

	SAFETY DATA SHEET (SDS)		
		Date First	Aug 1, 2008
		Rv. Date, Final	Apr 11, 2018

Section 1. Identification of the substance/mixture and of the company/undertaking

A. Product identifier

PRODUCT NAME : FIRE EXTINGUISHING SPRAY TOOL' / 'FIRE SUPPRESSANT

B. Relevant identified uses of the substance or mixture

RECOMMENDED USE : Fire extinguishing agent.

C. Details of the supplier of the safety data sheet

Supplier/Manufacturer : (Head Office)M.I.T. LIMITED

Address : 103-601, PARK TOWER, 67, SEOBINGGO-RO, YONGSAN-GU, SEOUL, KOREA, 04385

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PREPARATION DATE: AUG 2008, **REVISED**: JAN 18, 2011, FEB 2, 2012, APR 11 2018

Section 2. Hazards identification

A. Classification of the substance or mixture

- Skin corrosion/irritation : Category 2
- Serious eye damage/eye irritation : Category 2
- Specific target organ toxicity – Single exposure : Category 3 (Respiratory tract irritation).

B. Label elements

Hazard pictograms :



Signal word : Warning.

- Hazard statements** :
- H315 : Causes skin irritation.
 - H319 : Causes serious eye irritation.
 - H335 : May cause respiratory irritation.

Precautionary statements

- Prevention** :
- Avoid breathing dust/fumes/gas/mist/vapours/spray(P261).
 - Wash affected areas thoroughly after handling(P264).
 - Use only outdoors or in a well-ventilated area(P271).
 - Wear protective gloves/protective clothing/eye protection/face protection(P280).
- Response** :
- IF INHALED: Remove person to fresh air and keep comfortable for breathing(P304+P340).
 - IF ON SKIN: Wash with plenty of water(P302+P352).
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing(P305+P351+P338).
 - Take off contaminated clothing and wash it before reuse(P362+P364).
 - Call a POISON CENTER/doctor if you feel unwell(P312).
 - Specific treatment(P321).
 - If skin irritation occurs: Get medical advice/attention(P332+P313).
 - If eye irritation persists: Get medical advice/attention(P337+P313).
- Storage** :
- Store in a well-ventilated place. Keep container tightly closed(P403+P233).
 - Store locked up(P405).
- Disposal** :
- Dispose of contents/container in accordance with local/regional/national regulations(P501).

C. OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION

- : This mixture contains no substances considered to be PBT and vPvB.

Section 3. Composition/information on ingredients

Chemical name / Synonym and Code	Chemical Formula	CAS No. / EC No.
Potassium Carbonate / Carbonic acid, potassium salt (1:2)	K ₂ CO ₃	584-08-7 / 209-529-3
Magnesium Carbonate / Carbonic acid, magnesium salt (1:1)	MgCO ₃	546-93-0 / 208-915-9
Propylene Glycol / 1,2-Propanediol	C ₃ H ₈ O ₂	57-55-6 / 200-338-0
Sodium Lauryl Sulfate / Sulfuric acid monododecyl ester sodium salt (1:1)	NaC ₁₂ H ₂₅ SO ₄	151-21-3 / 205-788-1
Water	H ₂ O	7732-18-5 / 231-791-2

Section 4. First aid measures

- A. General information : If symptoms occur after exposure to this product, seek medical advice immediately.
- B. Inhalation : Move to fresh air in case of accidental inhalation of product mist. If symptoms persist, call a
Wipe or blot away excess material with clean cloth or paper towel. Wash affected areas
- C. Skin contact : thoroughly with soap and water. For a large splash, flood body under a shower. If symptoms develop, seek medical advice.
- D. Eye contact : Immediately flush eye with water for at least 15 minutes while holding eyelids open. Seek medical advice if soreness, tearing and redness etc. persist.
- E. Ingestion : If victim is fully conscious, washout mouth and give a cupful of water. Seek medical advice
- F. Indication of immediate medical attention and notes for physician
: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.
- G. Self-protection of first aider
: None.
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Section 5. Firefighting measures

- A. Extinguishing media
Suitable Extinguishing Media : This preparation is an FIRE EXTINGUISHING AGENT.
Use extinguishing media appropriate for surrounding fire.
Unsuitable Extinguishing Media : There are NO extinguishing media which must not be used for safety reasons.
- B. Special hazards arising from the substance or mixture
Hazardous Decomposition Products : Oxides of carbon and oxides of nitrogen may produce when all the water is boiled away.
Fire and Explosion Hazards : Container is equipped with temperature relief device. However rupture may occur under fire conditions and over 360°C.
- C. Advice for firefighters : Wear approved breathing apparatus and protective suit. Move container from fire area if you can do it without risk.
- D. Additional information : Do not allow contamination of public drains or surface or ground waters.
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Section 6. Accidental release measures

- A. Personal precautions, protective equipment and emergency procedures
: Surfaces may be slippery. Ventilate the confined space. Avoid contact with skin, eyes and clothing. Do not touch spilled material or damaged containers unless wearing appropriate protective equipment. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).
- B. Environmental precautions
: Prevent spill from spreading or soaking to soil. Prevent runoff to waterways and sewers. If a large spill occurs, notify local the city hall/a county office(environmental divisions etc.).
- C. Methods and material for containment and cleaning up
Small spills : Stop or reduce any leaks if it is safe to do so.
Refer to "Large spills"

Stop or reduce any leaks if it is safe to do so.
Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.
Large spills : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 7. Handling and storage

- A. Precautions for safe handling
- Do not ingest. Do not get in eyes and avoid contact with skin and clothing. Wash hands and other exposed areas.
: No special precautionary measures should be needed under anticipated conditions of use.
- B. Conditions for safe storage, including any incompatibilities
- Keep only in the original container in a cool, well-ventilated place.
: Store in original container. There is minimal danger to the environment from a storage release.
- C. Specific end use(s) : No further relevant information available.

Section 8. Exposure controls/personal protection

- A. Control parameters : No additional information available
- Occupational Exposure limit values
- ISHL : TWA : 10 mg/m3 (Magnesium Carbonate).
ACGIH TLV : Not applicable.
Biological limit values : Not applicable.
- B. Exposure controls
- Appropriate engineering controls
- For the workplace where gases, vapors, mists, fumes or dusts are diffused, the employer is required to take necessary action such as installing facilities for restraining the diffusion of gas or other hazardous emissions or for sealing the source of the diffusion, or local ventilation equipment or whole ventilation equipment, in order to prevent the concentration of the materials in air from exceeding the health-hazardous level.
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- Personal protection equipment
- Respiratory protection : Not expected to be needed. Vapors will be water.
Eye protection : Use approved safety glasses if there is a potential for direct contact/exposure.
Hand protection : Use chemical resistant gloves when handling the preparation. Gloves must be inspected prior to use.
Body protection : No special equipment is needed.

Section 9. Physical and chemical properties

- A. Information on basic physical and chemical properties
- Appearance (Form, Colour)
- : Clear slight color liquid.
- Odour : Mild.
- Odour threshold : No data available.
- pH value : 8.3
- Melting point/Melting range : No data available.
- Boiling point/Boiling range : 95 °C (initial).
- Flash point : > 250 °C (test method: Cleveland open cup).
- Evaporation rate : Not determined.
- Flammability (solid, gas) : Not flammable.
- Upper/lower flammability or explosive limits : No data available.
- Vapour pressure : Not determined.
- Vapour density : Not determined.
- Solubility : Water solubility: Completely soluble.
- Density : 1.13 (Water =1).
- Partition coefficient: n-octanol/water : Not determined.
- Auto-ignition temperature : Does not ignite.

Decomposition temperature	:	No data available.
Viscosity	:	Not determined.
Explosive properties	:	Not explosive.
Oxidising properties	:	Not an oxidising agent.
B. Other information	:	None.

Section 10. Stability and reactivity

A. Reactivity	:	Stable under normal temperature and pressure.
B. Chemical stability	:	Material is stable under normal conditions.
C. Possibility of hazardous reactions	:	No dangerous reactions known.
D. Conditions to avoid	:	Heating.
E. Incompatible materials	:	Avoid contact with strong acids.
F. Hazardous decomposition products	:	No dangerous decomposition products known.

Section 11. Toxicological information

A. Information on toxicological effects

Ingestion	:	Not a likely route of exposure. No significant adverse effects from available information.
Inhalation	:	Expected to route of exposure. Aerosols or product mist may irritate the upper respiratory tract.
Eye	:	Expected to route of exposure. May causes eye irritation on direct contact.
Skin	:	Expected to route of exposure. May causes transient irritation. Frequent or prolonged contact with product may cause redness and swelling.

Note: Not classified; Based on available data, the classification criteria are not met.

Acute toxicity	:	Rat : 1200 mg/kg [NITE] (Sodium Lauryl Sulfate).
Skin corrosion/irritation	:	Category 2. Rabbit : Highly irritating [NITE] (Sodium Lauryl Sulfate).
Serious eye damage/irritation	:	Category 2
Respiratory sensitization	:	No data available.
Skin sensitization	:	No data available.
Carcinogenicity	:	None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).
Germ cell mutagenicity	:	No data available.
Reproductive toxicity	:	No data available.
STOST-single exposure	:	Category 3 (Respiratory tract irritation). Respiratory tract irritation is seen by aerosol exposure in a mouse, a rabbit, and a guinea pig and by short terms exposure NITE (Sodium Lauryl Sulfate).
STOST-repeated exposure	:	No data
Aspiration hazard	:	No data available.

B. Potential adverse human health effects and symptoms

Ingestion	:	No data available.
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Section 12. Ecological information

A. Toxicity	:	No data available.
B. Persistence and degradability	:	No data
C. Bioaccumulative potential	:	No data
D. Mobility in soil	:	No data available.
E. Results of PBT and vPvB assessment	:	This mixture contains no substances considered to be PBT and vPvB.

F. OTHER HAZARDOUS EFFECTS

: Avoid release to the environment

Section 13. Disposal considerations

A. Waste treatment method: Disposal of waste product and contaminated packaging materials should be in accordance with applicable local or national legislation.

Section 14. Transport information

In accordance with IMDG / IATA

A. UN number : Not applicable.
B. UN proper shipping name : Not applicable.
C. Transport hazard class(es) : Not applicable.
D. Packing group : Not applicable.
E. Environmental hazards : Not applicable.
Marine pollutant : No.
F. Special precautions for user : There is no special precaution known.

Section 15. Regulatory information

Industrial Safety and Health Law - Korea
Prohibited Hazardous Substances : Not regulated.
Hazardous Substances Requiring Permission : Not regulated.
Harmful substances to be controlled : Not regulated.
Chemical substance subject to monitoring in the work : Not regulated.
Harmful Substances Requiring Special Medical : Not regulated.
Occupational exposure limits (OELs). : Magnesium Carbonate.
CCA(The Chemical Control Act) - Korea
Toxic substance : Not regulated.
Substance subject to authorization : Not regulated.
Restricted/Prohibited Substance : Not regulated.
Substance requiring preparation for accidents : Not regulated.
Dangerous goods safety management law : Not applicable (Practically non- flammable).

Other Regulations

UNITED STATES REGULATORY INFORMATION : Not regulated.
CERCLA Hazardous Substances and corresponding RQs: Not regulated.
: SARA Section 302 Extremely Hazardous Substances: Not regulated.
SARA Section 313: Not regulated.

Substance requiring preparation for accidents : Not regulated.
UNITED STATES REGULATORY INFORMATION : Not regulated.
: Not applicable (Practically non- flammable).

INVENTORIES

EINECS (EU) : Listed. / TSCA (US) : Listed.
ENCS (JAPAN) : Listed. / AICS (AUSTRALIA) : Listed.
: DSL/NDSL (CANADA) : Listed. / IECSC (CHNIA) : Listed.
PICCS (PHILIPPINES) : Listed. / ECL(Korea) : Listed.

INFORMATION ABOUT INTERNATIONAL CONVENTION

- Rotterdam Convention : Not regulated.
- Stockholm Convention : Not regulated.
- Montreal Protocol : Not regulated.

NOTE: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the Safety Data Sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

Section 16. Other information

The above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. M.I.T. LIMITED.. shall not be held liable for any damage resulting from handling or from contact with the above product. Each individual should make a determination as to the suitability of the information for their particular purpose(s). Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this SDS. The user is responsible for full compliance.

The date of preparation of the MSDS : Aug 1, 2008 / The date of final revision of the SDS : Apr 11, 2018

Relevant phrases

- H228: Flammable solid.
- H302: Harmful if swallowed.
- H311: Toxic in contact with skin.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335 : May cause respiratory irritation.

Abbreviations and acronyms

CAS: Chemical Abstracts Service

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative