Safety data sheet

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

1.1. Product identifier

Product name **DIRECT-1**

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

Intended use **Solvent-based paint ideal for painting direct on metallic surfaces.**

1.3. Details of the supplier of the safety data sheet

Name **VITEX - HERMES YANNIDIS BROS S.A.**
Full address **IMEROS TOPOS**
District and Country **19300 ASPROPYRGOS (ATTIKI)**
GREECE
Tel. (0030) 2105589400
Fax (0030) 2105597859
e-mail address of the competent person responsible for the Safety Data Sheet **vitexlab@vitex.gr**

Product distribution by **YANNIDIS BROS S.A.**

1.4. Emergency telephone number

For urgent inquiries refer to **(0030) 2105589400**
(0030) 2107793777

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.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols: Xn

R phrases: 10-20/21-38-52/53-66

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

2.2. Label elements.

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

Hazard pictograms:

SECTION 2. Hazards identification. ... / >>

Signal words: Danger

Hazard statements:

H225	Highly flammable liquid and vapour.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains: COBALT BIS (2-ETHYLHEXANOATE) ETHYL METHYL KETOXIME PHTHALIC ANHYDRIDE
	May produce an allergic reaction.

Precautionary statements:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust / fume / gas / mist / vapours / spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P405	Store locked up.
P501	Dispose of contents / container to . . .

Contains: XYLENE (MIXTURE OF ISOMERS)

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.	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
XYLENE (MIXTURE OF ISOMERS)			
CAS. 1330-20-7 *EC. 215-535-7* *INDEX. 601-022-00-9* *Reg. no. 01-2119488216-XXXX*	10 - 20	R10, Xn R20/21, Xi R38, Note C	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, Note C
HYDROCARBONS, C9, AROMATICS			
CAS. 64742-95-6 *EC. 918-668-5* *INDEX. 649-356-00-4* *Reg. no. 01-2119455851-35-XXXX*	10 - 18	R10, R66, R67, Xn R65, Xi R37, N R51/53, Note P	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411, EUH066, Note P
ETHYLBENZENE			
CAS. 100-41-4 *EC. 202-849-4* *INDEX. 601-023-00-4* *Reg. no. 01-2119489370-XXXX*	3 - 6	F R11, Xn R20	Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373
HYDROCARBONS, C10-C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS			
CAS. 64742-48-9 *EC. 918-481-9* *INDEX. 649-327-00-6* *Reg. no. 01-2119457273-XXXX*	3 - 6	R66, Xn R65, Note P	Asp. Tox. 1 H304, EUH066, Note P
1-METHOXY-2-PROPANOL			
CAS. 107-98-2 *EC. 203-539-1* *INDEX. 603-064-00-3* *Reg. no. 01-2119457435-35-XXXX*	2 - 4	R10, R67	Flam. Liq. 3 H226, STOT SE 3 H336

SECTION 3. Composition/information on ingredients. ... / >>

CALCIUM BIS (2-ETHYLHEXANOATE)

CAS.	*136-51-6*	1 - 2,5	Repr. Cat. 3 R63, Xi R41	Repr. 2 H361d, Eye Dam. 1 H318
EC.	*205-249-0*			
INDEX.				
Reg. no.	*01-2119978297-19-XXXX*			

STYRENE

CAS.	*100-42-5*	1 - 1,6	Repr. Cat. 3 R63, R10, Xn R20, Xn R48/20, Xi R36/38, Note D	Flam. Liq. 3 H226, Repr. 2 H361d, Acute Tox. 4 H332, STOT RE 1 H372, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Note D
EC.	*202-851-5*			
INDEX.	*601-026-00-0*			

PHTHALIC ANHYDRIDE

CAS.	*85-44-9*	0,2 - 0,4	Xn R22, Xn R42/43, Xi R37/38, Xi R41	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317
EC.	*201-607-5*			
INDEX.				
Reg. no.	*01-2119457017-41*			

ETHYL METHYL KETOXIME

CAS.	*96-29-7*	0,2 - 0,4	Carc. Cat. 3 R40, Xn R21, Xi R41, Xi R43	Carc. 2 H351, Acute Tox. 4 H312, Eye Dam. 1 H318, Skin Sens. 1 H317
EC.	*202-496-6*			
INDEX.	*616-014-00-0*			

COBALT BIS (2-ETHYLHEXANOATE)

CAS.	*136-52-7*	0,1 - 0,3	Xn R21/22, Xi R38, Xi R43, N R50/53	Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 1 H410
EC.	*205-250-6*			
INDEX.				

Note: Upper limit is not included into the range.
The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

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 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.
INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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.

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. Check incompatibility for container material in section 7. 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 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
CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
GRB	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ -ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012
HRV	Hrvatska	NN13/09 - Ministarstvo gospodarstva, rada i poduzetništva
HUN	Magyarország	50/2011. (XII. 22.) NGM rendelet a munkahelyek kémiai biztonságáról
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
	TLV-ACGIH	ACGIH 2014

SECTION 8. Exposure controls/personal protection. ... / >>

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	221		442		SKIN.
TLV	CZE	200		400		SKIN.
WEL	GRB	220	50	441	100	
TLV	GRC	435	100	650	150	SKIN.
GVI	HRV	221	50	442	100	SKIN.
AK	HUN	221		442		SKIN.
OEL	EU	221	50	442	100	SKIN.
TLV-ACGIH		434	100	651	150	

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

HYDROCARBONS, C9, AROMATICS

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	100				

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	11 mg/kg/d				
Inhalation.			VND	150 mg/m3			VND	32 mg/m3
Skin.			VND	11 mg/kg/d			VND	25 mg/kg/d

ETHYLBENZENE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	435		545		SKIN.
TLV	CZE	200		500		SKIN.
WEL	GRB	441	100	552	125	SKIN.
TLV	GRC	435	100	545	125	
GVI	HRV	442	100	884	200	SKIN.
AK	HUN	442		884		
OEL	EU	442	100	884	200	SKIN.
TLV-ACGIH		20	100		87	

HYDROCARBONS, C10-C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	1200				

SECTION 8. Exposure controls/personal protection. ... / >>

1-METHOXY-2-PROPANOL

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	375		568		SKIN.
TLV	CZE	270		550		SKIN.
WEL	GRB	375	100	560	150	SKIN.
TLV	GRC	360	100	1080	300	SKIN.
TLV	GRC	360	100	1080	300	
GVI	HRV	375	100	568	150	SKIN.
AK	HUN	375		568		
OEL	EU	375	100	568	150	SKIN.
TLV-ACGIH		369	100	553	150	

Predicted no-effect concentration - PNEC.

Normal value in fresh water	10	mg/l
Normal value for fresh water sediment	41,6	mg/kg
Normal value for marine water sediment	4,17	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	2,47	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	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

CALCIUM BIS (2-ETHYLHEXANOATE)

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	GRC	5000			

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	2,83 mg/m3				
Inhalation.			VND	9,86 mg/m3			VND	39,98 mg/m3
Skin.			VND	2,83 mg/m3			VND	5,67 mg/kg/d

STYRENE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	85		215		
TLV	CZE	1000		400		SKIN.
WEL	GRB	430	100	1080	250	
TLV	GRC	425	100	1050	250	
GVI	HRV	430	100	1080	250	
AK	HUN	50		50		
TLV-ACGIH		85	20	170	40	

PHTHALIC ANHYDRIDE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	GRC		1	6	

SECTION 8. Exposure controls/personal protection. ... / >>

COBALT BIS (2-ETHYLHEXANOATE)

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	GRC	5			

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. Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station.
Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).
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 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.
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.
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		viscous liquid
Colour		as showed in color folder
Odour		characteristic of solvent
Odour threshold.		Not available.
pH.		Not available.
Melting point / freezing point.		Not available.
Initial boiling point.	>	35 °C.
Boiling range.		Not available.
Flash point.		21 °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.		0,96-1,20 g/ml
Solubility		insoluble in water
Partition coefficient: n-octanol/water		Not available.
Auto-ignition temperature.		Not available.
Decomposition temperature.		Not available.
Viscosity		80-90 KU
Explosive properties		Not available.
Oxidising properties		Not available.

SECTION 9. Physical and chemical properties. ... / >>

9.2. Other information.
Information not available.

SECTION 10. Stability and reactivity.

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

2-BUTANONE OXIME: decomposes under the effect of heat.
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.
STYRENE: polymerises readily above 65°C/149°F with risk of fire and explosion; added with an inhibitor that requires a small amount of dissolved oxygen at temperatures < 25°C/77°F.

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.

2-BUTANONE OXIME: thermal decomposition can have an explosive course. It reacts violently with strong oxidising agents and acids. Above the flash point (69°C), explosive mixtures can form with air.
1-METHOXY-2-PROPANOL: can react dangerously with strong oxidising agents and strong acids.
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: reacts violently with strong oxidising agents and attacks various types of plastics. Can form explosive mixtures with the air.
STYRENE: can react dangerously with peroxides and strong acids. May polymerise on contact with: aluminium trichloride, azobisisobutyronitrile, dibenzoyl peroxide, sodium. Risk of explosion on contact with: butyllithium, chlorosulphuric acid, diterbutyl peroxide, oxidising agents, oxygen.

10.4. Conditions to avoid.
Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

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

10.5. Incompatible materials.
2-BUTANONE OXIME: oxidising substances and strong acids.
1-METHOXY-2-PROPANOL: oxidising agents, strong acids and alkaline metals.
STYRENE: avoid oxidising agents, copper and strong acids; it dissolves various types of plastic materials, but not polychloroprene and polyvinyl alcohol.

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.

2-BUTANONE OXIME: nitrogen oxides, carbon oxides.
ETHYLBENZENE: methane, styrene, hydrogen, ethane.

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.
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.

This product may cause functional disorders or morphological mutations after repeated or prolonged exposure and/or may accumulate inside the human body and is thus graded as dangerous.
Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.
Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.
Acute effects: inhalation of this product may irritate the lower and upper respiratory tract and cause cough and respiratory disorders; at higher concentrations it can also cause pulmonary edema. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.
This product contains sensitizing substance/s and may cause allergic reactions.

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): has a toxic effect on the CNS (encephalopathies). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.

SECTION 11. Toxicological information. ... / >>

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.
STYRENE: Acute toxicity following inhalation at 1000 ppm involves the central nervous system with headache and dizziness, lack of coordination; irritation of the mucous membranes of the eyes and respiratory tract occurs at 500 ppm concentrations. Chronic exposure produces depression of the Central and peripheral nervous system with loss of memory, headache and somnolence starting at 20 ppm; digestive disorders with nausea and loss of appetite; irritation of the respiratory tract with chronic bronchitis and dermatosis.

ETHYL METHYL KETOXIME

LD50 (Oral).	2400 mg/kg Rat
LD50 (Dermal).	1000 mg/kg Rabbit
LC50 (Inhalation).	20 mg/l/4h Rat

1-METHOXY-2-PROPANOL

LD50 (Oral).	> 2000 mg/kg Rat
LD50 (Dermal).	> 5000 mg/kg Rabbit
LC50 (Inhalation).	> 20 mg/l/4h Rat

XYLENE (MIXTURE OF ISOMERS)

LD50 (Oral).	> 2000 mg/kg Rat
LC50 (Inhalation).	> 10 mg/l/4h Rat

HYDROCARBONS, C9, AROMATICS

LD50 (Oral).	> 2000 mg/kg Rat
LD50 (Dermal).	> 2000 mg/kg Rabbit
LC50 (Inhalation).	> 20 mg/l/4h

HYDROCARBONS, C10-C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

LD50 (Oral).	> 5000 mg/kg
LD50 (Dermal).	> 5000 mg/kg
LC50 (Inhalation).	> 20 mg/l/4h Rat

STYRENE

LD50 (Oral).	5000 mg/kg Rat
LC50 (Inhalation).	11,8 mg/l/4h Rat

SECTION 12. Ecological information.

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

12.1. Toxicity.

1-METHOXY-2-PROPANOL

LC50 - for Fish.	> 100 mg/l/96h
EC50 - for Crustacea.	> 100 mg/l/48h
EC50 - for Algae / Aquatic Plants.	> 100 mg/l/72h

COBALT BIS (2-ETHYLHEXANOATE)

LC50 - for Fish.	> 10 mg/l/96h
EC50 - for Crustacea.	> 10 mg/l/48h
EC50 - for Algae / Aquatic Plants.	> 1 mg/l/72h

XYLENE (MIXTURE OF ISOMERS)

LC50 - for Fish.	> 1 mg/l/96h
EC50 - for Crustacea.	> 1 mg/l/48h
EC50 - for Algae / Aquatic Plants.	> 1 mg/l/72h
Chronic NOEC for Fish.	> 1 mg/l based on test data
Chronic NOEC for Crustacea.	> 0,1 mg/l

HYDROCARBONS, C9, AROMATICS

LC50 - for Fish.	> 1 mg/l/96h
EC50 - for Crustacea.	> 1 mg/l/48h
EC50 - for Algae / Aquatic Plants.	> 1 mg/l/72h
Chronic NOEC for Fish.	> 1 mg/l based on modeled data
Chronic NOEC for Crustacea.	> 1 mg/l based on modeled data

HYDROCARBONS, C10-C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

LC50 - for Fish.	> 100 mg/l/96h
EC50 - for Crustacea.	> 100 mg/l/48h
EC50 - for Algae / Aquatic Plants.	> 100 mg/l/72h

SECTION 12. Ecological information. ... / >>

Chronic NOEC for Fish.	> 0,1 mg/l based on modeled data
Chronic NOEC for Crustacea.	> 0,1 mg/l based on modeled data

CALCIUM BIS (2-ETHYLHEXANOATE)

LC50 - for Fish.	180 mg/l/96h
EC50 - for Crustacea.	85,4 mg/l/48h
EC50 - for Algae / Aquatic Plants.	49,3 mg/l/72h

12.2. Persistence and degradability.

1-METHOXY-2-PROPANOL
Rapidly biodegradable.

XYLENE (MIXTURE OF ISOMERS)
Rapidly biodegradable.

HYDROCARBONS, C9, AROMATICS
Rapidly biodegradable.

HYDROCARBONS, C10-C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS
Rapidly biodegradable.

CALCIUM BIS (2-ETHYLHEXANOATE)
Rapidly biodegradable.

STYRENE

Solubility in water.	320 mg/l

Rapidly biodegradable.

12.3. Bioaccumulative potential.

1-METHOXY-2-PROPANOL

Partition coefficient: n-octanol/water.	> 0,37

XYLENE (MIXTURE OF ISOMERS)

Partition coefficient: n-octanol/water.	3,12

HYDROCARBONS, C9, AROMATICS

Partition coefficient: n-octanol/water.	3,7

STYRENE

Partition coefficient: n-octanol/water.	2,96
BCF.	74

12.4. Mobility in soil.

STYRENE

Partition coefficient: soil/water.	2,55

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:
IATA:

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 Special Provision: -	Limited Quantities: -	Tunnel restriction code: -
IMDG:	EMS: -	Limited Quantities: -	
IATA:	Cargo: Pass.: Special Instructions:	Maximum quantity: - Maximum quantity: - -	Packaging instructions: - Packaging instructions: -

14.7. Transport in bulk according to Annex II of MARPOL73/78 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. 6

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.
Product.
Point. 3 - 40

Substances in Candidate List (Art. 59 REACH).
None.
Substances subject to authorisarion (Annex XIV REACH).
None.
Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None.

Substances subject to the Rotterdam Convention:
None.

SECTION 15. Regulatory information. ... / >>

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.

VOC (Directive 2004/42/EC) :
One-pack performance coatings.
VOC given in g/litre of product in a ready-to-use condition :

Limit value:	500,00 (2010)
VOC of product :	499,00

15.2. Chemical safety assessment.

No chemical safety assessment has been processed for the mixture and the substances it contains.

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
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
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
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
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.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R10	FLAMMABLE.
R11	HIGHLY FLAMMABLE.
R20	HARMFUL BY INHALATION.
R20/21	HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.
R21	HARMFUL IN CONTACT WITH SKIN.
R21/22	HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED.
R22	HARMFUL IF SWALLOWED.
R36/38	IRRITATING TO EYES AND SKIN.
R37	IRRITATING TO RESPIRATORY SYSTEM.
R37/38	IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
R38	IRRITATING TO SKIN.
Carc. Cat. 3	Carcinogenicity, category 3.

SECTION 16. Other information. ... / >>

R40	LIMITED EVIDENCE OF A CARCINOGENIC EFFECT.
R41	RISK OF SERIOUS DAMAGE TO EYES.
R42/43	MAY CAUSE SENSITIZATION BY INHALATION AND SKIN CONTACT.
R43	MAY CAUSE SENSITISATION BY SKIN CONTACT.
R48/20	HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE THROUGH INHALATION.
R50/53	VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R51/53	TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
R52/53	HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.
Repr. Cat. 3	Reproductive toxicity, development, category 3.
R63	POSSIBLE RISK OF HARM TO THE UNBORN CHILD.
R65	HARMFUL: MAY CAUSE LUNG DAMAGE IF SWALLOWED.
R66	REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING.
R67	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

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. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EU) 1907/2006 (REACH) of the European Parliament
4. Regulation (EU) 1272/2008 (CLP) of the European Parliament
5. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EU) 453/2010 of the European Parliament
7. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
8. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
9. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
10. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
11. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website

SECTION 16. Other information. ... / >>

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.

Changes to previous review:
The following sections were modified:
01 / 02 / 07 / 09 / 12 / 14.