Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: **CK202961001, CK202961003**

Product name **KRAFT ROAD LINER (WHITE/YELLOW)**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use **A fast-drying, solvent-based acrylic enamel paint, suitable for road marking**

1.3. Details of the supplier of the safety data sheet

Name **DRUCKFARBEN HELLAS SA**

Full address **Megaridos Ave**

District and Country **193 00 Aspropyrgos (Attiki)**

Greece

Tel. +30 210 5519500

Fax +30 210 5519501

e-mail address of the competent person responsible for the Safety Data Sheet **psafety@druckfarben.gr**

1.4. Emergency telephone number

For urgent inquiries refer to **+30 210 7793777**

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 (EU) Regulation 2015/830.
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:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Reproductive toxicity, category 2	H361d	Suspected of damaging the unborn child.
Eye irritation, category 2	H319	Causes serious eye irritation.

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:

H225	Highly flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H319	Causes serious eye irritation.
EUH208	Contains: 4-morpholinecarbaldehyde May produce an allergic reaction.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/ protective clothing / eye protection / face protection / ear protection.
P370+P378	In case of fire: use CO_2, foam or dry powder for extinction.
P501	Dispose of contents and container to an approved waste disposal plant or recycled in accordance with local / national / international regulations.
P102	Keep out of reach of children.
P312	Call a POISON CENTER / doctor if you feel unwell.
P201	Obtain special instructions before use.

Contains: Toluene

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

3.2. Mixtures

Contains:

Identification	**x = Conc. %**	**Classification 1272/2008 (CLP)**
2-methylpropan-2-ol		
CAS 75-65-0	10 < x < 20	Flam. Liq. 2 H225, Acute Tox. 4 H332, Eye Irrit. 2 H319, STOT SE 3 H335
EC 200-889-7		
INDEX 603-005-00-1		
Toluene		
CAS 108-88-3	5 < x < 9	Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336
EC 203-625-9		
INDEX 601-021-00-3		
1-methoxy-2-propanol		
CAS 107-98-2	0 < x < 0,5	Flam. Liq. 3 H226, STOT SE 3 H336
EC 203-539-1		
INDEX 603-064-00-3		
Reg. no. 01-2119457435-35-0000		

4-morpholinecarbaldehyde

CAS 4394-85-8	0 < x < 0,5	Skin Sens. 1 H317
EC 224-518-3		
INDEX -		
Reg. no. 01-2119987993-12		

acetone

CAS 67-64-1	0 < x < 0,5	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC 200-662-2		
INDEX 606-001-00-8		
Reg. no. 01-2119471330-49-0016		

xylene (mixture of isomers)

CAS 1330-20-7	0 < x < 0,5	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Classification note according to Annex VI to the CLP Regulation: C
EC 215-535-7		
INDEX 601-022-00-9		
Reg. no. 01-2119488216-32		

2-methoxy-1-methylethyl acetate

CAS 108-65-6	0 < x < 0,5	Flam. Liq. 3 H226
EC 203-603-9		
INDEX 607-195-00-7		

ethylbenzene

CAS 100-41-4	0 < x < 0,5	Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Aquatic Chronic 3 H412
EC 202-849-4		
INDEX 601-023-00-4		
Reg. no. 01-2119489370		

ethyl methyl ketone oxime

CAS 96-29-7	0 < x < 0,5	Carc. 2 H351, Acute Tox. 4 H312, Eye Dam. 1 H318, Skin Sens. 1 H317
EC 202-496-6		
INDEX 616-014-00-0		
Reg. no. 01-2119539477-28		

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

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 not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. 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. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

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

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.
Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. 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. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BGR	България	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г (4 Септември 2018г)
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition,published 2018)
GRC	Ελλάδα	ΕΦΗΜΕΡΙ Α ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 152 - 21 Αυγούστου 2018
ITA	Italia	DIRETTIVA (UE) 2017/164 DELLA COMMISSIONE del 31 gennaio 2017
ROU	România	HOTĂRÂRE nr. 584 din 2 august 2018 pentru modificarea Hotărârii Guvernului nr. 1.218/2006 privind stabilirea cerin elor minime de securitate i sănătate în muncă pentru asigurarea protec iei lucrătorilor împotriva riscurilor legate de prezen a agen ilor chimici
EU	OEL EU	Directive (EU) 2017/2398; 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 2019

Toluene

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	192	50	384	100	SKIN

WEL	GBR	191	50	384	100	SKIN
TLV	GRC	192	50	384	100	
VLEP	ITA	192	50			SKIN
TLV	ROU	192	50	384	100	SKIN
OEL	EU	192	50	384	100	SKIN
TLV-ACGIH		75,4	20			

1-methoxy-2-propanol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
WEL	GBR		100		150	
TLV	GRC	360	100	1080	300	
OEL	EU	375	100	568	150	
TLV-ACGIH			100		150	

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	41,6	mg/kg
Normal value for marine water sediment	4,17	mg/kg
Normal value for water, intermittent release	100	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	3,3 mg/kg				
Inhalation			VND	43,9 mg/m3	553,5 mg/m3	VND	VND	369 mg/m3
Skin			VND	18,1 mg/kg			VND	50,6 mg/kg

4-morpholinecarbaldehyde

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,5	mg/l
Normal value in marine water	0,05	mg/l
Normal value for fresh water sediment	1,85	mg/kg
Normal value for marine water sediment	0,0764	mg/kg
Normal value for water, intermittent release	5	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			VND	29 mg/m3			VND	98 mg/m3
Skin			VND	8 mg/kg/d			0,293 mg/cm2	VND

acetone

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations

		mg/m3	ppm	mg/m3	ppm			
TLV	BGR	600		1400				
WEL	GBR	1210	500	3620	1500			
TLV	GRC	1780		3560				
VLEP	ITA	1210	500					
OEL	EU	1210	500					
TLV-ACGIH		1187	500	1781	750			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	10,6	mg/l
Normal value in marine water	1,06	mg/l
Normal value of STP microorganisms	29,5	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	62 mg/kg/d				
Inhalation			VND	200 mg/m3	VND	2420 mg/m3	VND	1210 mg/m3
Skin			VND	62 mg/kg/d			VND	186 mg/kg/d

xylene (mixture of isomers)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
WEL	GBR		50		100	
TLV	GRC	435	100	650	150	
OEL	EU	221	50	442	100	
TLV-ACGIH			100		150	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,327	mg/l
Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg
Normal value for marine water sediment	12,46	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,6 mg/kg/d				
Inhalation	174 mg/m3	174 mg/m3	VND	14,8 mg/m3	289 mg/m3	289 mg/m3	VND	77 mg/m3
Skin			VND	108 mg/kg/d			VND	180 mg/kg/d

ethylbenzene

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
WEL	GBR		100		125	
TLV	GRC	435	100	545	125	

OEL	EU	442	100	884	200	
TLV-ACGIH			100		125	

2-methoxy-1-methylethyl acetate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	275	50	550	100	SKIN
WEL	GBR	274	50	548	100	SKIN
TLV	GRC	275	50	550	100	
VLEP	ITA	275	50	550	100	SKIN
TLV	ROU	275	50	550	100	SKIN
OEL	EU	275	50	550	100	SKIN

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,635	mg/l
Normal value in marine water	0,0635	ml/l
Normal value for fresh water sediment	3,29	mg/kg
Normal value for marine water sediment	0,329	mg/kg
Normal value for water, intermittent release	6,35	mg/l
Normal value of STP microorganisms	100	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,67 mg/kg				
Inhalation			VND	33 mg/m3	553,5 mg/m3	VND	VND	275 mg/m3
Skin			VND	54,8 mg/kg			VND	153,5 mg/kg

ethyl methyl ketone oxime

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	1	0,28			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,256	mg/l
Normal value of STP microorganisms	177	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			2 mg/m3	2,7 mg/m3			3,33 mg/m3	9 mg/m3
Skin	VND	1,5 mg/kg/d	VND	0,78 mg/kg/d	VND	2,5 mg/kg/d	VND	1,3 mg/kg/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.

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
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

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, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
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.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

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

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	yellow
Odour	characteristic
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	> 35 °C
Boiling range	Not available
Flash point	< 23 °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	1,44-1,48 g/cm3
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	70-80 KU
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Total solids (250°C / 482°F)	39,46 %
VOC (Directive 2010/75/EC) :	9,31 %
VOC (volatile carbon) :	8,41 %

SECTION 10. Stability and reactivity

10.1. Reactivity

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

Toluene
Avoid exposure to: light.

1-methoxy-2-propanol
1-METHOXY-2-PROPANOL: absorbs and disolves in water and in organic solvents, dissolves various plastic materials; it is stable but with air it may slowly form explosive peroxides.

acetone
ACETONE: decomposes under the effect of heat.

2-methoxy-1-methylethyl acetate
Stable in normal conditions of use and storage.

With the air it may slowly develop peroxides that explode with an increase in temperature.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

Toluene

Risk of explosion on contact with: fuming sulphuric acid,nitric acid,silver perchlorate,nitrogen dioxide,non-metal halogenates,acetic acid,organic nitrocompounds.May form explosive mixtures with: air.May react dangerously with: strong oxidising agents,strong acids,sulphur.

1-methoxy-2-propanol
1-METHOXY-2-PROPANOL: can react dangerously with strong oxidising agents and strong acids.

acetone
ACETONE: risk of explosion on contact with: bromine trifluoride, difluoro dioxide, hydrogen peroxide, nitrosyl chloride, 2-methyl-1,3 butadiene, nitromethane, nitrosyl perchlorate. Can react dangerously with: potassium tert-butoxide, alkaline hydroxides, bromine, bromoform, isoprene, sodium, sulphur dioxide, chromium trioxide, chromyl chloride, nitric acid, chloroform, peroxymonosulphuric acid, phosphoryl chloride, chromosulphuric acid, fluorine, strong oxidising agents. Develops flammable gases with nitrosyl perchlorate.

xylene (mixture of isomers)
XYLENE (MIXTURE OF ISOMERS): stable, but may develop violent reactions in the presence of strong oxidising agents such as sulphuric and nitric acids and perchlorates. May form explosive mixtures with the air.

ethylbenzene
ETHYLBENZENE: reacts violently with strong oxidising agents and attacks various types of plastics. Can form explosive mixtures with the air.

2-methoxy-1-methylethyl acetate
May react violently with: oxidising substances,strong acids,alkaline metals.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

1-methoxy-2-propanol
1-METHOXY-2-PROPANOL: avoid exposure to the air.

acetone
ACETONE: avoid exposure to sources of heat and naked flames.

10.5. Incompatible materials

1-methoxy-2-propanol
1-METHOXY-2-PROPANOL: oxidising agents, strong acids and alkaline metals.

acetone
ACETONE: acid and oxidising substances.

2-methoxy-1-methylethyl acetate
Incompatible with: oxidising substances,strong acids,alkaline metals.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

acetone
ACETONE: ketenes and other irritating compounds.

ethylbenzene
ETHYLBENZENE: methane, styrene, hydrogen, ethane.

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 effects

1-methoxy-2-propanol
1-METHOXY-2-PROPANOL: the main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic effects have been reported in man.

xylene (mixture of isomers)
XYLENE (MIXTURE OF ISOMERS): has a toxic effect on the CNS (encephalopathies). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.

ethylbenzene
ETHYLBENZENE: like the benzene homologues, may exert an effect on the CNS with depression, narcosis, often preceded by dizziness and accompanied by headache. It is irritating to the skin, conjunctivae and respiratory apparatus.

Metabolism, toxicokinetics, mechanism of action and other information

2-methoxy-1-methylethyl acetate
The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

Toluene
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.

2-methoxy-1-methylethyl acetate
WORKERS: inhalation; contact with the skin.

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

Toluene
Toxic effect on the central and peripheral nervous system with encephalopathy and polyneuritis; irritating for the skin, conjunctiva, cornea and respiratory apparatus.

2-methoxy-1-methylethyl acetate
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 (INCR, 2010).

Interactive effects

Toluene
Certain drugs and other industrial products can interfere with the metabolism of the toluene.

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
> 20 mg/l
LD50 (Oral) of the mixture:

Not classified (no significant component)
LD50 (Dermal) of the mixture:
Not classified (no significant component)

ethyl methyl ketone oxime
LD50 (Oral) 2100 mg/kg Rat

LD50 (Dermal) 1100 mg/kg Rat

acetone
LD50 (Oral) 5800 mg/kg Rat

LD50 (Dermal) 500 mg/kg Rabbit

ethylbenzene
LD50 (Oral) 3500 mg/kg Rat

LD50 (Dermal) > 5000 mg/kg Rabbit

1-methoxy-2-propanol
LD50 (Oral) > 2000 mg/kg Rat

LD50 (Dermal) > 5000 mg/kg Rabbit

LC50 (Inhalation) 54,6 mg/l/4h Rat

xylene (mixture of isomers)
LD50 (Oral) 3523 mg/kg Rat

LD50 (Dermal) > 1700 mg/kg Rabbit

LC50 (Inhalation) 5000 ppm/4h Rat

2-methoxy-1-methylethyl acetate
LD50 (Oral) 8530 mg/kg Rat

LD50 (Dermal) > 5000 mg/kg Rat

LC50 (Inhalation) > 25,8 mg/l Rat

Toluene
LD50 (Oral) 5580 mg/kg Rat

LD50 (Dermal) 12124 mg/kg Rabbit

LC50 (Inhalation) 28,1 mg/l/4h Rat

4-morpholinecarbaldehyde
LD50 (Oral) > 7360 mg/kg Rat

LD50 (Dermal) > 18400 mg/kg Rabbit

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.Contains:4-morpholinecarbaldehyde

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Toluene
Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 1999).
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

REPRODUCTIVE TOXICITY

Suspected of damaging the unborn child

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE
Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: 80-90 KU

SECTION 12. Ecological information

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil and waterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

12.1. Toxicity

ethyl methyl ketone oxime

LC50 - for Fish	843 mg/l/96h
EC50 - for Crustacea	750 mg/l/48h
EC50 - for Algae / Aquatic Plants	83 mg/l/72h

acetone

LC50 - for Fish	> 100 mg/l/96h
EC50 - for Algae / Aquatic Plants	> 5600 mg/l/72h
Chronic NOEC for Fish	0,1 mg/l

1-methoxy-2-propanol

LC50 - for Fish	> 6,8 mg/l/96h

xylene (mixture of isomers)

LC50 - for Fish	> 100 mg/l/96h Microorganisms

4-morpholinecarbaldehyde

LC50 - for Fish	> 500 mg/l/96h Leuciscus idus (Golden orfe
EC50 - for Crustacea	> 500 mg/l/48h Daphnia magna (Water flea
EC50 - for Algae / Aquatic Plants	23880 mg/l/72h Scenedesmus subspicatus

12.2. Persistence and degradability

ethyl methyl ketone oxime

Degradability: information not available

acetone

Rapidly degradable

xylene (mixture of isomers)

Rapidly degradable

2-methoxy-1-methylethyl acetate

Solubility in water	> 10000 mg/l

Rapidly degradable

Toluene

Solubility in water	100 - 1000 mg/l

Rapidly degradable

4-morpholinecarbaldehyde

Rapidly degradable

12.3. Bioaccumulative potential

ethyl methyl ketone oxime

Partition coefficient: n-octanol/water	0,59
BCF	5

acetone

Partition coefficient: n-octanol/water	-0,24
BCF	3

2-methoxy-1-methylethyl acetate

Partition coefficient: n-octanol/water	1,2

Toluene

Partition coefficient: n-octanol/water	2,73
BCF	90

12.4. Mobility in soil

Information not available

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:	1263

14.2. UN proper shipping name

ADR / RID:	PAINT or PAINT RELATED MATERIAL
IMDG:	PAINT or PAINT RELATED MATERIAL

IATA: PAINT or PAINT RELATED MATERIAL

14.3. Transport hazard class(es)

ADR / RID:	Class: 3	Label: 3
IMDG:	Class: 3	Label: 3
IATA:	Class: 3	Label: 3

14.4. Packing group

ADR / RID, IMDG, IATA:	II

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special Provision: 640D		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 364
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 353
	Special Instructions:	A3, A72, A192	

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: P5c

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

Product

Point 3 - 40

Contained substance

Point 48 TOLUENE

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.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

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

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Carc. 2	Carcinogenicity, category 2
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Eye Dam. 1	Serious eye damage, 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
Skin Sens. 1	Skin sensitization, category 1

Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful 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
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
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9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
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16. Regulation (EU) 2019/521 (XII Atp. CLP)
- 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.
Product`s classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.
The data for evaluation of chemical-physical properties are reported in section 9.