

## Safety data sheet

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

**1.1. Product identifier**

Product name **PLB THINNER**

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

Intended use **Pad printing thinner.**

**1.3. Details of the supplier of the safety data sheet**

Name **COMEC ITALIA SRL**  
 Full address **Piazzale del Lavoro 149**  
 District and Country **21044 Cavaria (VA)**  
**ITALY**  
**Tel. +39 0331 219516**  
**Fax +39 0331 216161**

e-mail address of the competent person

responsible for the Safety Data Sheet **info@comec-italia.it**  
 Product distribution by: **Edgardo Baggini**

**1.4. Emergency telephone number**

For urgent inquiries refer to **CENTRO ANTIVELENI OSPEDALE NIGUARDA MILANO Tel. 02/66101029 (24/24h) -**  
**CENTRO ANTIVELENI POLICLINICO A.GEMELL ROMA Tel. 06/3054343 (24/24h) -**

### 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 EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin 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:

**H226** Flammable liquid and vapour.  
**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.  
**H315** Causes skin 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.  
**P280** Wear protective gloves / eye protection / face protection.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P310** Immediately call a POISON CENTER or a doctor.  
**P331** Do NOT induce vomiting.  
**P370+P378** In case of fire: use chemical powder, CO2 or dry send to extinguish.

**Contains:** XYLENE (MIXTURE OF ISOMERS)  
 CYCLOHEXANONE  
 N-BUTYL ACETATE

**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:

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

Identification	x = Conc. %	Classification 1272/2008 (CLP)
<b>N-BUTYL ACETATE</b>		
CAS 123-86-4	62 ≤ x < 66	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC 204-658-1		
INDEX 607-025-00-1		
Reg. no. 01-2119485493-29-xxxx		



Information not available

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

#### SUITABLE EXTINGUISHING EQUIPMENT

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

#### UNSUITABLE EXTINGUISHING EQUIPMENT

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

### 5.2. Special hazards arising from the substance or mixture

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

### 5.3. Advice for firefighters

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

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

## SECTION 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. 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. If the product is flammable, use explosion-proof equipment. 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	MAK-und BAT-Werte-Liste 2012

DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
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
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diaro da Republica I 26; 2012-02-06
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
TUR	Türkiye	2000/39/EC sayılı Direktifin ekidir
EU	OEL EU	Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016

**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
NDS	POL	200		950	
MAK	SWE	500	100	700	150
TLV-ACGIH			50		150

**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
NDS	POL	100				
VLE	PRT	221	50	442	100	SKIN
MAK	SWE	221	50	442	100	SKIN
ESD	TUR	221	50	442	100	SKIN
OEL	EU	221	50	442	100	SKIN

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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/d				
Inhalation	174 mg/m3	174 mg/m3	VND	14,8 mg/m3	289 mg/m3	289 mg/m3	77 mg/m3	77 mg/m3
Skin			VND	108 mg/kg/d	174 mg/m3	VND	VND	180 mg/kg

CYCLOHEXANONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	40,8		81,6		SKIN
TLV	CZE	40		80		SKIN
AGW	DEU	80	20	80	20	SKIN
TLV	DNK	40	10			
VLA	ESP	41	10	82	20	SKIN
VLEP	FRA	40,8	10	81,6	20	
WEL	GBR	41	10	82	20	SKIN
VLEP	ITA	40,8	10	81,6	20	SKIN
NDS	POL	40		80		
VLE	PRT	40,8	10	81,6	20	SKIN
MAK	SWE	41	10	81	20	SKIN
ESD	TUR	40,8	10	81,6	20	SKIN
OEL	EU	40,8	10	81,6	20	SKIN
TLV-ACGIH		80	20	201	50	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	0,512	mg/kg
Normal value for marine water sediment	0,0512	mg/kg
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,0435	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
Inhalation			VND	10 mg/m3			VND	40 mg/m3
Skin			VND	1 mg/kg			VND	4 mg/kg/d

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

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TLV	CZE	270		550		SKIN
AGW	DEU	270	50	270	50	
MAK	DEU	270	50	270	50	
TLV	DNK	275	50			SKIN
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
NDS	POL	260		520		
VLE	PRT	275	50	550	100	SKIN
MAK	SWE	250	50	400	75	SKIN
ESD	TUR	275	50	550	100	SKIN
OEL	EU	275	50	550	100	SKIN

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,635	mg/l
Normal value in marine water	0,0635	mg/l
Normal value for fresh water sediment	3,29	mg/kg
Normal value for marine water sediment	0,329	mg/l
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

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers		Effects on workers		
	Acute local	Acute systemic	Chronic local	Chronic systemic	Chronic systemic
Oral			VND	1,67 mg/kg	
Inhalation			VND	33 mg/m3	VND, 272 mg/m3
Skin			VND	54,8 mg/kg	VND, 153,5 mg/kg

ISOBUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	CZE	950		1200	
MAK	DEU	480	100	960	200
VLA	ESP	724	150		
VLEP	FRA	710	150	940	200
WEL	GBR	724	150	903	187
NDS	POL	200		400	
MAK	SWE	500	100	700	150
TLV-ACGIH			50		150

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,17	mg/l
Normal value in marine water	0,017	mg/l
Normal value for fresh water sediment	0,877	mg/kg
Normal value for marine water sediment	0,0877	mg/kg
Normal value for water, intermittent release	0,34	mg/l
Normal value of STP microorganisms	200	mg/l
Normal value for the terrestrial compartment	0,0755	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	Chronic systemic
Oral				5 mg/kg bw/d	

Inhalation	35,7 mg/m3	300 mg/m3	
Skin		5 mg/kg bw/d	10 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 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 a hood visor or protective visor combined with airtight 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**

Appearance	liquid
Colour	colourless

Odour	ketonic
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	> 115 °C
Boiling range	Not available
Flash point	23 ≤ T ≤ 60 °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	12,2 mmHg
Vapour density	Not available
Relative density	0,89
Solubility	Not available
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**

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.

**N-BUTYL ACETATE**

Decomposes on contact with: water.

**CYCLOHEXANONE**

Attacks various types of plastic materials.

May condense under the effect of heat to form resinous compounds.

**2-METHOXY-1-METHYLETHYL ACETATE**

Stable in normal conditions of use and storage.

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

**ISOBUTYL ACETATE**

Decomposes under the effect of heat. Attacks various types of plastic materials.

**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.

**N-BUTYL ACETATE**

Risk of explosion on contact with: strong oxidising agents. May react dangerously with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

**XYLENE (MIXTURE OF ISOMERS)**

Stable in normal conditions of use and storage. Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates. May form explosive mixtures with: air.

**CYCLOHEXANONE**

Risk of explosion on contact with: hydrogen peroxide, nitric acid, heat, mineral acids. May react violently with: oxidising agents. Forms explosive mixtures with: air.

**2-METHOXY-1-METHYLETHYL ACETATE**

May react violently with: oxidising substances, strong acids, alkaline metals.

**ISOBUTYL ACETATE**

Risk of explosion on contact with: strong oxidising agents. May react violently with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

**10.4. Conditions to avoid**

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

**N-BUTYL ACETATE**

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

**CYCLOHEXANONE**

Avoid exposure to: sources of heat, naked flames.

**ISOBUTYL ACETATE**

Avoid exposure to: sources of heat, naked flames.

**10.5. Incompatible materials**

**N-BUTYL ACETATE**

Incompatible with: water, nitrates, strong oxidants, acids, alkalis, zinc.

**2-METHOXY-1-METHYLETHYL ACETATE**

Incompatible with: oxidising substances, strong acids, alkaline metals.

**ISOBUTYL ACETATE**

Incompatible with: strong oxidants, nitrates, strong acids, strong bases.

**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

##### 2-METHOXY-1-METHYLETHYL ACETATE

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

#### Information on likely routes of exposure

##### XYLENE (MIXTURE OF ISOMERS)

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

##### 2-METHOXY-1-METHYLETHYL ACETATE

WORKERS: inhalation; contact with the skin.

##### N-BUTYL ACETATE

WORKERS: inhalation; contact with the skin.

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

##### XYLENE (MIXTURE OF ISOMERS)

Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

##### 2-METHOXY-1-METHYLETHYL ACETATE

Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

##### N-BUTYL ACETATE

In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

#### Interactive effects

##### XYLENE (MIXTURE OF ISOMERS)

Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

##### N-BUTYL ACETATE

A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

#### ACUTE TOXICITY

LC50 (Inhalation) of the mixture:> 20 mg/l  
 LD50 (Oral) of the mixture:>2000 mg/kg  
 LD50 (Dermal) of the mixture:>2000 mg/kg

**XYLENE (MIXTURE OF ISOMERS)**

3523 mg/kg Rat  
 LD50 (Oral)  
 4350 mg/kg Rabbit  
 LD50 (Dermal)  
 26 mg/l/4h Rat  
 LC50 (Inhalation)

**2-METHOXY-1-METHYLETHYL ACETATE**

8530 mg/kg Rat  
 LD50 (Oral)  
 > 5000 mg/kg Rat  
 LD50 (Dermal)  
 > 4345 ppm/6h Ratto / Rat  
 LC50 (Inhalation)

**CYCLOHEXANONE**

1535 mg/kg Ratto / Rat  
 LD50 (Oral)  
 1100 mg/kg Coniglio / Rabbit  
 LD50 (Dermal)  
 11 mg/l/4h Ratto / Rat (4h)  
 LC50 (Inhalation)

**N-BUTYL ACETATE**

> 6400 mg/kg Rat  
 LD50 (Oral)  
 > 5000 mg/kg Rabbit  
 LD50 (Dermal)  
 21,1 mg/l/4h Rat  
 LC50 (Inhalation)

**ISOBUTYL ACETATE**

13413 mg/kg Ratto / Rat  
 LD50 (Oral)  
 > 17400 mg/kg Conigliio / Rabbit  
 LD50 (Dermal)  
 > 23,4 mg/l/4h Ratto / Rat  
 LC50 (Inhalation)

**SKIN CORROSION / IRRITATION**

Causes skin irritation

**SERIOUS EYE DAMAGE / IRRITATION**

Causes serious eye damage

**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

**XYLENE (MIXTURE OF ISOMERS)**

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).

The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

**REPRODUCTIVE TOXICITY**

Does not meet the classification criteria for this hazard class

**STOT - SINGLE EXPOSURE**

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

XYLENE (MIXTURE OF ISOMERS)

LC50 - for Fish	2,6 mg/l/96h Fish
EC50 - for Crustacea	1 mg/l/48h Daphnia magna
EC10 for Algae / Aquatic Plants	1,9 mg/l/72h Selenastrum capricornutum

2-METHOXY-1-METHYLETHYL ACETATE

LC50 - for Fish	134 mg/l/96h Pesce, Oncorhynchus mykiss OECD 203
EC50 - for Crustacea	> 500 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Selenastrum capricornutum OECD 201
Chronic NOEC for Fish	47,5 mg/l Oryzias latipes 14 gg OECD 204
Chronic NOEC for Crustacea	100 mg/l Daphnia magna 21 gg OECD 202

CYCLOHEXANONE

EC50 - for Crustacea	527 mg/l/96h Fish, Pimephales promelas (96h)
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Scenedesmus subspicatus

N-BUTYL ACETATE

LC50 - for Fish	18 mg/l/96h Fish
EC50 - for Crustacea	44 mg/l/48h Daphnia Magna

ISOBUTYL ACETATE

LC50 - for Fish	16,6 mg/l/96h Oryzias latipe
EC50 - for Crustacea	24,6 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	397 mg/l/72h Pseudokirchneriella subcapitata

### 12.2. Persistence and degradability

XYLENE (MIXTURE OF ISOMERS)

Solubility in water	100 - 100 mg/l mg/l
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Rapidly degradable

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water	> 10000 mg/l
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Rapidly degradable

CYCLOHEXANONE  
Solubility in water 0,1 - 100 mg/l  
Rapidly degradable

N-BUTYL ACETATE  
Solubility in water 1000 - 10000 mg/l

ISOBUTYL ACETATE  
Solubility in water 1000 - 10000 mg/l  
Rapidly degradable

**12.3. Bioaccumulative potential**

XYLENE (MIXTURE OF ISOMERS)  
Partition coefficient: n-octanol/water 3,12  
BCF 25,9

2-METHOXY-1-METHYLETHYL ACETATE  
Partition coefficient: n-octanol/water 1,2

CYCLOHEXANONE  
Partition coefficient: n-octanol/water 0,86

N-BUTYL ACETATE  
Partition coefficient: n-octanol/water 2,3  
BCF 15,3

ISOBUTYL ACETATE  
Partition coefficient: n-octanol/water 2,3  
BCF 15,3

**12.4. Mobility in soil**

XYLENE (MIXTURE OF ISOMERS)  
Partition coefficient: soil/water 2,73

CYCLOHEXANONE  
Partition coefficient: 1,18

soil/water

N-BUTYL ACETATE

Partition coefficient: < 3  
soil/water

**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, 1993  
IATA:

**14.2. UN proper shipping name**

ADR / RID: FLAMMABLE  
LIQUID, N.O.S.  
(ISOBUTYL  
ACETATE; N-  
BUTYL  
ACETATE)  
IMDG: FLAMMABLE  
LIQUID, N.O.S.  
(ISOBUTYL  
ACETATE; N-  
BUTYL  
ACETATE)  
IATA: FLAMMABLE  
LIQUID, N.O.S.  
(ISOBUTYL  
ACETATE; N-  
BUTYL  
ACETATE)

**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, <u>S-E</u>	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special Instructions:	A3	

**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

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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:

<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H226</b>	Flammable liquid and vapour.
<b>H302</b>	Harmful if swallowed.
<b>H312</b>	Harmful in contact with skin.
<b>H332</b>	Harmful if inhaled.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H318</b>	Causes serious eye damage.
<b>H319</b>	Causes serious eye irritation.

<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H336</b>	May cause drowsiness or dizziness.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.

**LEGEND:**

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

**GENERAL BIBLIOGRAPHY**

1. Regulation (EU) 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
- 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:  
11 / 12 / 14.