Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Code: **O41B**
Product name **OPALUX 41 comp.B non ingiallente**

UFI : **1Q92-J0UQ-H003-07CP**

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

Intended use **Hardener 20%**

1.3. Details of the supplier of the safety data sheet

Name **BOTTOSSO E FRIGHETTO VERNICI S.R.L.**
Full address **Viale J.F.Kennedy 20**
District and Country **30025 FOSSALTA DI PORTOGRUARO (VE)**
ITALIA
Tel. +39 0421 700222

e-mail address of the competent person responsible for the Safety Data Sheet **info@bottosso-frighetto.com**

1.4. Emergency telephone number

For urgent inquiries refer to **PV 0382/24444 - MI 02/66101029-**
FI 055/7947819 - RM 06/3054343-49978000
NA 081/7472870 - BG 800883300

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 2020/878.
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	H225	Highly flammable liquid and vapour.
Reproductive toxicity, category 2	H361d	Suspected of damaging the unborn child.
Acute toxicity, category 4	H332	Harmful if inhaled.
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.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
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:



SECTION 2. Hazards identification ... / >>

Signal words: Danger

Hazard statements:

H225	Highly flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H332	Harmful if inhaled.
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.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
EUH204	Contains isocyanates. May produce an allergic reaction.

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 . . . to extinguish.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P201	Obtain special instructions before use.
P233	Keep container tightly closed.

Contains:
TOLUENE
XYLENE
ALIPHATIC POLYISOCYANATE
ETHYL ACETATE

As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

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

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification		**x = Conc. %**	**Classification (EC) 1272/2008 (CLP)**
ALIPHATIC POLYISOCYANATE			
INDEX		30 ≤ x < 32,5	**Acute Tox. 4 H332, STOT SE 3 H335, Skin Sens. 1 H317**
EC	*931-274-8*		**ATE Inhalation mists/powders: 1,5 mg/l**
CAS	*28182-81-2*		
REACH Reg.	*01-2119485796-17-0000*		
ETHYL ACETATE			
INDEX	*607-022-00-5*	21 ≤ x < 22,5	**Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066**
EC	*205-500-4*		**EUH066: ≥ 20%**
CAS	*141-78-6*		
REACH Reg.	*01-2119475103-46*		
XYLENE			
INDEX	*601-022-00-9*	20 ≤ x < 21,5	**Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H335, Classification note according to Annex VI to the CLP Regulation: C**
EC	*215-535-7*		**ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l**
CAS	*1330-20-7*		
REACH Reg.	*01-2119488216-32*		

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

N-BUTYL ACETATE			
INDEX	*607-025-00-1*	13,5 ≤ x < 15	**Flam. Liq. 3 H226, STOT SE 3 H336, EUH066**
EC	*204-658-1*		**EUH066: ≥ 20%**
CAS	*123-86-4*		
REACH Reg.	*01-2119485493-29*		
2-METHOXY-1-METHYLETHYL ACETATE			
INDEX	*607-195-00-7*	4,5 ≤ x < 5	**Flam. Liq. 3 H226**
EC	*203-603-9*		
CAS	*108-65-6*		
REACH Reg.	*01-2119475791-29*		
TOLUENE			
INDEX	*601-021-00-3*	3,5 ≤ x < 4	**Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 3 H412**
EC	*203-625-9*		
CAS	*108-88-3*		
REACH Reg.	*01-2119471310-51*		
ISOBUTYL ACETATE			
INDEX	*607-026-00-7*	2 ≤ x < 2,5	**Flam. Liq. 2 H225, EUH066, Classification note according to Annex VI to the CLP Regulation: C**
EC	*203-745-1*		**EUH066: ≥ 20%**
CAS	*110-19-0*		
REACH Reg.	*01-2119488971-22*		
CYCLOHEXANONE			
INDEX	*606-010-00-7*	2 ≤ x < 2,5	**Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335**
EC	*203-631-1*		**LD50 Oral: 1890 mg/kg, ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l**
CAS	*108-94-1*		
REACH Reg.	*01-2119453616-35*		
HEXAMETHYLENE-DI-ISOCYANATE			
INDEX	*615-011-00-1*	0,1 ≤ x < 0,15	**Acute Tox. 1 H330, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317, Classification note according to Annex VI to the CLP Regulation: 2**
EC	*212-485-8*		**Skin Sens. 1 H317: ≥ 0,5%, Resp. Sens. 1 H334: ≥ 0,5%**
CAS	*822-06-0*		**ATE Oral: 500 mg/kg, LC50 Inhalation vapours: 0,124 mg/l/4h**
REACH Reg.	*01-2119457571-37-0000*		

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

In case of doubt or in the presence of symptoms contact a doctor and show him this document.
In case of more severe symptoms, ask for immediate medical aid.
EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Take off immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. Avoid further contact with contaminated clothing.
INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.
INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

Specific information on symptoms and effects caused by the product are unknown.

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

SECTION 4. First aid measures ... / >>

4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned: Get medical advice / attention.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

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. 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.

SECTION 7. Handling and storage ... / >>

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.

2-METHOXY-1-METHYLETHYL ACETATE
Store in an inert atmosphere, sheletered from moisture because it hydrolises easily.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

CZE	Česká Republika	NAŘÍZENÍ VLÁDY ze dne 10. května 2021, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci
ESP	España	Límites de exposición profesional para agentes químicos en España 2023
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en FranceDécret n° 2021-1849 du 28 décembre 2021
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
RUS	Россия	ПОСТАНОВЛЕНИЕ от 13 февраля 2018 г. N 25 ОБ УТВЕРЖДЕНИИ ГИГИЕНИЧЕСКИХ НОРМАТИВОВ ГН 2.2.5.3532-18 "ПРЕДЕЛЬНО ДОПУСТИМЫЕ КОНЦЕНТРАЦИИ (ПДК) ВРЕДНЫХ ВЕЩЕСТВ В ВОЗДУХЕ РАБОЧЕЙ ЗОНЫ"
SVK	Slovensko	NARIADENIE VLÁDY Slovenskej republiky z 12. augusta 2020, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 356/2006 Z. z. o ochrane zdravia zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym a mutagénnym faktorom pri práci v znení neskorších predpisov
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; 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 2023

XYLENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	200	45,4	400	90,8	SKIN
VLA	ESP	221	50	442	100	SKIN
VLEP	FRA	221	50	442	100	SKIN
VLEP	ITA	221	50	442	100	SKIN
NDS/NDSCh	POL	100		200		SKIN
ПДК	RUS	50		150		п
NPEL	SVK	221	50	442	100	SKIN
MV	SVN	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH			20			

ALIPHATIC POLYISOCYANATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	0,01		0,02		SKIN As NCO

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

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	270	49,14	550	100,1	SKIN
VLA	ESP	275	50	550	100	SKIN
VLEP	FRA	275	50	550	100	SKIN
VLEP	ITA	275	50	550	100	SKIN
NDS/NDSCh	POL	260		520		SKIN
ПДК	RUS			10		п
NPEL	SVK	275	50	550	100	SKIN
MV	SVN	275	50	550	100	SKIN
WEL	GBR	274	50	548	100	SKIN
OEL	EU	275	50	550	100	SKIN

TOLUENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	192	50,112	384	100,224	SKIN
VLA	ESP	192	50	384	100	SKIN
VLEP	FRA	76,8	20	384	100	SKIN
VLEP	ITA	192	50			SKIN
NDS/NDSCh	POL	100		200		SKIN
ПДК	RUS	50		150		п
NPEL	SVK	192	50	384	100	SKIN
MV	SVN	192	50	384	100	SKIN
WEL	GBR	191	50	384	100	SKIN
OEL	EU	192	50	384	100	SKIN
TLV-ACGIH			20			

CYCLOHEXANONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	40	9,8	80	196	SKIN
VLA	ESP	41	10	82	20	SKIN
VLEP	FRA	40,8	10	81,6	20	
VLEP	ITA	40,8	10	81,6	20	SKIN
NDS/NDSCh	POL	40		80		SKIN
ПДК	RUS	10		30		п
NPEL	SVK	41	10	82	20	SKIN
MV	SVN	40,8	10	81,6	20	SKIN
WEL	GBR	41	10	82	20	SKIN
OEL	EU	40,8	10	81,6	20	SKIN
TLV-ACGIH		80	20	201	50	SKIN

ETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	700	191,1	900	245,7	
VLA	ESP	734	200	1468	400	
VLEP	FRA	734	200	1468	400	
VLEP	ITA	734	200	1468	400	
NDS/NDSCh	POL	734		1468		
ПДК	RUS	50		200		п
NPEL	SVK	734	200	1468	400	
MV	SVN	734	200	1468	400	
WEL	GBR	734	200	1468	400	
OEL	EU	734	200	1468	400	
TLV-ACGIH		1441	400			

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

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	241		723		
VLA	ESP	241	50	723	150	
VLEP	FRA	241	50	723	150	
VLEP	ITA	241	50	723	150	
NDS/NDSCh	POL	240		720		
ПДК	RUS			0,1		п
NPEL	SVK	241	50	723	150	
MV	SVN	300	62	600	124	
WEL	GBR	724	150	966	200	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

ISOBUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	241		723		
VLA	ESP	241	50	723	150	
VLEP	FRA	241	50	723	150	
VLEP	ITA	241	50	723	150	
NDS/NDSCh	POL	240		720		
NPEL	SVK	241	50	723	150	
MV	SVN	300	62	600	124	
WEL	GBR	724	150	903	187	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

HEXAMETHYLENE-DI-ISOCYANATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	0,035	0,005	0,07	0,01	
VLA	ESP	0,035	0,005			
VLEP	FRA	0,075	0,01	0,15	0,02	
NDS/NDSCh	POL	0,04		0,08		SKIN
ПДК	RUS			0,05		п, A
NPEL	SVK	0,035	0,005			
MV	SVN	0,035	0,005	0,035	0,005	
OEL	EU	0,01		0,02		SKIN As NCO
TLV-ACGIH		0,034	0,005			

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

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.
The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, permeability time.
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.

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

EYE PROTECTION
Wear airtight protective goggles (see standard EN ISO 16321).

RESPIRATORY PROTECTION
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. Use a mask with a type AX filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387).
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		colourless		
Odour		solvent		
Melting point / freezing point		0	°C	
Initial boiling point	>	35	°C	
Flammability		not available		
Lower explosive limit		not available		
Upper explosive limit		not available		
Flash point	<	23	°C	
Auto-ignition temperature		0	°C	
Decomposition temperature		not available		
pH		not available		
Kinematic viscosity		>20,5 mm2/sec (40°C)		
Solubility		insoluble in water		
Partition coefficient: n-octanol/water		not available		
Vapour pressure		35,37	mmHg	
Density and/or relative density		0,92		
Relative vapour density		not available		
Particle characteristics		not applicable		

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Total solids (250°C / 482°F)	31,01 %			
VOC (Directive 2010/75/EU)	68,99 %	-	634,73	g/litre
VOC (volatile carbon)	47,75 %	-	439,31	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.

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.

TOLUENE
Avoid exposure to: light.

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

CYCLOHEXANONE
Attacks various types of plastic materials.
May condense under the effect of heat to form resinous compounds.

ETHYL ACETATE
Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

N-BUTYL ACETATE
Decomposes on contact with: water.
ISOBUTYL ACETATE
Decomposes under the effect of heat.Attacks various types of plastic materials.
HEXAMETHYLENE-DI-ISOCYANATE
Decomposes at 255°C/491°F.Polymerises at temperatures above 200°C/392°F.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

XYLENE
Stable in normal conditions of use and storage.Reacts violently with: strong oxidants,strong acids,nitric acid,perchlorates.May form explosive mixtures with: air.
2-METHOXY-1-METHYLETHYL ACETATE
May react violently with: oxidising substances,strong acids,alkaline metals.
TOLUENE
Risk of explosion on contact with: fuming sulphuric acid,nitric acid,silver perchlorate,nitrogen dioxide,non-metal halogenates,acetic acid,organic nitrocompounds.May form explosive mixtures with: air.May react dangerously with: strong oxidising agents,strong acids,sulphur.
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.
ETHYL ACETATE
Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidising agents,chlorosulphuric acid,potassium tert-butoxide.Forms explosive mixtures with: 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.
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.
HEXAMETHYLENE-DI-ISOCYANATE
May form explosive mixtures with: alcohols,bases.May react violently with: alcohols,amines,strong bases,oxidising agents,strong acids,water.

10.4. Conditions to avoid

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

CYCLOHEXANONE
Avoid exposure to: sources of heat,naked flames.
ETHYL ACETATE
Avoid exposure to: light,sources of heat,naked flames.
N-BUTYL ACETATE
Avoid exposure to: moisture,sources of heat,naked flames.
ISOBUTYL ACETATE
Avoid exposure to: sources of heat,naked flames.
HEXAMETHYLENE-DI-ISOCYANATE
Avoid exposure to: high temperatures,moisture.

10.5. Incompatible materials

2-METHOXY-1-METHYLETHYL ACETATE
Incompatible with: oxidising substances,strong acids,alkaline metals.
ETHYL ACETATE
Incompatible with: acids,bases,strong oxidants,chlorosulphuric acid.
N-BUTYL ACETATE
Incompatible with: water,nitrates,strong oxidants,acids,alkalis,zinc.
ISOBUTYL ACETATE
Incompatible with: strong oxidants,nitrates,strong acids,strong bases.

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

HEXAMETHYLENE-DI-ISOCYANATE
Incompatible with: alcohols,carboxylic acids,amines,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.

HEXAMETHYLENE-DI-ISOCYANATE
May develop: nitric oxide,hydrogen cyanide.

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 hazard classes as defined in Regulation (EC) No 1272/2008

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
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.

TOLUENE
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air; contact with the skin of products containing the substance.

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
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).

TOLUENE
Toxic effect on the central and peripheral nervous system with encephalopathy and polyneuritis; irritating for the skin, conjunctiva, cornea and respiratory apparatus.

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
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.

SECTION 11. Toxicological information ... / >>

TOLUENE
Certain drugs and other industrial products can interfere with the metabolism of the toluene.

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

ATE (Inhalation - mists / powders) of the mixture:	4,62 mg/l
ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

XYLENE

LD50 (Dermal):	4350 mg/kg Rabbit
ATE (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	3523 mg/kg Rat
LC50 (Inhalation vapours):	26 mg/l/4h Rat
ATE (Inhalation vapours):	11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

ALIPHATIC POLYISOCYANATE

LC50 (Inhalation mists/powders):	0,39 mg/l/4h Rat
ATE (Inhalation mists/powders):	1,5 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Dermal):	> 5000 mg/kg Rat
LD50 (Oral):	8530 mg/kg Rat

TOLUENE

LD50 (Dermal):	12124 mg/kg Rabbit
LD50 (Oral):	5580 mg/kg Rat
LC50 (Inhalation vapours):	28,1 mg/l/4h Rat

CYCLOHEXANONE

ATE (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	1890 mg/kg Rat
LC50 (Inhalation vapours):	> 6,2 mg/l/4h Rat
ATE (Inhalation vapours):	11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

N-BUTYL ACETATE

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

HEXAMETHYLENE-DI-ISOCYANATE

ATE (Oral):	500 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LC50 (Inhalation vapours):	0,124 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

SECTION 11. Toxicological information ... / >>

Sensitising for the skin

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
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".

TOLUENE
Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 1999).
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

REPRODUCTIVE TOXICITY

Suspected of damaging the unborn child

STOT - SINGLE EXPOSURE

May cause respiratory irritation
May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

May cause damage to organs

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: >20,5 mm2/sec (40°C)

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

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

Information not available

12.2. Persistence and degradability

XYLENE
Solubility in water 100 - 1000 mg/l
Rapidly degradable

ALIPHATIC POLYISOCYANATE
Solubility in water 0,1 - 100 mg/l

2-METHOXY-1-METHYLETHYL ACETATE
Solubility in water > 10000 mg/l

TOLUENE
Solubility in water 100 - 1000 mg/l

SECTION 12. Ecological information ... / >>

CYCLOHEXANONE	
Solubility in water	0,1 - 100 mg/l
ETHYL ACETATE	
Solubility in water	> 10000 mg/l
N-BUTYL ACETATE	
Solubility in water	1000 - 10000 mg/l
ISOBUTYL ACETATE	
Solubility in water	1000 - 10000 mg/l

12.3. Bioaccumulative potential

XYLENE	
Partition coefficient: n-octanol/water	3,12
BCF	25,9
ALIPHATIC POLYISOCYANATE	
Partition coefficient: n-octanol/water	5,54
BCF	367,7
2-METHOXY-1-METHYLETHYL ACETATE	
Partition coefficient: n-octanol/water	1,2
TOLUENE	
Partition coefficient: n-octanol/water	2,73
BCF	90
CYCLOHEXANONE	
Partition coefficient: n-octanol/water	0,86
ETHYL ACETATE	
Partition coefficient: n-octanol/water	0,68
BCF	30
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
HEXAMETHYLENE-DI-ISOCYANATE	
Partition coefficient: n-octanol/water	3,2
BCF	3,2

12.4. Mobility in soil

XYLENE	
Partition coefficient: soil/water	2,73
ALIPHATIC POLYISOCYANATE	
Partition coefficient: soil/water	7,3
CYCLOHEXANONE	
Partition coefficient: soil/water	1,18
N-BUTYL ACETATE	
Partition coefficient: soil/water	< 3

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. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

SECTION 12. Ecological information ... / >>

12.7. 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.
The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.
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 or ID number

ADR / RID, IMDG, IATA: UN 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: II

14.5. Environmental hazards

ADR / RID: NO
IMDG: not marine pollutant
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 5 lt	Tunnel restriction code: (D/E)
	Special provision: 163, 367, 640D, 650		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 lt	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 364
	Passengers:	Maximum quantity: 5 L	Packaging instructions: 353
	Special provision:	A3, A72, A192	

14.7. Maritime transport in bulk according to IMO instruments

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/EU: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product		
Point	3 - 40	
Contained substance		
Point	75	
Point	48	TOLUENE REACH Reg.: 01-2119471310-51
Point	74	DIISOCYANATES

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to Regulation (EU) 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
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 1	Acute toxicity, 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
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H330	Fatal if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.

SECTION 16. Other information ... / >>

H373	May cause damage to organs through prolonged or repeated exposure.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 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: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 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: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- 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) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) 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
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13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)

SECTION 16. Other information ... / >>

22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 2023/707
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
25. Delegated Regulation (UE) 2023/1435 (XX Atp. CLP)
26. Delegated Regulation (UE) 2024/197 (XXI 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
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 / 08 / 11 / 12 / 13 / 14.