

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:

PNTHSxx3226AB

Product name

PAINT MARKER INKS HS 3226 SERIES

UFI :

AX50-V05D-K00Y-93K4

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

Intended use

INKS FOR VALVE MARKERS - COLORS: WHITE - BLACK - BLUE - GREEN - RED - BROWN - YELLOW - VIOLET - ORANGE - LIGHT BLUE

Identified Uses	Industrial	Professional	Consumer
Inks	✓	✓	✓
Uses Advised Against			
Do not use for purposes other than those specified			

1.3. Details of the supplier of the safety data sheet

Name

Full address

District and Country

e-mail address of the competent person responsible for the Safety Data Sheet

1.4. Emergency telephone number

For urgent inquiries refer to

CAVp Osp. Pediatrico Bambino Gesù - Piazza Sant’Onofrio, 4 CAP 00165 Roma  
Tel. 06-68593726  
Az. Osp. Univ. Foggia - V.le Luigi Pinto, 1 CAP 71122 Foggia Tel. 0881-732326  
Az. Osp. A. Cardarelli - Via A. Cardarelli, 9 CAP 80131 Napoli Tel. 081-7472870  
CAV Policlinico Umberto I - V.le del Policlinico, 155 CAP 00161 Roma  
Tel. 06-49978000  
CAV Policlinico A. Gemelli - Largo Agostino Gemelli, 8 CAP 00168 Roma  
Tel. 06-3054343  
Az. Osp. Careggi - U.O. Tossicologia Medica Largo Brambilla, 3 CAP 50134 Firenze  
Tel. 055-7947819  
CAV Centro Nazionale di Informazione Tossicologica - Via Salvatore Maugeri, 10  
CAP 27100 Pavia Tel. 0382-24444  
Osp. Niguarda Ca" Granda - Piazza Ospedale Maggiore, 3 CAP 20162 Milano  
Tel. 02-66101029  
Azienda Ospedaliera Papa Giovanni XXII - Piazza OMS, 1 CAP 24127 Bergamo  
Tel. 800-883300  
  
Servizi operativi 24h/24h

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

Aspiration hazard, category 1

H225

H304

Highly flammable liquid and vapour.

May be fatal if swallowed and enters airways.

SECTION 2. Hazards identification

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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.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

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.
H304	May be fatal if swallowed and enters airways.
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.
H336	May cause drowsiness or dizziness.

Precautionary statements:	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P331	Do NOT induce vomiting.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P301+P310	IF SWALLOWED: immediately call a POISON CENTER / a doctor / a center suitable for emergency medical advice.
P370+P378	In case of fire: use extinguishing media appropriate to extinguish.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.

Contains: REACTION MASS OF ETHYLBENZENE AND XYLENE  
2-METHOXY-1-METHYLETHYL ACETATE  
METHYL ETHYL KETONE  
N-BUTYL ACETATE

2.3. Other hazards

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
REACTION MASS OF ETHYLBENZENE AND XYLENE		
CAS	22 ≤ x < 25	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
EC INDEX	905-588-0	
Reg. no.	01-2119488216-32-xxxx	

SECTION 3. Composition/information on ingredients

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2-METHOXY-1-METHYLETHYL ACETATE			
CAS	108-65-6	16 ≤ x < 19	Flam. Liq. 3 H226, STOT SE 3 H336
EC	203-603-9		
INDEX	607-195-00-7		
Reg. no.	01-2119475791-29-xxxx		
N-BUTYL ACETATE			
CAS	123-86-4	7 ≤ x < 10	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC	204-658-1		
INDEX	607-025-00-1		
Reg. no.	01-2119485493-29-xxxx		
METHYL ETHYL KETONE			
CAS	78-93-3	7 ≤ x < 10	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
EC	201-159-0		
INDEX	606-002-00-3		
Reg. no.	01-2119457290-43-xxxx		
CYCLOHEXANAMINE, N,N-DIMETHYL-, COMPD. WITH ALPHA-ISOTRIDECYL-OMEGA-HYDROXPOLY(OXY-1,2-ETHANEDIYL) PHOSPHATE			
CAS	164383-18-0	1 ≤ x < 2,5	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Aquatic Chronic 2 H411
EC			
INDEX			
PHOSPHORIC ACID			
CAS	7664-38-2	0 ≤ x < 0,5	Met. Corr. 1 H290, Skin Corr. 1B H314, Eye Dam. 1 H318, Classification note/notes according to Annex VI to the CLP Regulation: B
EC	231-633-2		
INDEX	015-011-00-6		
Reg. no.	01-2119485924-24-xxxx		
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, Aquatic Chronic 3 H412, Classification note/notes according to Annex VI to the CLP Regulation: C
EC	215-535-7		
INDEX	601-022-00-9		
Reg. no.	01-2119488216-32-xxxx		
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

		Revision nr:9 Dated 05/02/2021 Printed on 17/03/2021 Page n. 4 / 17 Replaced revision:8 (Dated 26/01/2021)	EN
	PNTHSxx3226AB - PAINT MARKER INKS HS 3226 SERIES		

SECTION 5. Firefighting measures ... / >>

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIREExcess 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. 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 2018r)
CZE	Česká Republika	Nařízení vlády č. 246/2018 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	TRGS 900 - Seite 1 von 69 (Fassung 29.03.2019)- Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Regeling van de Staatssecretaris van Sociale Zaken en Werkgelegenheid van 13 juli 2018, 2018-0000118517 tot wijziging van de Arbeidsomstandighedenregeling in verband met de implementatie van Richtlijn 2017/164 in Bijlage XIII
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r
SWE	Sverige	Hygieniska gränsvärden, AFS 2018:1
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition, published 2018)
EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; 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 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2020

REACTION MASS OF ETHYLBENZENE AND XYLENE								
Threshold Limit Value								
Type	Country	TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm			
TLV-ACGIH		434	100	651	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	
Normal value for water, intermittent release						0,327	mg/l	
Normal value of STP microorganisms						6,58	mg/l	
Normal value for the terrestrial compartment						2,31	mg/kg	
Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				Effects on workers			
Route of exposure	Acute	Acute		Chronic	Chronic	Acute local	Acute	Chronic
	local	systemic		local	systemic		systemic	local
Oral		NPI		VND	12,5 mg/kg bw/d			
Inhalation	260 mg/kg	260 mg/kg		65,3 mg/kg	65,3 mg/kg	442 mg/m3	442 mg/m3	221 mg/m3
Skin				NPI	125 mg/kg bw/d	VND	VND	212 mg/kg bw/d

SECTION 8. Exposure controls/personal protection

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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		550		SKIN		
TLV	CZE	270		550		SKIN		
AGW	DEU	270	50	270	50			
MAK	DEU	270	50	270	50			
VLA	ESP	275	50	550	100	SKIN		
VLEP	FRA	275	50	550	100	SKIN		
VLEP	ITA	275	50	550	100	SKIN		
TGG	NLD	550						
NDS/NDSCh	POL	260		520				
NGV/KGV	SWE	275	50	550	100	SKIN		
WEL	GBR	274	50	548	100			
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	mg/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	
Normal value for the terrestrial compartment						0,29	mg/kg	
Normal value for the atmosphere						NPI		
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		500 mg/kg bw/d	VND	36 mg/kg bw/d				
Inhalation			33 mg/m3	33 mg/m3	550 mg/m3	NPI	NPI	275 mg/m3
Skin			NPI	320 mg/kg bw/d			NPI	796 mg/kg bw/d

SECTION 8. Exposure controls/personal protection

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N-BUTYL ACETATE								
Threshold Limit Value								
Type	Country	TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm			
TLV	CZE	950	196,55	1200	284,4			
MAK	DEU	300	62	600	124			
VLA	ESP	724	150	965	200			
VLEP	FRA	710	150	940	200			
TGG	NLD	150						
NDS/NDSch	POL	240		720				
NGV/KGV	SWE	500	100	700	150			
WEL	GBR	724	150	966	200			
OEL	EU	241	50	723	150			
TLV-ACGIH		713	150					
Predicted no-effect concentration - PNEC								
Normal value in fresh water						0,18	mg/l	
Normal value in marine water						0,018	mg/l	
Normal value for fresh water sediment						0,981	mg/kg	
Normal value for marine water sediment						0,0981	mg/kg	
Normal value for water, intermittent release						0,36	mg/l	
Normal value of STP microorganisms						35,6	mg/l	
Normal value for the terrestrial compartment						0,0903	mg/kg	
Normal value for the atmosphere						NPI		
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	2 mg/kg bw/d	VND	2 mg/kg bw/d				
Inhalation	300 mg/m3	300 mg/m3	35,7 mg/m3	35,7 mg/m3	600 mg/m3	600 mg/m3	300 mg/m3	300 mg/m3
Skin	NPI	6 mg/kg bw/d	NPI	6 mg/kg bw/d	NPI	11 mg/kg bw/d	NPI	11 mg/kg bw/d

SECTION 8. Exposure controls/personal protection

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METHYL ETHYL KETONE								
Threshold Limit Value								
Type	Country	TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm			
TLV	BGR	590		885				
TLV	CZE	600		900				
AGW	DEU	600	200	600	200	SKIN		
MAK	DEU	600	200	600	200	SKIN		
VLA	ESP	600	200	900	300			
VLEP	FRA	600	200	900	300	SKIN		
VLEP	ITA	600	200	900	300			
NDS/NDSch	POL	450		900				
NGV/KGV	SWE	150	50	900	300			
WEL	GBR	600	200	899	300	SKIN		
OEL	EU	600	200	900	300			
TLV-ACGIH		590	200	885	300			
Predicted no-effect concentration - PNEC								
Normal value in fresh water						55,8	mg/l	
Normal value in marine water						55,8	mg/l	
Normal value for fresh water sediment						284,7	mg/kg	
Normal value for marine water sediment						284,7	mg/kg	
Normal value for water, intermittent release						55,8	mg/l	
Normal value of STP microorganisms						709	mg/l	
Normal value for the food chain (secondary poisoning)						1000	mg/kg	
Normal value for the terrestrial compartment						22,5	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			VND	31 mg/kg bw/d				
Inhalation			VND	106 mg/m3			VND	600 mg/m3
Skin			VND	412 mg/kg bw/d			VND	1161 mg/kg bw/d

PHOSPHORIC ACID								
Threshold Limit Value								
Type	Country	TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm			
TLV	BGR	1		2				
TLV	CZE	1		2				
AGW	DEU	2		4		INHAL		
MAK	DEU	2		4		INHAL		
VLA	ESP	1		2				
VLEP	FRA	1	0,2	2	0,5			
VLEP	ITA	1		2				
TGG	NLD	1		2				
NDS/NDSCh	POL	1		2				
NGV/KGV	SWE	1		3				
WEL	GBR	1		2				
OEL	EU	1		2				
TLV-ACGIH		1		3				
Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				Effects on workers			
Route of exposure	Acute	Acute		Chronic	Chronic	Acute local	Acute	Chronic
	local	systemic		local	systemic		systemic	local
Inhalation				0,73	VND	2	VND	1
				mg/m3		mg/m3		mg/m3



SECTION 8. Exposure controls/personal protection

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XYLENE (MIXTURE OF ISOMERS)								
Threshold Limit Value								
Type	Country	TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm			
TLV	BGR	221		442		SKIN		
TLV	CZE	200		400		SKIN		
AGW	DEU	440	100	880	200	SKIN		
MAK	DEU	440	100	880	200	SKIN		
VLA	ESP	221	50	442	100	SKIN		
VLEP	FRA	221	50	442	100	SKIN		
VLEP	ITA	221	50	442	100	SKIN		
TGG	NLD	210		442		SKIN		
NDS/NDSCh	POL	100						
NGV/KGV	SWE	221	50	442	100	SKIN		
WEL	GBR	220	50	441	100			
OEL	EU	221	50	442	100	SKIN		
TLV-ACGIH		434	100	651	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	
Normal value for water, intermittent release						0,327	mg/l	
Normal value of STP microorganisms						6,58	mg/l	
Normal value for the terrestrial compartment						2,31	mg/kg	
Health - Derived no-effect level - DNEL / DMEL								
Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute local	Acute	Chronic	Chronic
	local	systemic	local	systemic		systemic	local	systemic
Oral		NPI		12,5 mg/kg bw/d				
Inhalation	260 mg/m3	260 mg/m3	65,3 mg/m3	65,3 mg/m3	442 mg/m3	442 mg/m3	221 mg/m3	221 mg/m3
Skin	VND	VND	NPI	125 mg/kg bw/d	VND	VND	NPI	212 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.

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.

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 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, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (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.

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

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

Properties	Value	Information
Appearance	liquid	
Colour	different assorted colors	
Odour	characteristic of solvent	
Odour threshold	Not determined	
pH	Not determined	
Melting point / freezing point	Not determined	
Initial boiling point	79,6 °C	
Boiling range	Not determined	
Flash point	-6 °C	
Evaporation Rate	Not determined	
Flammability of solids and gases	Not available	
Lower inflammability limit	Not determined	
Upper inflammability limit	Not determined	
Lower explosive limit	Not determined	
Upper explosive limit	Not determined	
Vapour pressure	Not determined	
Vapour density	Not determined	
Relative density	0,900 - 1,100 Kg/L	
Solubility	immiscible with water	
Partition coefficient: n-octanol/water	Not determined	
Auto-ignition temperature	Not determined	
Decomposition temperature	Not determined	
Viscosity	Not determined	
Explosive properties	Not available	
Oxidising properties	Not available	

9.2. Other information

VOC (Directive 2010/75/EC) :	55,63 % - 607,99	g/litre
VOC (volatile carbon) :	40,50 %	

SECTION 10. Stability and reactivity

10.1. Reactivity

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

METHYL ETHYL KETONE  
ETHYL METHYL KETONE: reacts with light metals like aluminium, and with strong oxidising agents; attacks various types of plastic.  
Decomposes under the effect of heat.

PHOSPHORIC ACID  
PHOSPHORIC ACID: decomposes at temperatures over 200°C.

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.

METHYL ETHYL KETONE  
ETHYL METHYL KETONE: may generate peroxides on contact with air, light or oxidising agents. Risk of explosion on contact with: hydrogen peroxide and sulphuric acid. It may react dangerously with: oxidising agents, trichloromethane, alkalis. Forms explosive mixtures with the air.

PHOSPHORIC ACID

SECTION 10. Stability and reactivity ... / >>

PHOSPHORIC ACID: risk of explosion on contact with nitromethane. May react dangerously with alkalis and sodium borohydride.

10.4. Conditions to avoid

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

METHYL ETHYL KETONE  
ETHYL METHYL KETONE: avoid exposure to sources of heat.

10.5. Incompatible materials

METHYL ETHYL KETONE  
ETHYL METHYL KETONE: strong oxidising agents, inorganic acids, ammonia, copper and chloroform.

PHOSPHORIC ACID  
PHOSPHORIC ACID: Metals, strong alkalis, aldehydes, sulphides and peroxides.

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.

PHOSPHORIC ACID  
PHOSPHORIC ACID: phosphorus oxide.

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	>2000 mg/kg

PHOSPHORIC ACID	
LD50 (Oral)	1530 mg/kg Rat
LD50 (Dermal)	2740 mg/kg Rabbit
LC50 (Inhalation)	> 0,85 mg/l/1h Rat

2-METHOXY-1-METHYLETHYL ACETATE	
LD50 (Oral)	> 5000 mg/kg Rat (Fischer 344) - OECD Guideline 401
LD50 (Dermal)	> 2000 mg/kg Rat (Fischer 344) - OECD Guideline 402

N-BUTYL ACETATE	
LD50 (Oral)	> 10760 mg/kg Rat (Sprague-Dawley) - OECD Guideline 423
LD50 (Dermal)	> 14112 mg/kg Rabbit (New Zealand White) - OECD Guideline 402
LC50 (Inhalation)	> 6,6 mg/l/4h Rat (Wistar) - OECD Guideline 403

SECTION 11. Toxicological information

... / >>

METHYL ETHYL KETONE	
LD50 (Oral)	> 2193 mg/kg Rat - OECD Guideline 423
LD50 (Dermal)	> 5000 mg/kg Rabbit - OECD Guideline 402
XYLENE (MIXTURE OF ISOMERS)	
LD50 (Oral)	> 3523 mg/kg Rat (F344/N) - EU Method B.1
LD50 (Dermal)	> 4200 mg/kg Rabbit
LC50 (Inhalation)	29,091 mg/l/4h Rat - EU Method B.2
REACTION MASS OF ETHYLBENZENE AND XYLENE	
LD50 (Oral)	3523 mg/kg Rat (male) - EU Method B.1
LD50 (Dermal)	12126 mg/kg Rabbit (New Zealand White) (male)
LC50 (Inhalation)	27,571 mg/l/4h Rat (Long-Evans) - EU Method B.2

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

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 respiratory irritation  
May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

May cause damage to organs

ASPIRATION HAZARD

Toxic for aspiration

SECTION 12. Ecological information




Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.


12.1. Toxicity

2-METHOXY-1-METHYLETHYL ACETATE	
LC50 - for Fish	> 100 mg/l/96h Oncorhynchus mykiss - OECD Guideline 203
EC50 - for Crustacea	> 500 mg/l/48h Daphnia magna - EU Method C.2 (Acute Toxicity for Daphnia)
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Pseudokirchnerella subcapitata - OECD Guideline 201
Chronic NOEC for Fish	47,5 mg/l Oryzias latipes - OECD Guideline 204 - Total exposure duration: 14 d
Chronic NOEC for Crustacea	100 mg/l Daphnia magna - OECD Guideline 211 - Total exposure duration: 21 d
Chronic NOEC for Algae / Aquatic Plants	1000 mg/l Pseudokirchnerella subcapitata - OECD Guideline 201 - Total duration exposure: 72h

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SECTION 12. Ecological information      ... / >>			
N-BUTYL ACETATE			
LC50 - for Fish	18 mg/l/96h Pimephales promelas - OECD Guideline 203		
EC50 - for Crustacea	44 mg/l/48h Daphnia sp. - OECD Guideline 202		
EC50 - for Algae / Aquatic Plants	397 mg/l Pseudokirchneriella subcapitata - OECD Guideline 201		
Chronic NOEC for Crustacea	23,2 mg/l Daphnia magna - OECD Guideline 211 - Total exposure duration: 21 d		
Chronic NOEC for Algae / Aquatic Plants	196 mg/l Pseudokirchneriella subcapitata - OECD Guideline 201 - Total exposure duration: 72 h		
METHYL ETHYL KETONE			
LC50 - for Fish	2993 mg/l/96h Pimephales promelas - OECD Guideline 203		
EC50 - for Crustacea	308 mg/l/48h Daphnia magna - OECD Guideline 202		
EC50 - for Algae / Aquatic Plants	2029 mg/l/72h Pseudokirchneriella subcapitata - OECD Guideline 201		
XYLENE (MIXTURE OF ISOMERS)			
LC50 - for Fish	2,6 mg/l/96h Oncorhynchus mykiss - OECD Guideline 203		
REACTION MASS OF ETHYLBENZENE AND XYLENE			
LC50 - for Fish	2,6 mg/l/96h Oncorhynchus mykiss - OECD Guideline 203		
EC50 - for Algae / Aquatic Plants	4,6 mg/l/72h Pseudokirchneriella subcapitata - OECD Guideline 201		
Chronic NOEC for Fish	> 1,3 mg/l Oncorhynchus mykiss - Total exposure duration: 56 d		
12.2. Persistence and degradability			
PHOSPHORIC ACID			
Solubility in water	> 850000 mg/l		
Degradability: information not available			
2-METHOXY-1-METHYLETHYL ACETATE			
Solubility in water	>10000 mg/l		
Rapidly degradable			
N-BUTYL ACETATE			
Solubility in water	1000 - 10000 mg/l		
Rapidly degradable	Biodegradation: 83% (28 d) - Method: OECD Guideline 301 D		
METHYL ETHYL KETONE			
Solubility in water	> 10000 mg/l		
Rapidly degradable			
XYLENE (MIXTURE OF ISOMERS)			
Solubility in water	165,8 mg/l		
Rapidly degradable	Biodegradability: 98% (28 d) - OECD Guideline 301 F		
REACTION MASS OF ETHYLBENZENE AND XYLENE			
Solubility in water	165,8 mg/l		
Rapidly degradable	% Biodegradability: 90% (28 d)		
12.3. Bioaccumulative potential			
2-METHOXY-1-METHYLETHYL ACETATE			
Partition coefficient: n-octanol/water	1,2		
N-BUTYL ACETATE			
Partition coefficient: n-octanol/water	2,3		
BCF	15,3		
METHYL ETHYL KETONE			
Partition coefficient: n-octanol/water	0,3		
XYLENE (MIXTURE OF ISOMERS)			
Partition coefficient: n-octanol/water	3,16		
REACTION MASS OF ETHYLBENZENE AND XYLENE			
Partition coefficient: n-octanol/water	3,16		
BCF	29		
12.4. Mobility in soil			

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SECTION 12. Ecological information ... / >>				
N-BUTYL ACETATE Partition coefficient: soil/water < 3				
REACTION MASS OF ETHYLBENZENE AND XYLENE Partition coefficient: soil/water 2,73 mg/l				
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 ≥ 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: 1210				
14.2. UN proper shipping name				
ADR / RID: PRINTING INK or PRINTING INK RELATED MATERIAL IMDG: PRINTING INK or PRINTING INK RELATED MATERIAL IATA: PRINTING INK or PRINTING INK 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 Special Provision: 640D	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:		EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:		Cargo: Pass.: Special Instructions:	Maximum quantity: 60 L Maximum quantity: 5 L A3, A72, A192	Packaging instructions: 364 Packaging instructions: 353

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SECTION 14. Transport information ... / >>

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

Substances in Candidate List (Art. 59 REACH)  
On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  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
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
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
Skin Corr. 1B	Skin corrosion, category 1B
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
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
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.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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.

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

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
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  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
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
  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.

### CALCULATION METHODS FOR CLASSIFICATION



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SECTION 16. Other information

... / >>

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9. Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:  
The following sections were modified:  
01 / 03 / 09 / 16.