



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: PNT000320xxAB
Product name: PAINT MARKER INKS SERIES 2568

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

Intended use: INK FOR VALVE MARKERS

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: REINOL S.R.L.
Full address: Strada del Francese 21
District and Country: 10071 Borgaro T.se (TO)
Italia
Tel. +39 011 4701510
Fax +39 011 4703910
e-mail address of the competent person responsible for the Safety Data Sheet: jacopo.pernice@reinol.it

1.4. Emergency telephone number

For urgent inquiries refer to: REINOL S.R.L. - Tel. +39 011-4701510 (h 09.00 - 12.00) (h 14.00 - 16.00) working days

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 3

H226

Flammable liquid and vapour.

Specific target organ toxicity - single exposure, category 3

H336

May cause drowsiness or dizziness.



SECTION 2. Hazards identification ... / >>

2.2. Label elements

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

Hazard pictograms:



Signal words: Warning

Hazard statements:

H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

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.
P370+P378 In case of fire: use extinguishing media appropriate to extinguish.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P312 Call a POISON CENTRE / a doctor / a center suitable for emergency medical advice if you feel unwell.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Contains: N-BUTYL ACETATE
1-METHOXY-2-PROPANOL
2-METHOXY-1-METHYLETHYL ACETATE
METHYL ETHYL KETONE

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)
N-BUTYL ACETATE		
CAS	123-86-4 34 ≤ x < 37	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC	204-658-1	
INDEX	607-025-00-1	
Reg. no.	01-2119485493-29-xxxx	
1-METHOXY-2-PROPANOL		
CAS	107-98-2 13 ≤ x < 16	Flam. Liq. 3 H226, STOT SE 3 H336
EC	203-539-1	
INDEX	603-064-00-3	
Reg. no.	01-2119457435-35-xxxx	
2-METHOXY-1-METHYLETHYL ACETATE		
CAS	108-65-6 7 ≤ x < 10	Flam. Liq. 3 H226, STOT SE 3 H336
EC	203-603-9	
INDEX	607-195-00-7	
Reg. no.	01-2119475791-29-xxxx	
METHYL ETHYL KETONE		
CAS	78-93-3 3 ≤ x < 5	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	



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

XYLENE (MIXTURE OF ISOMERS)

CAS 1330-20-7 $0 \leq x < 0,5$

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 according to Annex VI to the CLP Regulation: C

EC 215-535-7

INDEX 601-022-00-9

Reg. no. 01-2119488216-32-xxxx

ETHYLBENZENE

CAS 100-41-4 $0 \leq x < 0,5$

Flam. Liq. 2 H225, Acute Tox. 4 H332

EC 202-849-4

INDEX 601-023-00-4

Reg. no. 01-2119489370-35-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. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless 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.



SECTION 6. Accidental release measures ... / >>

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 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
DEU	Deutschland	TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2017
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZIN Y, PRAC Y I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
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 2018



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

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	BGR	710		950	
TLV	CZE	950		1200	
MAK	DEU	480	100	960	200
VLA	ESP	724	150	965	200
VLEP	FRA	710	150	940	200
WEL	GBR	724	150	966	200
OEL	NLD	150			
NDS	POL	200		950	
MAK	SWE	500	100	700	150
TLV-ACGIH		713	150	950	200

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 ... / >>

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
AGW	DEU	370	100	740	200	
MAK	DEU	370	100	740	200	
VLA	ESP	375	100	568	150	SKIN
VLEP	FRA	188	50	375	10	SKIN
WEL	GBR	375	100	560	150	SKIN
VLEP	ITA	375	100	568	150	SKIN
OEL	NLD	375		563		SKIN
NDS	POL	180		360		
MAK	SWE	190	50	300	75	SKIN
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 in marine water	1	mg/l
Normal value for fresh water sediment	52,3	mg/kg
Normal value for marine water sediment	5,2	mg/kg
Normal value for water, intermittent release	100	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	4,59	mg/kg
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	33 mg/kg bw/d				
Inhalation			NPI	43,9 mg/m3	553,5 mg/m3	553,5 mg/m3	NPI	369 mg/m3
Skin			NPI	78 mg/kg bw/d			NPI	183 mg/kg bw/d



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

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		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
WEL	GBR	274	50	548	100	
VLEP	ITA	275	50	550	100	SKIN
OEL	NLD	550				
NDS	POL	260		520		
MAK	SWE	250	50	400	75	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	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			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 ... / >>

METHYL ETHYL KETONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		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
WEL	GBR	600	200	899	300	SKIN
VLEP	ITA	600	200	900	300	
NDS	POL	450		900		
MAK	SWE	150	50	300	100	
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



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
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
WEL	GBR	220	50	441	100	
VLEP	ITA	221	50	442	100	SKIN
OEL	NLD	210		442		SKIN
NDS	POL	100				
MAK	SWE	221	50	442	100	SKIN
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 local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,6 mg/kg bw/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 bw/d			VND	180 mg/kg bw/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
AGW	DEU	440	100	880	200	SKIN
MAK	DEU	88	20	176	40	SKIN
VLA	ESP	441	100	884	200	SKIN
VLEP	FRA	88,4	20	442	100	SKIN
WEL	GBR	441	100	552	125	SKIN
VLEP	ITA	442	100	884	200	SKIN
OEL	NLD	215		430		SKIN
NDS	POL	200		400		
MAK	SWE	200	50	450	100	
OEL	EU	442	100	884	200	SKIN
TLV-ACGIH		87	20			

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.

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



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

the duration and type of use.

SKIN PROTECTION

Wear category I 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, 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.

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	green	
Odour	characteristic of solvent	
Odour threshold	Not available	
pH	Not available	
Melting point / freezing point	Not available	
Initial boiling point	Not available	
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	1,050 +/- 0,05	
Solubility	immiscible with water	
Partition coefficient: n-octanol/water	Not available	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
Viscosity	Not available	
Explosive properties	Not available	
Oxidising properties	Not available	

9.2. Other information

VOC (Directive 2010/75/EC) :	60,13 % - 645,23	g/litre
VOC (volatile carbon) :	34,73 % - 372,67	g/litre

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

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



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

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

BUTANONE: 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.

10.4. Conditions to avoid

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

METHYL ETHYL KETONE

BUTANONE: avoid exposure to sources of heat.

10.5. Incompatible materials

METHYL ETHYL KETONE

BUTANONE: strong oxidising agents, inorganic acids, ammonia, copper and chloroform.

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.

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

LC50 (Inhalation) of the mixture:	Not classified (no significant component)
LD50 (Oral) of the mixture:	Not classified (no significant component)
LD50 (Dermal) of the mixture:	Not classified (no significant component)

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
LD50 (Dermal)	> 14112 mg/kg Rabbit
LC50 (Inhalation)	> 6,6 mg/l/4h Rat (Wistar) - OECD Guideline 403



SECTION 11. Toxicological information ... / >>

1-METHOXY-2-PROPANOL

LD50 (Oral)

4016 mg/kg Rat (Fischer 344) - EU Method B.1

LD50 (Dermal)

> 2000 mg/kg Rat (Fischer 344) - EU Method B.3

LC50 (Inhalation)

< 6000 ppm/6h Mouse (B6C3F1) (female) - OECD Guideline 403

METHYL ETHYL KETONE

LD50 (Oral)

> 2193 mg/kg Rat

LD50 (Dermal)

> 5000 mg/kg Rabbit

XYLENE (MIXTURE OF ISOMERS)

LD50 (Oral)

> 3523 mg/kg Rat

LD50 (Dermal)

> 12,13 mg/kg Rabbit

LC50 (Inhalation)

> 27,124 mg/l/4h Rat

ETHYLBENZENE

LD50 (Oral)

3500 mg/kg Rat (Wistar)

LD50 (Dermal)

15354 mg/kg Rabbit

LC50 (Inhalation)

17,2 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.
Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

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

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



SECTION 12. Ecological information ... / >>

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

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

1-METHOXY-2-PROPANOL
LC50 - for Fish > 4600 mg/l/96h *Leuciscus idus* - DIN 38 412, part L15
EC50 - for Crustacea 2954 mg/l/48h *Acartia tonsa* - ISO TC147/SC5/WG2
EC50 - for Algae / Aquatic Plants 6745 mg/l/72h *Skeletonema costatum* - ISO 10253

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

12.2. Persistence and degradability

2-METHOXY-1-METHYLETHYL ACETATE
Solubility in water 198000 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

1-METHOXY-2-PROPANOL
Rapidly degradable

METHYL ETHYL KETONE
Solubility in water > 10000 mg/l
Rapidly degradable

ETHYLBENZENE
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

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

ETHYLBENZENE
Partition coefficient: n-octanol/water 3,6

12.4. Mobility in soil

N-BUTYL ACETATE
Partition coefficient: soil/water < 3



SECTION 12. Ecological information ... / >>

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: III

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special Provision: -		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	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

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

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
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 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 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
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.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
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



SECTION 16. Other information ... / >>

- 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)
- 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.

Changes to previous review:

The following sections were modified:
01 / 02 / 03 / 04 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.
Changed TLVs in section 8.1 for following countries:
SWE,