



Safety data-sheet issued according to US-Standard
Printed 20.01.2006
Revision 17.01.2006 (US) Version 1.8
FRIGOMET® HM 442
40 441.02

! 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Name of product	FRIGOMET® HM 442 Prod-Nr. 40 441.02 Q-Nr. Q 975/0305 Jo/sh
Manufacturer/distributor	Oemeta Chemische Werke GmbH Ossenpadd 54, D-25436 Uetersen Phone ++49 (0)4122/924-0, Fax ++49 (0)4122/924-157 E-Mail oemeta@oemeta.com Internet www.oemeta.com
Advice	Oemeta Service Phone ++49 (0)4122/924-132 Fax ++49 (0)4122/924-157
Emergency advice	Dipl.- Ing. Stefan Joksch Phone ++49 0172/9144099 (Mobile)
Recommended intended purpose(s)	Water soluble cutting fluid (preparation to ISO 6743-7)
Effect of the substance / the formulation	Application range: industry / craft. For special application notes see technical data sheet.

! 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization

Preparation, contains surfactants, long-chain alcohols, additives

! Hazardous ingredients

CAS-No.	EC-No.	Name	[%-Vol]	Classification
111-46-6	203-872-2	diethylene glycol	5 - 10	Xn - R 22
		glycol ether derivate	1 - 5	Xn - R 22
95-14-7	202-394-1	1H-benzotriazole	5 - 10	Xn - R 20/22-36-52/53
929-06-6	213-195-4	2-(2-aminoethoxy)ethanol	1 - 5	C - R 34

Additional advice

Please note: The information in this safety data sheet refers to the concentrate. In water solubilised form, other properties appropriate to the dilution apply.

3. HAZARDS IDENTIFICATION

Special hazards information for humans and environment

This product does not require marking as dangerous under the hazardous substances ordinance.

4. FIRST AID MEASURES

General information

Remove contaminated soaked clothing immediately.

In case of inhalation

In the event of symptoms refer for medical treatment.

In case of skin contact

In case of contact with skin wash off immediately with soap and water.



Safety data-sheet issued according to US-Standard
Printed 20.01.2006
Revision 17.01.2006 (US) Version 1.8
FRIGOMET® HM 442
40 441.02

In case of eye contact

In case of contact with eyes rinse thoroughly with warm water.

In case of ingestion

Do not induce vomiting.

Rinse out mouth and give plenty of water to drink.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Foam

Dry powder

Carbon dioxide

Water spray jet

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

In case of fire formation of dangerous gases possible.

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Additional information

Collect contaminated firefighting water separately, must not be discharged into the drains.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

High risk of slipping due to leakage/spillage of product.

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

Do not discharge into the subsoil/soil.

Methods for cleaning up

Take up with absorbent material (e.g. oil binder).

Additional Information

Informations for disposal see chapter 13.

7. HANDLING AND STORAGE

Requirements for storage rooms and vessels

Do not use containers, leads, pipes a.s.o. of copper or copper-containing alloys.

Do not use zinc containers.

Further information on storage conditions

Storage temperature between 10°C to 30°C (=50°F to 86°F).

Information on storage stability

In closed original container and at storage temperature of 30 °C (86 °F) maximum product keeps stable for at least 12 months.

! 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional advice on system design

In case of forming aerosols/vapours we recommend purposeful exhaust.

! Ingredients with occupational exposure limits to be monitored

CAS-No.	Name	Code	[mg/m ³]	[ml/m ³]	Remark
111-46-6	diethylene glycol		44	10	DFG, Y



Safety data-sheet issued according to US-Standard
Printed 20.01.2006
Revision 17.01.2006 (US) Version 1.8
FRIGOMET® HM 442
40 441.02

Ingredients with occupational exposure limits to be monitored

CAS-No.	Name	Code	[mg/m ³]	[ml/m ³]	Remark
	cutting fluids watermiscible/non watermiscible Flp.>100 °C)		10		MAK, TRGS 901, No. 72- part 1(Germany/ Allemagne)

Additional advice

-

Hand protection

At full-contact with the concentrate we recommend to use gloves made of 740 Dermatril (KCL, Germany), with a layer thickness of at least 0,1 mm. The breakthrough-time for these gloves is > 480 min.

The type-classification refers only to the ability of the material to resist chemicals.

If other properties f.e. resistance against higher mechanical stress, abrasion resistance of temperature behaviour are important, please contact a manufacturer of protective gloves.

Eye protection

safety goggles

General protective measures

Avoid contact with eyes and skin

Hygiene measures

Do not eat or drink when working.

Clean skin thoroughly after working.

Cloths contaminated with product should not be kept in trouser pockets.

Keep away from food and drink.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form liquid	Colour yellowish	Odour mild
-----------------------	----------------------------	----------------------

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value in delivery state	9 - 11	20 °C		DIN 51369	
cloud / clear point	< 0 °C				
Flash point	not applicable				product contains water
Combustion temperature	not applicable				product contains water
Density	1,11 - 1,14 g/cm ³	20 °C		DIN 51757	
Solubility in water					very good soluble
Viscosity 1 kinematic	33 - 55 mm ² /s	20 °C		DIN 53018	



Safety data-sheet issued according to US-Standard
Printed 20.01.2006
Revision 17.01.2006 (US) Version 1.8
FRIGOMET® HM 442
40 441.02

10. STABILITY AND REACTIVITY

Conditions to avoid

Avoid heating of concentrate > 100 °C.

Materials to avoid

Reactions with acids and strong oxidising agents.

11. TOXICOLOGICAL INFORMATION

Acute toxicity/Irritability/Sensitization

Value/Validation	Species	Method	Remark
Irritability eye			Can shortly be irritating in case of direct contact.

Additional information

Pay attention to skin care/protection when continual or frequent contact with the water mixed form occurs, because the product has degreasing effect which can make the skin dry.
Cutting fluid aerosol/vapours in the working environment should be avoided.

12. ECOLOGICAL INFORMATION

Data on elimination (persistence and degradability)

Elimination rate	Method of analysis	Method	Validation
Biological degradability			Biodegradable
The biodegradability of this product has not been tested, the classifying is related to the biodegradability of the single raw materials.			

Additional ecological information

Value	Method	Remark
AOX		The product contains organically bounded iodine. Iodine: < 400 mg/kg

General regulation

Do not discharge product unmonitored into the environment.

13. DISPOSAL CONSIDERATIONS

Waste code No.

12 01 10*

Name of waste

synthetic machining oils

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 91/689/EEC on hazardous waste.

Recommendations for packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Recommended cleansing agent

Water

General information

In accordance with regulations for waste, the product must be taken to an authorised waste treatment for during or recycling, by mentioning the EWC-Code. The disposal has to be proved.

Not cleaned packages: EWC Code 15 01 02 plastic can/container; 15 01 04 steel drums



Safety data-sheet issued according to US-Standard
Printed 20.01.2006
Revision 17.01.2006 (US) Version 1.8
FRIGOMET® HM 442
40 441.02

14. TRANSPORT INFORMATION

Transport/further informations

No hazardous material as defined by the prescriptions.

! 15. REGULATORY INFORMATION

Remarks for classification

The product does not require a hazard warning label in accordance with EC directives/German regulations on dangerous substances.

VOC standard

VOC content ca.3 %

16. OTHER INFORMATION

Training advice

For further information how to use this product please apply to: Oemeta Chemische Werke GmbH/Germany, phone Mr. Joksch +49 4122/924-124.

Recommend uses and restrictions

Further information

For further information please apply the Technical Department ++49 4122/924-132.

! An exclamation mark before the relevant section number indicates that the safety data sheet has been revised.
All declarations of safety-data-sheet refer to pure substance.

Sources of key data used

Oemeta Technical Department

Wording of the R-phrases specified in chapter 2 (not the classification of the formulation!)

R 20/22 Harmful by inhalation and if swallowed.

R 22 Harmful if swallowed.

R 34 Causes burns.

R 36 Irritating to eyes.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.