

MOS2LUBE A320

Safety data sheet

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

1.1. Product identifierCode: U051650004
Product name: MOS2LUBE A320**1.2. Relevant identified uses of the substance or mixture and uses advised against**Intended use: Lubricant with molybdenum disulphide.
Uses advised against: Different uses than those intended.**1.3. Details of the supplier of the safety data sheet**Name: CENTRO DISTRIBUZIONE UTENSILI SCPA
Full address: Via delle Gerole, 19
District and Country: 20867 CAPONAGO (MB)
ITALY
tel. +39 02 95746081
fax. + 39 02 95745182

e-mail address of the competent person

responsible for the Safety Data Sheet: info@cdu.net
Product distribution by: Centro Distribuzione Utensili Scpa**1.4. Emergency telephone number**For urgent inquiries refer to: **+39 02 95746081 during office hours 8.30-12.30 - 13.30-17.30**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Aerosol, category 1	H222	Extremely flammable aerosol.
Aspiration hazard, category 1	H229	Pressurised container: may burst if heated.
Skin irritation, category 2	H304	May be fatal if swallowed and enters airways.
Specific target organ toxicity - single exposure, category 3	H315	Causes skin irritation.
Hazardous to the aquatic environment, chronic toxicity, category 2	H336	May cause drowsiness or dizziness.
	H411	Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: DANGER

Hazard statements:

H222: Extremely flammable aerosol.
H229: Pressurised container: may burst if heated.
H315: Causes skin irritation.



H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P331 Do NOT induce vomiting.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P501 Dispose of contents / container to in accordance with local and national regulations.

Contains: HEPTANE
NAPHTA (PETROLEUM), HYDROTREATED LIGHT
ETHYL ACETATE
1-METHOXY-2-PROPANOL

Statements on the aspiration toxicity classification were not included in the label elements, based on section 1.3.3. of Annex I to CLP.

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients**3.1. Substances**

Information not relevant.

3.2. Mixtures

Contains:

Identification	x=Conc. %	Classification 1272/2008 (CLP)
HYDROCARBONS, C3-4		
CAS 68476-40-4	31,0 ≤ x ≤ 41,0	Flam. Gas 1 H220, Press. Gas H280, Note K U
EC 270-681-9		
INDEX 649-199-00-1		
NAPHTA (PETROLEUM), HYDROTREATED LIGHT		
CAS -	20,0 ≤ x ≤ 26,55	Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411, Note P
EC 931-254-9		
INDEX -		
Reg. no. 01-2119484651-34		
HEPTANE		
CAS 142-82-5	10,95 ≤ x ≤ 13,95	Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411, Note C
EC 927-510-4		
INDEX 601-008-00-2		
Reg. no. 01-2119475515-33		
ETHYL ACETATE		
CAS 141-78-6	2,95 ≤ x ≤ 4,95	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC 205-500-4		
INDEX 607-022-00-5		
Reg. no. 01-2119475103-46		
MOLYBDENUM DISULPHIDE		
CAS 1317-33-5	2,72 ≤ x ≤ 4,72	--
EC 215-263-9		



INDEX -

1-METHOXY-2-PROPANOL

CAS 107-98-2

0,50 ≤ x ≤ 2,95

Flam. Liq. 3 H226, STOT SE 3 H336

EC 203-539-1

INDEX 603-064-00-3

Reg. no. 01-2119457435-35

The full wording of hazard (H) phrases is given in section 16 of the sheet.

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants max: 41,00 %

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information for the doctor: symptomatically treatment.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.2. Environmental precautions

Do not disperse in the environment.



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6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

Storage class TRGS 510 (Germany): 2B

7.3. Specific end use(s)

Lubricant with molybdenum disulphide.

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory References:

DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveystieteiden tutkimuskeskus julkaisu 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Databank of the social and Economic Council of Netherlands (SER) Values, AF 2011:18
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diário da República I 26; 2012-02-06
EU	OEL EU	Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016

HYDROCARBONS, C3-4

Threshold Limit Value Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	2400	1000	9600	4000
MAK	DEU	2400	1000	9600	4000
TLV	DNK	1200	500		
VLA	ESP		800		
HTP	FIN	1900	800	2400	1000
VLEP	FRA	1900	800		
WEL	GBR	1450	600	1810	750
OEL	NLD	1430			
NDS	POL	1900		3000	



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TLV-ACGIH 1000

NAPHTA (PETROLEUM), HYDROTREATED LIGHT

Threshold Limit Value					
Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH		1200	353		

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1301 mg/kg/d				
Inhalation			VND	1131 mg/m3			VND	5306 mg/m3
Skin			VND	1377 mg/kg bw/d			VND	13964 mg/kg bw/d

HEPTANE

Threshold Limit Value					
Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
MAK	DEU	2100	500	2100	500
TLV	DNK	820	200		
VLA	ESP	2085	500		
VLEP	FRA	1668	400	2085	500
WEL	GBR	2085	500		
VLEP	ITA	2085	500		
OEL	NLD	1200		1600	
NDS	POL	1200		2000	
VLE	PRT	2085	500		
OEL	EU	2085	500		
TLV-ACGIH		1639	400	2049	500

ETHYL ACETATE

Threshold Limit Value					
Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
AGW	DEU	1500	400	3000	800
MAK	DEU	1500	400	3000	800
TLV	DNK	540	150		
VLA	ESP	1460	400		
HTP	FIN	1100	300	1800	500
VLEP	FRA	1400	400		
WEL	GBR		200		400
OEL	NLD	550		1100	
NDS	POL	200		600	
OEL	EU	734	200	1468	400
TLV-ACGIH		1441	400		

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,24	mg/l
Normal value in marine water	0,02	mg/l
Normal value for fresh water sediment	1,15	mg/kg/d
Normal value for marine water sediment	0,115	mg/kg/d



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Normal value for water, intermittent release	1,65	mg/l
Normal value of STP microorganisms	650	mg/l
Normal value for the food chain (secondary poisoning)	200	mg/kg
Normal value for the terrestrial compartment	0,148	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				4,5 mg/kg bw/d				
Inhalation	734 mg/m3	734 mg/m3	367 mg/m3	367 mg/m3	1468 mg/m3	1468 mg/m3	734 mg/m3	734 mg/m3
Skin				37 mg/kg bw/d			VND	63 mg/kg bw/d

MOLYBDENUM DISULPHIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH		3			

1-METHOXY-2-PROPANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	370	100	740	200	
MAK	DEU	370	100	740	200	
TLV	DNK	185	50			
VLA	ESP	375	100	568	150	SKIN
HTP	FIN	370	100	560	150	SKIN
VLEP	FRA	188	50	375	10	SKIN
WEL	GBR	375	100	560	150	SKIN
VLEP	ITA	375	100	568	150	SKIN
OEL	NLD	375		563		SKIN
NDS	POL	180		360		
VLE	PRT	375	100	568	150	
OEL	EU	375	100	568	150	SKIN
TLV-ACGIH		184	50	368	100	

Predicted no-effect concentration - PNEC

Normal value in fresh water	10	mg/l
Normal value in marine water	1	mg/l
Normal value for fresh water sediment	52,3	mg/kg
Normal value for marine water sediment	5,2	mg/kg
Normal value for water, intermittent release	100	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	4,59	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				33 mg/kg bw/d				
Inhalation				43,9 mg/m3	553,5 mg/m3	VND		369 mg/m3
Skin				78 mg/kg bw/d				183 mg/kg bw/d

Legend:

(C) = CEILING; INHAL = Inhalable Fraction; RESP = Respirable Fraction; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available; NEA = no exposure expected; NPI = no hazard identified.



TLV of solvent mixture: 782 mg/m³

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

None required.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	aerosol
Colour	grey
Odour	characteristic
Odour threshold	Not available
pH	Not applicable
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	< 0 °C
Evaporation Rate	Not available
Flammability of solids and gases	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	0,70 Kg/l
Solubility	in water: insoluble; in acetone: soluble
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) :	89,37 %
Propellant flammability	extremely flammable
Limit of propellant flammability	1,8-9,5%

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

ETHYL ACETATE

Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

**1-METHOXY-2-PROPANOL**

Dissolves various plastic materials. Stable in normal conditions of use and storage.

Absorbs and dissolves in water and in organic solvents. With air it may slowly form explosive peroxides.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

HYDROCARBONS, C3-4

May form flammable mixtures with: strong oxidising agents. Forms explosive mixtures with: strong oxidising agents, nitrates.

ETHYL ACETATE

Risk of explosion on contact with: alkaline metals, hydrides, oleum. May react violently with: fluorine, strong oxidising agents, chlorosulphuric acid, potassium tert-butoxide. Forms explosive mixtures with: air.

1-METHOXY-2-PROPANOL

May react dangerously with: strong oxidising agents, strong acids.

10.4. Conditions to avoid

Avoid overheating.

HYDROCARBONS, C3-4

Keep away from: strong oxidising agents. Avoid exposure to: sources of heat, naked flames, overheated surfaces, electrostatic discharges.

NAPHTA (PETROLEUM), HYDROTREATED LIGHT

Avoid exposure to: high temperatures, naked flames.

ETHYL ACETATE

Avoid exposure to: light, sources of heat, naked flames.

1-METHOXY-2-PROPANOL

Avoid exposure to: air, naked flames, ignition sources, electrostatic discharges.

10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

HYDROCARBONS, C3-4

Avoid contact with: strong oxidising agents.

NAPHTA (PETROLEUM), HYDROTREATED LIGHT

Avoid contact with: oxidising agents.

ETHYL ACETATE

Incompatible with: acids, bases, strong oxidants, aluminium, nitrates, chlorosulphuric acid. Incompatible materials: plastic materials.

1-METHOXY-2-PROPANOL

Incompatible with: oxidising agents, aluminium, acids, bases.

10.6. Hazardous decomposition products

NAPHTA (PETROLEUM), HYDROTREATED LIGHT

In decomposition develops: carbon oxides.

ETHYL ACETATE

May develop: carbon oxides.

1-METHOXY-2-PROPANOL

May develop: carbon oxides.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effectsMetabolism, toxicokinetics, mechanism of action and other information

Information not available.

Information on likely routes of exposure

1-METHOXY-2-PROPANOL

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; inhalation of ambient air; contact with the skin of products containing the substance.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

1-METHOXY-2-PROPANOL

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product. Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported.

Interactive effects

Information not available.

ACUTE TOXICITY

LC50 (Inhalation - vapours) of the mixture:

Not classified (no significant component)

LC50 (Inhalation - mists / powders) of the mixture:

Not classified (no significant component)

LD50 (Oral) of the mixture:

Not classified (no significant component)

LD50 (Dermal) of the mixture:

Not classified (no significant component)

HEPTANE

LD50 (Oral)

> 8 ml/kg bw Rat

LD50 (Dermal)

2800 mg/kg bw Rabbit

LC50 (Inhalation)

> 23,3 mg/l/4h Rat

1-METHOXY-2-PROPANOL

LD50 (Oral)

4016 mg/kg Rat

LD50 (Dermal)

> 2000 mg/kg bw/d Rat

LC50 (Inhalation)

> 7000 ppm/6h Rat (OECD - 403)

ETHYL ACETATE

LD50 (Oral)

4934 mg/kg bw Rat (OECD - 401)

LD50 (Dermal)

> 20000 mg/kg bw Rabbit

LC50 (Inhalation)

> 22,5 mg/l/6h Rat

NAPHTA (PETROLEUM), HYDROTREATED LIGHT

LD50 (Oral)

> 16750 mg/kg dw Rat

LD50 (Dermal)

> 3350 mg/kg dw Rabbit

LC50 (Inhalation)

> 259354 mg/m³/4h Rat

HYDROCARBONS, C3-4

LC50 (Inhalation)

658 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation.

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class.

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class.

**STOT - SINGLE EXPOSURE**

May cause drowsiness or dizziness.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class.

ASPIRATION HAZARD

Toxic for aspiration.

SECTION 12. Ecological information

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment.

12.1. Toxicity**HEPTANE**

LC50 - for Fish	> 13,4 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	3,2 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	12 mg/l/72h Pseudokirchneriella subcapitata

1-METHOXY-2-PROPANOL

LC50 - for Fish	20800 mg/l/96h Pimephales promelas
EC50 - for Crustacea	21100 mg/l/48h Daphnia magna

ETHYL ACETATE

LC50 - for Fish	230 mg/l/96h Pimephales promelas
EC50 - for Crustacea	165 mg/l/48h Daphnia magna
Chronic NOEC for Crustacea	2,4 mg/l Daphnia pulex

NAPHTA (PETROLEUM), HYDROTREATED LIGHT

LC50 - for Fish	> 1 mg/l/96h Oryzias latipes
EC50 - for Crustacea	31,9 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	13,56 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Fish	4,09 mg/l Oncorhynchus mykiss
Chronic NOEC for Crustacea	7,14 mg/l Daphnia magna

HYDROCARBONS, C3-4

LC50 - for Fish	24,11 mg/l/96h (QSAR calculation - butane - ECOSAR Program v1.00)
EC50 - for Crustacea	16,33 mg/l/48h Daphnia (isobutane, calculated with ECOSAR Program v1.00. EPI Suite™ v4.00)

12.2. Persistence and degradability

The paraffinic hydrocarbons fraction may be considered biodegradable in water and in air. They distribute mostly in the air. The small non biodegradable amount which spreads into water tends to accumulate in fish.

HEPTANE

Solubility in water	0,1 - 100 mg/l
Rapidly biodegradable.	

1-METHOXY-2-PROPANOL



Solubility in water 1000 - 10000 mg/l
Rapidly biodegradable.

ETHYL ACETATE

Solubility in water > 10000 mg/l
Rapidly biodegradable.

NAPHTA (PETROLEUM), HYDROTREATED LIGHT

Solubility in water Insoluble
Rapidly biodegradable.

HYDROCARBONS, C3-4

Solubility in water 24,4 - 60,4 mg/l
Rapidly biodegradable.

12.3. Bioaccumulative potential**HEPTANE**

Partition coefficient: n-octanol/water 4,5
BCF 552

1-METHOXY-2-PROPANOL

Partition coefficient: n-octanol/water < 1
BCF < 100

ETHYL ACETATE

Partition coefficient: n-octanol/water 0,68
BCF 30

HYDROCARBONS, C3-4

Partition coefficient: n-octanol/water 2,03058 Log Kow (QSAR, KOWWIN, Butane)

12.4. Mobility in soil**HEPTANE**

Partition coefficient: soil/water 2,38

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available.

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information**14.1. UN number**

ADR / RID, IMDG, IATA: 1950

14.2. UN proper shipping name

ADR / RID: AEROSOLS
IMDG: AEROSOLS (NAPHTA (PETROLEUM), HYDROTREATED LIGHT)
IATA: AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR / RID: Class: 2 Label: 2.1

IMDG: Class: 2 Label: 2.1

IATA: Class: 2 Label: 2.1

**14.4. Packing group**

ADR / RID, IMDG, IATA: -

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous

IMDG: Marine Pollutant

IATA: NO



For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: -- Special Provision: -	Limited Quantities: 1 L	Tunnel restriction code: (D)
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo: Pass.:	Maximum quantity: 100 Kg Maximum quantity: 25 Kg	Packaging instructions: 130 Packaging instructions: 130
	Special Instructions:	A802	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant.

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P3a-E2

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 40

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

German regulation on the classification of substances hazardous to water (VwVwS 2005)

WGK 3: Severe hazard to waters

15.2. Chemical safety assessment

No chemical safety assessment for the mixture was carried out.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Gas 1	Flammable gas, category 1
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Press. Gas	Pressurised gas
Asp. Tox. 1	Aspiration hazard, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may burst if heated.



H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
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 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.



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01 / 02 / 03 / 04 / 07 / 08 / 09 / 10 / 11 / 12 / 14 / 15.