

## Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

#### 1.1. Product identifier

Code: **02W**  
Product name: **X-POWDER**

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

Intended use: **SOLVENT-BASED URETHANE IMPREGNATING AGENT**

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

Name: **NORD RESINE S.p.A.**  
Full address: **Via Fornace Vecchia, 79**  
District and Country: **31058 Susegana (TV) Italia**  
Tel.: **+39 0438-437511**  
Fax: **+39 0438-435155**e-mail address of the competent person responsible for the Safety Data Sheet: **annabreda@nordresine.com**Supplier: **NORD RESINE S.p.A.**

#### 1.4. Emergency telephone number

For urgent inquiries refer to: **+39 0438 437511**

### 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.
Acute toxicity, category 4	H332	Harmful if inhaled.
Eye irritation, category 2	H319	Causes serious eye 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.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

#### 2.2. Label elements

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

Hazard pictograms:

Signal words: **Danger**

### SECTION 2. Hazards identification ... / >>

**Hazard statements:**

<b>H225</b>	Highly flammable liquid and vapour.
<b>H332</b>	Harmful if inhaled.
<b>H319</b>	Causes serious eye irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H336</b>	May cause drowsiness or dizziness.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.
<b>EUH204</b>	Contains isocyanates. May produce an allergic reaction.

**Precautionary statements:**

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P280</b>	Wear protective gloves/ protective clothing / eye protection / face protection.
<b>P370+P378</b>	In case of fire: use carbon anhydride, foam, nebulized water to extinguish.
<b>P261</b>	Avoid breathing dust / fume / gas / mist / vapours / spray.
<b>P233</b>	Keep container tightly closed.
<b>P312</b>	Call a POISON CENTRE / doctor / . . . if you feel unwell.

**Contains:** ALIPHATIC POLYISOCYANATE  
 ETHYL ACETATE  
 SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM  
 2-METHOXY-1-METHYLETHYL ACETATE

Product not intended for uses provided for by Directive 2004/42/EC.

### 2.3. Other hazards

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

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>ETHYL ACETATE</b>		
CAS	141-78-6	75 $\leq$ x < 100
EC	205-500-4	
INDEX	607-022-00-5	
REACH Reg.	01-2119475103-46	
<b>ALIPHATIC POLYISOCYANATE</b>		
CAS	67892-85-7	12 $\leq$ x < 19
EC		
INDEX		
<b>SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM</b>		
CAS	64742-95-6	4 $\leq$ x < 8
EC	265-199-0	
INDEX	649-356-00-4	
REACH Reg.	01-2119455851-35	
<b>2-METHOXY-1-METHYLETHYL ACETATE</b>		
CAS	108-65-6	1 $\leq$ x < 4
EC	203-603-9	
INDEX	607-195-00-7	
REACH Reg.	01-2119475791-29	
<b>TOSYL ISOCYANATE</b>		
CAS	4083-64-1	0 $\leq$ x < 1
EC	223-810-8	
INDEX	615-012-00-7	

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

REACH Reg. 01-2119980050-47

**HEXAMETHYLENE-DI-ISOCYANATE**CAS 822-06-0  $0 \leq x < 0,5$ 

EC 212-485-8

INDEX 615-011-00-1

REACH Reg. 01-2119457571-37

**TOSYL CHLORIDE**CAS 98-59-9  $0 \leq x < 1$ 

EC 202-684-8

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**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****Skin Sens. 1 H317:  $\geq 0,5\%$ , Resp. Sens. 1 H334:  $\geq 0,5\%$** **LD50 Oral: 746 mg/kg, LC50 Inhalation vapours: 0,124 mg/l/4h****Skin Corr. 1B H314, Eye Dam. 1 H318, EUH029****EUH029:  $\geq 0\%$** 

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

**SECTION 4. First aid measures****4.1. Description of first aid measures**

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

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

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

Information not available

**SECTION 5. Firefighting measures****5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

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

**UNSUITABLE EXTINGUISHING EQUIPMENT**

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

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

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

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

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

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. 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.

#### 7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition.

#### 7.3. Specific end use(s)

Information not available

### SECTION 8. Exposure controls/personal protection

#### 8.1. Control parameters

Regulatory References:

CZE	Česká Republika	Nariadení vlády č. 41/2020 Sb. Nariadení vlády, kterým se mění nariadení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α' 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ "σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιογόνους παράγοντες κατά την εργασία"»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os

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

POL	Polska	agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos 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
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
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) 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 2021

#### 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	
AGW	DEU	730	200	1460	400	
MAK	DEU	750	200	1500	400	
VLA	ESP	734	200	1468	400	
VLEP	FRA	734	200	1468	400	
TLV	GRC	734	200	1468	400	
AK	HUN	734		1468		
GVI/KGVI	HRV	734	200	1468	400	
VLEP	ITA	734	200	1468	400	
TGG	NLD	734		1468		
VLE	PRT	734	200	1468	400	
NDS/NDSch	POL	734		1468		
TLV	ROU	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			

##### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,26	mg/l
Normal value in marine water	0,026	mg/l
Normal value for fresh water sediment	1,25	mg/kg
Normal value for marine water sediment	0,125	mg/kg
Normal value for water, intermittent release	1,65	mg/l
Normal value of STP microorganisms	650	mg/l
Normal value for the food chain (secondary poisoning)	200	mg/kg
Normal value for the terrestrial compartment	0,24	mg/kg

### 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
AGW	DEU	270	50	270	50	
MAK	DEU	270	50	270	50	
VLA	ESP	275	50	550	100	SKIN
VLEP	FRA	275	50	550	100	SKIN
TLV	GRC	275	50	550	100	
AK	HUN	275		550		
GVI/KGVI	HRV	275	50	550	100	SKIN
VLEP	ITA	275	50	550	100	SKIN
TGG	NLD	550				
VLE	PRT	275	50	550	100	SKIN
NDS/NDSch	POL	260		520		SKIN
TLV	ROU	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

##### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,635	mg/l
Normal value in marine water	0,0635	mg/l
Normal value for fresh water sediment	3,29	mg/kg
Normal value for marine water sediment	0,329	mg/kg
Normal value for water, intermittent release	6,35	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,29	mg/kg

##### 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				1,67 mg/kg/d				
Inhalation				33 mg/m3				275 mg/m3
Skin				54,8 mg/kg/d				153,5 mg/kg/d

#### TOSYL ISOCYANATE

##### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
GVI/KGVI	HRV	0,02		0,07		Kao NCO
WEL	GBR	0,02		0,07		AS NCO

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

#### 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	
AGW	DEU	0,035	0,005	0,035 (C)	0,005 (C)	
MAK	DEU	0,035	0,005	0,035 (C)	0,005 (C)	C = 0,070 mg/m3
VLA	ESP	0,035	0,005			
VLEP	FRA	0,075	0,01	0,15	0,02	
AK	HUN	0,035		0,035		
NDS/NDSch	POL	0,04		0,08		SKIN
TLV	ROU	0,05	0,007	1	0,14	
MV	SVN	0,035	0,005	0,035	0,005	
TLV-ACGIH		0,034	0,005			

##### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0774	mg/l
Normal value in marine water	0,00774	mg/l
Normal value for fresh water sediment	0,01334	mg/kg
Normal value for marine water sediment	0,00133	mg/kg
	4	
Normal value for water, intermittent release	0,774	mg/l
Normal value of STP microorganisms	8,42	mg/l
Normal value for the terrestrial compartment	0,0026	mg/kg

##### Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Chronic	Chronic	Chronic
Inhalation	local	systemic	local	systemic	0,07	0,07	0,035	0,035
					mg/m3	mg/m3	mg/m3	mg/m3

##### 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.

#### HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

#### SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

#### EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

#### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (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.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

### SECTION 9. Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	characteristic of solvent	
Melting point / freezing point	Not available	
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	Not available	
pH	Not available	
Kinematic viscosity	Not available	
Solubility	soluble in organic solvents	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	0,95 kg/l	
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

VOC (Directive 2010/75/EU)	84,26 % - 800,48	g/litre
VOC (volatile carbon)	47,91 % - 455,19	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.

##### ETHYL ACETATE

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

##### 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.

##### 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.

##### 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.

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

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

##### 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



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

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

**ETHYL ACETATE**

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

**HEXAMETHYLENE-DI-ISOCYANATE**

Avoid exposure to: high temperatures, moisture.

**10.5. Incompatible materials****ETHYL ACETATE**

Incompatible with: acids, bases, strong oxidants, aluminium, nitrates, chlorosulphuric acid. Incompatible materials: plastic materials.

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

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

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

WORKERS: inhalation; contact with the skin.

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

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - mists / powders) of the mixture:	Acute Tox. 4
ATE (Inhalation - vapours) of the mixture:	Acute Tox. 4
ATE (Inhalation - gas) of the mixture:	Acute Tox. 4
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

**ALIPHATIC POLYISOCYANATE**

LD50 (Dermal):

> 2000 mg/kg Rat

LD50 (Oral):

> 5000 mg/kg Rat

LC50 (Inhalation mists/powders):

0,943 mg/l/4h Rat

STA (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)

**SECTION 11. Toxicological information** ... / >>**2-METHOXY-1-METHYLETHYL ACETATE**LD50 (Dermal): > 5000 mg/kg Rat  
LD50 (Oral): 8530 mg/kg Rat**HEXAMETHYLENE-DI-ISOCYANATE**LD50 (Oral): 746 mg/kg Rat  
LC50 (Inhalation vapours): 0,124 mg/l/4h RatSKIN CORROSION / IRRITATION

Repeated exposure may cause skin dryness or cracking.

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Respiratory sensitization

Information not available

Skin sensitization

Information not available

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSUREMay cause respiratory irritation  
May cause drowsiness or dizzinessTarget organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

**SECTION 11. Toxicological information** ... / >>Target organs

Information not available

Route of exposure

Information not available

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**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**

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

**12.1. Toxicity**

HEXAMETHYLENE-DI-ISOCYANATE	
LC50 - for Fish	22 mg/l/96h
EC50 - for Crustacea	89,1 mg/l/48h
Chronic NOEC for Algae / Aquatic Plants	11,7 mg/l

**12.2. Persistence and degradability**

2-METHOXY-1-METHYLETHYL ACETATE	
Solubility in water	> 10000 mg/l
Rapidly degradable	
ETHYL ACETATE	
Solubility in water	> 10000 mg/l
Rapidly degradable	
HEXAMETHYLENE-DI-ISOCYANATE	
NOT rapidly degradable	
TOSYL ISOCYANATE	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM	
Rapidly degradable	

**12.3. Bioaccumulative potential**

2-METHOXY-1-METHYLETHYL ACETATE	
Partition coefficient: n-octanol/water	1,2
ETHYL ACETATE	
Partition coefficient: n-octanol/water	0,68
BCF	30
HEXAMETHYLENE-DI-ISOCYANATE	
Partition coefficient: n-octanol/water	3,2
BCF	3,2
TOSYL ISOCYANATE	
Partition coefficient: n-octanol/water	0,6

**12.4. Mobility in soil**

### SECTION 12. Ecological information ... / >>

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM  
Partition coefficient: soil/water 1,78

#### 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  $\geq$  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.

#### 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.

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: 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: NO

IATA: NO

**SECTION 14. Transport information** ... / >>**14.6. Special precautions for user**

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

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  $\geq$  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:

<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Acute Tox. 1</b>	Acute toxicity, category 1
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>Skin Corr. 1B</b>	Skin corrosion, category 1B
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>Resp. Sens. 1</b>	Respiratory sensitization, category 1
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>Aquatic Chronic 2</b>	Hazardous to the aquatic environment, chronic toxicity, category 2
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H330</b>	Fatal if inhaled.

**SECTION 16. Other information** ... / >>

<b>H302</b>	Harmful if swallowed.
<b>H332</b>	Harmful if inhaled.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H319</b>	Causes serious eye irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H334</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>H317</b>	May cause an allergic skin reaction.
<b>H336</b>	May cause drowsiness or dizziness.
<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH014</b>	Reacts violently with water.
<b>EUH029</b>	Contact with water liberates toxic gas.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.
<b>EUH204</b>	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 as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- 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 as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 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
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 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)

**SECTION 16. Other information** ... / >>

20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)  
21. Delegated Regulation (UE) 2021/849 (XVII 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 / 02 / 03 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.