

SAFETY DATA SHEET

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	Revision: 1.06	Date: 04/08

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

PRODUCT NAME	HARP® DME
SUPPLIER	Harp International Limited Gellihirion Industrial Estate Pontypridd Rhondda Cynon Taff CF37 5SX United Kingdom
	Telephone: +44 (0) 1443 842255
	Fax: +44 (0) 1443 841805
	Email: cjharries@harpintl.com
EMERGENCY TELEPHONE NUMBER:	+44 (0) 1865 407333 (24 HOUR)

02 - HAZARDS IDENTIFICATION

MOST IMPORTANT HAZARDS	Extremely flammable.
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03 - COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME OF THE SUBSTANCE	DIMETHYL ETHER
CAS	115-10-6
EC-NUMBER	204-065-8
ANNEX-1 NUMBER	603-019-00-8
SYMBOLS	F+
RISK PHRASE	R12

04 - FIRST AID MEASURES

SYMPTOMS AND EFFECTS	Irritating to eyes and respiratory system. Causes frostbite.
GENERAL INHALATION	In all cases of doubt, or when symptoms persist, seek medical attention. Move to fresh air. Oxygen or artificial respiration if needed.
SKIN CONTACT	Seek medical advice after significant exposure. Frostbite: treat as thermal burns. In case of frostbite, do not remove clothing, but first thaw frozen parts with water (never warm water), then remove clothing carefully and seek medical advice.
EYE CONTACT	Wash immediately, abundantly and thoroughly with water If irritation persists, consult an ophthalmologist.
INGESTION	Not likely to occur.
ADVICE TO PHYSICIANS	Symptomatic treatment is advised.

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05 - FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA	Powder.
UNSUITABLE EXTINGUISHING MEDIA	None known.
SPECIAL EXPOSURE HAZARDS	Vapours may form explosive mixtures with air. Vapours may travel to a source of ignition and flash back.
HAZARDOUS DECOMPOSITION PRODUCTS	None known.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS	Wear self-contained or supplied-air respiratory equipment.
OTHER INFORMATION	Cool closed containers with water.

06 - ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION	Wear self-contained breathing apparatus.
ENVIRONMENTAL PRECAUTIONS	Do not allow to enter drains or water courses.
METHODS FOR CLEANING UP	Isolate spill area. Ventilate the area.
OTHER INFORMATION	Take precautionary measures against static discharges. Keep away from sources of ignition. No smoking.

07 - HANDLING AND STORAGE

HANDLING	Use only in well ventilated areas.
FIRE AND EXPLOSION PREVENTION	Avoid ignition sources - DO NOT SMOKE. Avoid static discharges. Vapours are heavier than air and may spread along floors. Vapours may travel to a source of ignition and flash back.
STORAGE	Store in a dry well ventilated place away from sources of heat and direct sunlight.

08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE PROVISIONS	Provide sufficient air exchange and/or exhaust in work areas. Use explosion protected equipment.
PERSONAL PROTECTION	-
RESPIRATORY	Use self contained respiratory equipment.
HAND	Wear neoprene gloves.
EYE	Wear eye/face protection.
SKIN AND BODY	Wear suitable protective clothing.

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09 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE (25°C)	liquefied gas
COLOUR	colourless
ODOUR	almost odourless
pH	not applicable
BOILING POINT/RANGE	-25°C (101.3 kPa)
MELTING POINT/RANGE	-141°C (freezing point)
FLASH POINT	-41°C
AUTOIGNITION TEMPERATURE	350°C (235°C, BAM, DIN 51 794)
EXPLOSIVE PROPERTIES	Vapours may form explosive mixtures with air
EXPLOSION LIMITS	3 - 18.6 vol. % (ASTM)
VAPOUR PRESSURE	(20°C): 0.51 MPa (5.1 bar) (50°C): 1.14 MPa (11.4 bar)
LIQUID DENSITY	(20°C): 670 kg/m ³
RELATIVE VAPOUR DENSITY (air = 1)	1.59
SOLUBILITY	Soluble in chlorinated solvents and alcohols. Solubility of product in water at 20°C (0.41 MPa) = 328 g/l
PARTITION COEFFICIENT	log P _{ow} = -0.18

10 - STABILITY AND REACTIVITY

STABILITY	Stable under recommended storage and handling conditions.
CONDITIONS TO AVOID	Keep away from heat and sources of ignition. No smoking. Avoid contact with air/O ₂ (formation of peroxides).
MATERIALS TO AVOID	Chlorine, Air, hydrochloric acid, O ₂ , HF, N ₂ O, strong oxidising agents, rubber, KEL-F, Viton.
HAZARDOUS DECOMPOSITION PRODUCTS	None known.

11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	-
ORAL LD50	Not applicable.
INHALATION LC50	rat, 16.4 vol. %, 4 hours inhalation.
IRRITATION	-
SKIN	Causes frostbite
OTHER TOXICOLOGICAL INFORMATION effect	Not mutagenic, not teratogenic, not carcinogenic. 90 days inhalation, rat: no observed concentration (NOEC) 10 000ppm

12 - ECOLOGICAL INFORMATION

ECOTOXICITY	
FISH	Poecilia reticulata: acute toxicity, 96h-LC50 > 4000 mg/l.
DAPHNIA	Daphnia magna: acute toxicity, 48h-EC50 > 4000 mg/l.
FATE	
DEGRADATION ABIOTIC	The chemical can be degraded by chemical or photolytic processes
DEGRADATION BIOTIC	Not readily biodegradable

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13 - DISPOSAL CONSIDERATIONS

DISPOSAL OF PACKAGING
DISPOSAL OF PRODUCT

Return to supplier.
According to local Regulations (most probably controlled incineration).

14 - TRANSPORT INFORMATION

UN NUMBER	1033
-LAND (railway/road such as RID/ADR)	
ADR/RID	Class: 2
HAZARD IDENTIFICATION NUMBER	23
SUBSTANCE IDENTIFICATION NUMBER	1033
PROPER SHIPPING NAME	DIMETHYL ETHER
TRANSPORT LABELS	2.1
-SEA	
IMO/IMDG CODE	-
CLASS	2
EMS NUMBER	2-07
MARINE POLLUTANT	No
TRANSPORT DOCUMENT NAME	DIMETHYL ETHER
MFAG NUMBER	330
PACKAGING GROUP	
-AIR TRANSPORT	
ICAO-TI/IATA-DGR	
CLASS	2.1
PROPER SHIPPING NAME	DIMETHYL ETHER
OTHER INFORMATION	Cargo aircraft only.

15 - REGULATORY INFORMATION

PRODUCT LABEL NAME Dimethyl ether

LABELLING ACCORDING TO EEC DIRECTIVE

EINECS NUMBER 204-065-8

CLASSIFICATION BASED ON Annex-1

SYMBOLS F+

RISK PHRASE(S) R12: Extremely flammable

S2: Keep out of the reach of children

S9: Keep container in a well ventilated place

S16: Keep away from sources of ignition - No smoking

S33: Take precautionary measures against static discharges

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16 - OTHER INFORMATION

RECOMMENDED USES

Aerosol propellant

NOTE

This information contained within this safety data sheet applies only to the Harp International Limited product to which it relates. The information provided is based upon our best knowledge at the time that this safety data sheet was published.

The information is believed to be accurate and is given in all good faith.

When used in other preparations, in formulations or in mixtures, it is necessary to ascertain if the classification of the hazards have changed. The attention of users is drawn to the possibility of creating other hazards when the product is used for purposes other than that for which it is recommended. In such cases a complete reassessment should be made by user.

This safety data sheet should only be used and reproduced in order that the necessary measures may be taken relating to the protection of health and safety at work and relating to the protection of environment.

The reference to the legislative, regulatory and codes of practice documents must not be considered as exhaustive.

It is the responsibility of handlers of the product to pass on the totality of the information contained within this document to any subsequent persons who will come into contact with, handle or use the product in any way.

They should check the adequacy of the information contained in the safety data sheet received before passing it onto their customers.

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