoparticles

This material contains nanoparticles.

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

<u>Substance</u> Carbon monoxide Carbon dioxide Condition Not Specified Not Specified

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:

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

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
Polymer NJTS Reg. No. 04499600-7181	Dermal		LD50 estimated to be > 5,000 mg/kg
Polymer NJTS Reg. No. 04499600-7181	Ingestion	Rat	LD50 > 2,000 mg/kg
Limestone	Dermal	Rat	LD50 > 2,000 mg/kg
Limestone	Inhalation- Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Limestone	Ingestion	Rat	LD50 6,450 mg/kg
Alumina Trihydrate	Dermal		LD50 estimated to be > 5,000 mg/kg
Alumina Trihydrate	Ingestion	Rat	LD50 > 5,000 mg/kg
Styrene-butadiene polymer	Dermal	Rabbit	LD50 > 2,000 mg/kg
Styrene-butadiene polymer	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Polymer NJTS Reg. No. 04499600-7181	Rabbit	Minimal irritation
Limestone	Rabbit	No significant irritation
Alumina Trihydrate	Rabbit	No significant irritation
Styrene-butadiene polymer	Professio	No significant irritation
	nal	
	judgemen	
	t	

Serious Eye Damage/Irritation

Name	Species	Value
Polymer NJTS Reg. No. 04499600-7181	Professio	Mild irritant
	nal	
	judgemen	
	t	
Limestone	Rabbit	No significant irritation
Alumina Trihydrate	Rabbit	No significant irritation

Sensitization:

Skin Sensitization

Name	Species	Value
Alumina Trihydrate	Guinea pig	Not classified

Respiratory Sensitization

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

Germ Cell Mutagenicity

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

Carcinogenicity

Name	Route	Species	Value
Alumina Trihydrate	Not	Multiple	Not carcinogenic
	Specified	animal	
		species	

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Limestone	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Alumina Trihydrate	Ingestion	Not classified for development	Rat	NOAEL 768 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Limestone	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
Limestone	Inhalation	respiratory system	Not classified	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:

Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Туре	Exposure	Test Endpoint	Test Result
Limestone	1317-65-3	Green algae	Estimated		EC50	>100 mg/l

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Limestone	1317-65-3	Rainbow Trout	Estimated	96 hours	LC50	>100 mg/l
Limestone	1317-65-3	Water flea	Estimated	48 hours	EC50	>100 mg/l
Limestone	1317-65-3	Green algae	Estimated	72 hours	EC10	>100 mg/l
Polymer NJTS Reg. No. 04499600-7181	Trade Secret		Data not available or insufficient for classification			N/A
Alumina Trihydrate	21645-51-2	Fish other	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Alumina Trihydrate	21645-51-2	Green Algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Alumina Trihydrate	21645-51-2	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Alumina Trihydrate	21645-51-2	Green Algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Styrene- butadiene polymer	9003-55-8		Data not available or insufficient for classification			N/A
Alcohols, C10- 16, ethoxilated, sulfosuccinates, disodium salts	68815-56-5		Data not available or insufficient for classification			N/A

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Limestone	1317-65-3	Data not availbl- insufficient			N/A	
Polymer NJTS Reg. No. 04499600-7181	Trade Secret	Data not availbl- insufficient			N/A	
Alumina Trihydrate	21645-51-2	Data not availbl- insufficient			N/A	
Styrene- butadiene polymer	9003-55-8	Data not availbl- insufficient			N/A	
Alcohols, C10- 16, ethoxilated, sulfosuccinates, disodium salts	68815-56-5	Experimental Biodegradation	28 days	Carbon dioxide evolution	>90 % weight	OECD 310 CO2 Headspace

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Limestone	1317-65-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polymer NJTS Reg. No. 04499600-7181		Data not available or insufficient for	N/A	N/A	N/A	N/A

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		classification				
Alumina	21645-51-2	Data not	N/A	N/A	N/A	N/A
Trihydrate		available or				
		insufficient for				
		classification				
Styrene-	9003-55-8	Data not	N/A	N/A	N/A	N/A
butadiene		available or				
polymer		insufficient for				
		classification				
Alcohols, C10-	68815-56-5	Data not	N/A	N/A	N/A	N/A
16, ethoxilated,		available or				
sulfosuccinates,		insufficient for				
disodium salts		classification				

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:(Alumina Trihydrate) 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:(Alumina Trihydrate) 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. 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 on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

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