

3. Composition / Information on ingredients

Contains:

Name	Concentration % (C)	Classification
XYLENE (MIXTURE OF ISOMERS) CAS No 1330-20-7 CE No 215-535-7 Index No 601-022-00-9	0,5 <= C < 0,6	R10 Xn R20/21 Xi R38 Note C
1-METHOXY-2-PROPANOL ACETATE CAS No 108-65-6 CE No 203-603-9 Index No 607-195-00-7	9 <= C < 10,5	R10 Xi R36
1-ETHOXY-2-PROPANOL ACETATE CAS No 54839-24-6 CE No 259-370-9 Index No 603-177-00-8	25,5 <= C < 27	R10 R67
BUTANOL CAS No 71-36-3 CE No 200-751-6 Index No 603-004-00-6	4,5 <= C < 5	R10 R67 Xn R22 Xi R37/38 Xi R41
1-METHOXY-2-PROPANOL CAS No 107-98-2 CE No 203-539-1 Index No 603-064-00-3	7 <= C < 8	R10
BUTYLGLYCOL ACETATE CAS No 112-07-2 CE No 203-933-3 Index No 607-038-00-2	16,5 <= C < 18	Xn R20/21

The complete text of -R- phrases is specified in section 16.

4. First aid measures

EYES: Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

SKIN: Wash immediately with plenty of water. Remove contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before using them again.

INHALATION: Remove to open air. If breathing is irregular, seek medical advice.

INGESTION: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.

5. Fire-fighting measures

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Excess pressure may form in containers exposed to fire at a risk of explosion. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water and the remains of the fire according to applicable regulations.

SUITABLE EXTINGUISHING MEDIA

The extinction equipment should contain carbon dioxide, foam or chemical powders. For product leaks and spills that have not caught fire, nebulised water can be used to dispel flammable fumes and protect the individuals taking part in stemming the leak.

EXTINGUISHING MEDIA WHICH SHALL NOT BE USED FOR SAFETY REASONS

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.

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Hardhat with visor, fireproof clothing (fireproof jacket and trousers with ties around arms, legs and waist) work gloves (fireproof, cut proof and dielectric), self-respirator (self-protector).

6. Accidental release measures

PERSONAL PRECAUTIONS

Eliminate sources of ignition (cigarettes, flames, sparks, etc.) from the area in which the leak occurred. If there are no contraindications, spray solid products with water to prevent the formation of dust. Use breathing equipment if fumes or powders are released into the air. Block the leakage if there is no hazard. Do not handle damaged containers or leaked product before donning appropriate protective gear. Send away individuals who are not suitably equipped. For information on risks for the environmental and health, respiratory tract protection, ventilation and personal protection equipment, refer to the other sections of this sheet.

ENVIRONMENTAL PRECAUTIONS

The product must not penetrate the sewers, surface water, ground water and neighbouring areas.

METHODS FOR CLEANING UP

For liquid products, suck into a suitable container (made of material not incompatible with the product) and soak up any leaked product with absorbent inert material (sand, vermiculite, diatomeous earth, Kieselguhr, etc). Collect the majority of the remaining material and deposit in containers for disposal. For solid products, use spark proof mechanical tools to collect the leaked product and place in plastic containers. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

7. Handling and storage

Store in a well ventilated place, keeping the containers closed when not used. Do not smoke while handling. Keep far away from sources of heat, bright flames and sparks and other sources of ignition.

8. Exposure control / personal protection.

8.1 Exposure limit values

Name	Type	Country	TWA/8h		STEL/15min		
			mg/m3	ppm	mg/m3	ppm	
XYLENE (MIXTURE OF ISOMERS)	TLV-ACGIH		434		651		Skin
	OEL	EU	221	50	442	100	Skin

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	OEL	IRL		50		100	Skin
	WEL	UK		50		100	Skin
1-METHOXY-2-PROPANOL ACETATE							
	OEL	EU	275	50	550	100	Skin
	OEL	IRL		50		100	Skin
	WEL	UK		50		100	Skin
BUTANOL							
	TLV-ACGIH		61				Skin
	OEL	IRL				25	Skin
	WEL	UK				50	Skin
1-METHOXY-2-PROPANOL							
	TLV-ACGIH		369		553		Skin
	OEL	EU	375	100	568	150	Skin
	OEL	IRL		100		300	Skin
	WEL	UK		100		150	Skin
BUTYLGLYCOL ACETATE							
	TLV-ACGIH		131				Skin
	OEL	EU	133	20	333	50	Skin
	OEL	IRL		20			Skin
	WEL	UK		20		50	Skin

8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration or bad air vent. If such operations do not make it possible to keep the concentration of the product below the permitted workplace exposure thresholds a suitable respiratory tract protection must be used. See product label for hazard details during use. Ask your chemical substance suppliers for advice when choosing personal protection equipment. Personal protection equipment must comply with the rules in force indicated below.

RESPIRATORY PROTECTION.

If workplace maximum concentration thresholds are exceeded, wear a partial facemask with an ABEK2P3 fume and powder mask (see standard EN 141). If no technical measures are defined, to limit worker exposure, airway protection equipment, such as masks with cartridges for organic fumes and for powders/dusts, must be used. Facemasks only provide limited protection. For high concentrations in the workplace or in the case of an emergency, when exposure levels are unknown, wear an open circuit compressed air self-respirator (see standard EN 137) or an external air intake respirator with mask, partial mask or snorkel (see standard EN 138).

HAND PROTECTION.

Protect hands using work gloves (see standard EN 374). We recommend applying protective hand cream. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

EYE PROTECTION.

Wear sealed protective goggles with side shields (see standard EN 166).

SKIN PROTECTION.

Wear overalls with long sleeves and professional safety footwear (see standard EN 344). Wash with soap and water after removing protective clothing. Wash clothing before reuse.

9. Physical and chemical properties

Colour	various
Odour	typical of solvent
Physical state	liquid

Solubility	partially soluble in water. Soluble in almost all organic solvents
	Not available
	Not available
Viscosity	Not available
Vapour density	> 1 (aria =1)
Evaporation speed	Not available
Comburent properties	Not available
Partition coefficient: n-octanol/water	Not available
pH	Not available
Boiling point	>115°C
Flash point	>21°C
Explosive properties	Not available
Vapour pressure	Not available
Specific gravity	Not available

10. Stability and reactivity

The product is stable in normal conditions of use and storage. When heated or in the event of a fire, carbon oxides may be released and vapours which are dangerous to health. The vapours may also form explosive mixtures with the air.

1-methyl-2-methoxyethyl acetate: it is stable but in presence of air, it can gradually form peroxides which explode due to the rise in temperature. It can react violently with oxidizing agents and strong acids and alkaline metals. Avoid copper, aluminium and their alloys when storing. Store under inert atmosphere, repaired from humidity because it easily hydrolyses.

Butyl alcohol is biodegradable (MITI1984). The mixture reacts with strong oxidizing agents and with alkaline metals releasing flammable hydrogen. It attacks different types of plastic materials.

1-methoxy 2-propanol absorbs and dissolves in water and in organic solvents; it dissolves different plastic material; it is stable but in the presence of air it can gradually form explosive peroxides when heated and may react with strong oxidizing agents and acids. It should be biodegradable. Stainless steel is suitable while copper and aluminium are not.

11. Toxicological information

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation. Vapour inhalation may moderately irritate the upper respiratory tract. Contact with skin may cause slight irritation. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, dizziness, slow reflexes, narcosis.

1-methoxy-2-propanol and corresponding acetate: the main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx.

The recommended limit of exposure is 100 ppm for 8 hours. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. (For further details refer to INRS, Fiche toxicologique, nr. 221).

Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic effects have been reported in man. In vitro genotoxicity tests on animals resulted to be negative.

No significant effects were observed in studies on animal reproduction.

The following experimental data confirm that the substance is not even harmful: oral LD50 in the rat = 7900 mg/kg, inhalation CL50 in the rat 4 hours = 55.2 mg/l (Fiche toxicologique nr. 221).

2-METHOXY-1-METHYLETHYL ACETATE: oral LD50 (mg/kg) > 5000 (RAT) ; dermal LD50 (mg/kg) > 5000 (RAT).
1-METHOXY-2-PROPYLACETATE: inhalation LC50 (rat) 6,99 mg/l/4h.

BUTANOL: oral LD50 (mg/kg) 790 (RAT) ; dermal LD50 (mg/kg) 3400 (RABBIT) ; inhalation LC50 (rat) 8000 ppm/4h.

12. Ecological information

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

13. Disposal consideration

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.

14. Transport information

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations.

These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:

ADR/RID:	3
UN:	1210
Packing Group:	III
Label:	3
Nr. Kemler:	30
Proper Shipping Name:	Printing ink
Special Provision:	640E



Carriage by sea (shipping):

IMO class:	3
UN:	1210
Packing Group:	III
Label:	3
EMS:	F-E, S-D
Proper Shipping Name:	Printing ink



Transport by air:

IATA:	3
UN:	1210
Packing Group:	III
Label:	3
Cargo:	
Packaging instructions:	310
Maximum quantity:	220 L



Pass.:
Packaging instructions: 309
Maximum quantity: 60 L
Special Instructions: A3, A72

15. Regulatory information



R10	FLAMMABLE.
R36	IRRITATING TO EYES.
R67	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.
S25	AVOID CONTACT WITH EYES.
S26	IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S43	IN CASE OF FIRE, USE CHEMICAL POWDER FIRE EXTINGUISHER. DO NOT USE WATER.

Danger labelling under directives 67/548/EEC and 1999/45/EC and following amendments and adjustments.

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.

16. Other information

Text of -R- phrases quoted in section 3 of the sheet.

R10	FLAMMABLE.
R20/21	HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.
R22	HARMFUL IF SWALLOWED.
R36	IRRITATING TO EYES.
R37/38	IRRITATING TO RESPIRATORY SYSTEM AND SKIN.
R38	IRRITATING TO SKIN.
R41	RISK OF SERIOUS DAMAGE TO EYES.
R67	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments;
2. Directive 67/548/EEC and following amendments and adjustments (technical adjustment XXIX);
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament;
4. The Merck Index. - 10th Edition;
5. Handling Chemical Safety;
6. Niosh - Registry of Toxic Effects of Chemical Substances;

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7. INRS - Fiche Toxicologique (toxicological sheet);
8. Patty - Industrial Hygiene and Toxicology;
9. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition;

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.

Changes to previous review

The following sections were modified:

01 / 02 / 03 / 08 / 09 / 13 / 15 / 16