

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
Product name CATALIZZATORE: PLHN,
UFI : E063-H08T-J00N-C9WR

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use Pad printing hardener.

1.3. Details of the supplier of the safety data sheet
Name COMEC ITALIA SRL
Full address Piazzale del lavoro 149
District and Country 21044 Cavarina (VA)
ITALIA
Tel. +39 0331 219516
Fax +39 0331 216161

e-mail address of the competent person
responsible for the Safety Data Sheet
Supplier: info@comec-italia.it
Edgardo Baggini

1.4. Emergency telephone number
For urgent inquiries refer to
Centro Antiveleni di Milano 02 66101029
(Niguarda Ca Granda - Milano)
Centro Antiveleni di Pavia 0382 24444
(Fondazione Maugeri - Pavia)
Centro Antiveleni di Bergamo 800 883300
(Papa Giovanni XXIII - Bergamo)
Centro Antiveleni di Verona 800 011858
(AOUI - Verona)
Centro Antiveleni di Firenze 055 7947819
(Careggi - Firenze)
Centro Antiveleni di Roma 06 3054343
(Agostino Gemelli - Roma)
Centro Antiveleni di Roma 06 49978000
(Umberto I - Roma)
Centro Antiveleni di Roma 06 68593726
(Ospedale pediatrico Bambino Gesù - Roma)
Centro Antiveleni di Napoli 081 5453333
(Antonio Cardarelli - Napoli)
Centro Antiveleni di Foggia 800 183459
(Azienda ospedaliera universitaria - Foggia)

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

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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 3	H226	Flammable liquid and vapour.
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.
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.

2.2. Label elements

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

Hazard pictograms:



Signal words: Warning

Hazard statements:

H226	Flammable liquid and vapour.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
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 chemical powder, CO2 or dry send to extinguish.
P261	Avoid breathing dust, gas or vapours.
P312	Call a POISON CENTRE or a doctor if you feel unwell.
P264	Wash the hands thoroughly after handling.

Contains: XYLENE
Hexamethylene diisocyanate homopolymer
HEXAMETHYLENE-DI-ISOCYANATE

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

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
Hexamethylene diisocyanate homopolymer		
INDEX -	74 ≤ x < 78	Acute Tox. 4 H332, STOT SE 3 H335, Skin Sens. 1 H317
EC 500-060-2		LC50 Inhalation mists/powders: 1,5 mg/l/4h
CAS 28182-81-2		
REACH Reg. 01-2119485796-17		
XYLENE		
INDEX 601-022-00-9	12 ≤ x < 13,5	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, LC50 Inhalation vapours: 11,58 mg/l/4h
CAS 1330-20-7		
REACH Reg. 01-2119488216-32-xxxx		
2-METHOXY-1-METHYLETHYL ACETATE		
INDEX 607-195-00-7	12 ≤ x < 13,5	Flam. Liq. 3 H226, STOT SE 3 H336
EC 203-603-9		
CAS 108-65-6		
REACH Reg. 01-2119475791-29-xxxx		
HEXAMETHYLENE-DI-ISOCYANATE		
INDEX 615-011-00-1	0,192 ≤ x < 0,202	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		LD50 Oral: 746 mg/kg, LC50 Inhalation vapours: 0,124 mg/l/4h

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CAS 822-06-0
REACH Reg. 01-2119457571-37-
xxxx

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

SECTION 4. First aid measures

4.1. Description of first aid measures

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.

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

Call a POISON CENTRE or a doctor if you feel unwell.

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

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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. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. 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:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
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
DEU	Deutschland	Forschungsgemeinschaft MAK- und BAT-Werte-Liste 2022 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe Mitteilung 58
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
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
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
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 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
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
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
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
TUR	Türkiye	Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733; 20.10.2023 / 32345.
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

Hexamethylene diisocyanate homopolymer

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,127	mg/l
Normal value in marine water	0,0127	mg/l
Normal value for fresh water sediment	266700	mg/kg
Normal value for marine water sediment	26670	mg/kg
Normal value for water, intermittent release	1,27	mg/l
Normal value of STP microorganisms	38,3	mg/l
Normal value for the terrestrial compartment	53182	mg/kg

Health - Derived no-effect level - DNEL / DMEL								
Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation					1 mg/m3		0,5 mg/m3	

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value										
Type	Country	TWA/8h		STEL/15min		Remarks / Observations				
		mg/m3	ppm	mg/m3	ppm					
TLV	BGR	275	50	550	100	SKIN				
TLV	CZE	270	49,14	550	100,1	SKIN				
AGW	DEU	270	50	270	50					
MAK	DEU	270	50	270	50					
TLV	DNK	275	50	550	100	SKIN	E			
VLA	ESP	275	50	550	100	SKIN				
VLEP	FRA	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				
NGV/KGV	SWE	275	50	550	100	SKIN				
ESD	TUR	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/l					
Normal value for water, intermittent release				6,35	mg/l					
Normal value of STP microorganisms				100	mg/l					
Normal value for the terrestrial compartment				0,29	mg/kg					
Health - Derived no-effect level - DNEL / DMEL										
		Effects on consumers			Effects on workers					
Route of exposure		Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic	
Oral				VND	1,67 mg/kg					
Inhalation				33 mg/m3	33 mg/m3	550 mg/m3		VND	275 mg/m3	
Skin				VND	54,8 mg/kg			VND	153,5 mg/kg	
XYLENE										
Threshold Limit Value										
Type	Country	TWA/8h		STEL/15min		Remarks / Observations				
		mg/m3	ppm	mg/m3	ppm					
TLV	BGR	221	50	442	100	SKIN				
TLV	CZE	200	45,4	400	90,8	SKIN				
AGW	DEU	220	50	440	100	SKIN				
MAK	DEU	220	50	440	100	SKIN				
TLV	DNK	109	25			SKIN	E			
VLA	ESP	221	50	442	100	SKIN				

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VLEP	FRA	221	50	442	100	SKIN			
AK	HUN	221	50	442	100	SKIN			
VLEP	ITA	221	50	442	100	SKIN			
TGG	NLD	210		442		SKIN			
VLE	PRT	221	50	442	100	SKIN			
NDS/NDSch	POL	100		200		SKIN			
TLV	ROU	221	50	442	100	SKIN			
NGV/KGV	SWE	221	50	442	100	SKIN			
ESD	TUR	221	50	442	100	SKIN			
WEL	GBR	220	50	441	100	SKIN			
OEL	EU	221	50	442	100	SKIN			
TLV-ACGIH			20						
Predicted no-effect concentration - PNEC									
Normal value in fresh water				0,327		mg/l			
Normal value in marine water				0,327		mg/l			
Normal value for fresh water sediment				12,46		mg/kg			
Normal value for marine water sediment				12,46		mg/kg			
Normal value for water, intermittent release				0,327		mg/l			
Normal value of STP microorganisms				6,58		mg/l			
Normal value for the terrestrial compartment				2,31		mg/kg			
Health - Derived no-effect level - DNEL / DMEL									
		Effects on consumers			Effects on workers				
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic	
Oral			VND	1,6 mg/kg/d					
Inhalation	174 mg/m3	174 mg/m3	VND	14,8 mg/m3	289 mg/m3	289 mg/m3	77 mg/m3	77 mg/m3	
Skin			VND	108 mg/kg/d	174 mg/m3	VND	VND	180 mg/kg	
HEXAMETHYLENE-DI-ISOCYANATE									
Threshold Limit Value									
Type	Country	TWA/8h		STEL/15min		Remarks / Observations			
		mg/m3	ppm	mg/m3	ppm				
TLV	BGR	0,1							
TLV	CZE	0,035		0,07					
AGW	DEU	0,035	0,005	0,035	0,005				
MAK	DEU	0,035	0,005	0,035	0,005				
TLV	DNK	0,035	0,005	0,07	0,01				
VLA	ESP	0,035	0,005						
VLEP	FRA	0,075	0,01	0,15	0,02				
AK	HUN	0,035		0,035					
VLEP	ITA	0,034	0,005						
NDS/NDSch	POL	0,04		0,08					
NGV/KGV	SWE	0,02	0,002	0,03 (C)	0,005 (C)				
WEL	GBR	0,02		0,07					

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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 ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

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.

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 A 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	transparent	
Odour	amino	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	23 ≤ T ≤ 60 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	immiscible	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	1,09	
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

Information not available

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SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

Hexamethylene diisocyanate homopolymer

Stable in normal conditions of use and storage.

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.

Hexamethylene diisocyanate homopolymer

Stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

Hexamethylene diisocyanate homopolymer

Reacts with: alcohols,amines.Forms: high temperatures.Reacts with: water.Forms: carbon dioxide.May develop: pressure.May form flammable mixtures with: metals.May form: toxic gases.On contact with: strong oxidising agents,mineral acids.

2-METHOXY-1-METHYLETHYL ACETATE

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

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.

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.

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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.

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.

XYLENE

WORKERS: inhalation; contact with the skin.

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

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).

XYLENE

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

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.

ACUTE TOXICITY

ATE (Inhalation - mists / powders) of the mixture:	1,92 mg/l
ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	>2000 mg/kg

Hexamethylene diisocyanate homopolymer	
LD50 (Dermal):	> 2000 mg/kg Coniglio / Rabbit
LD50 (Oral):	> 2500 mg/kg Ratto / Rat (OECD 401)
LC50 (Inhalation mists/powders):	1,5 mg/l/4h Ratto / Rat (OECD 401)

2-METHOXY-1-METHYLETHYL ACETATE	
LD50 (Dermal):	> 5000 mg/kg Coniglio / Rabbit
LD50 (Oral):	8500 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	4345 ppm/6h Ratto / Rat

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):	11,58 mg/l/4h Rat

HEXAMETHYLENE-DI-ISOCYANATE	
LD50 (Dermal):	599 mg/kg/24h Coniglio / Rabbit
LD50 (Oral):	746 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	0,124 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

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".

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause respiratory irritation

STOT - REPEATED EXPOSURE

May cause damage to organs

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

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

HEXAMETHYLENE-DI-ISOCYANATE		
LC50 - for Fish	> 22 mg/l/96h	
EC50 - for Crustacea	> 89,1 mg/l/48h Dafnie	
EC50 - for Algae / Aquatic Plants	> 77,4 mg/l/72h	
Chronic NOEC for Algae / Aquatic Plants	11,7 mg/l 72h	
2-METHOXY-1-METHYLETHYL ACETATE		
LC50 - for Fish	134 mg/l/96h Pesce, Oncorhynchus mykiss OECD 203	
EC50 - for Crustacea	> 500 mg/l/48h Daphnia magna	
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Selenastrum capricornutum OECD 201	
Chronic NOEC for Fish	47,5 mg/l Oryzias latipes 14 gg OECD 204	
Chronic NOEC for Crustacea	100 mg/l Daphnia magna 21 gg OECD 202	
Hexamethylene diisocyanate homopolymer		
LC50 - for Fish	> 100 mg/l/96h Method: Dir 67/548/CEE, All. V, C.1	
EC50 - for Crustacea	> 100 mg/l/48h Daphnia - Method: Dir 67/548/CEE, All. V, C.2	
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Alghe - Method: Dir 67/548/CEE, All. V, C.3	

12.2. Persistence and degradability

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HEXAMETHYLENE-DI-ISOCYANATE		
NOT rapidly degradable		
XYLENE		
Solubility in water	100 - 1000 mg/l	
Rapidly degradable		
2-METHOXY-1-METHYLETHYL ACETATE		
Solubility in water	> 10000 mg/l	
Rapidly degradable		
OECD GI 301F 83% 10 d		
Hexamethylene diisocyanate homopolymer		
Solubility in water	20 mg/l	
NOT rapidly degradable		
12.3. Bioaccumulative potential		
HEXAMETHYLENE-DI-ISOCYANATE		
Partition coefficient: n-octanol/water	3,2	
BCF	57,63	
XYLENE		
Partition coefficient: n-octanol/water	3,12	
BCF	25,9	
2-METHOXY-1-METHYLETHYL ACETATE		
Partition coefficient: n-octanol/water	1,2	
BCF	100	
Hexamethylene diisocyanate homopolymer		
BCF	367,7 l/kg	
12.4. Mobility in soil		
HEXAMETHYLENE-DI-ISOCYANATE		
Partition coefficient: soil/water	3,77	
XYLENE		
Partition coefficient: soil/water	2,73	
2-METHOXY-1-METHYLETHYL ACETATE		
Partition coefficient: soil/water	1,7	
Hexamethylene diisocyanate homopolymer		
Partition coefficient: soil/water	7,8	
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.
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 1866

14.2. UN proper shipping name

ADR / RID: RESIN SOLUTION
IMDG: RESIN SOLUTION
IATA: RESIN SOLUTION

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3
IMDG: Class: 3 Label: 3
IATA: Class: 3 Label: 3



14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

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

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 It	Tunnel restriction code: (D/E)
IMDG:	Special provision: - EMS: F-E, <u>S-E</u>	Limited Quantities: 5 It	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Passengers:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3	

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

<u>Product</u>		
Point	3 - 40	
<u>Contained substance</u>		
Point	75	HEXAMETHYLENE-DI-ISOCYANATE REACH Reg.: 01-2119457571-37-xxxx
Point	75	XYLENE REACH Reg.: 01-2119488216-32-xxxx
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 \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:

Flam. Liq. 3	Flammable liquid, category 3
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 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
H226	Flammable liquid and vapour.
H330	Fatal if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.

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H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
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.
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
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)

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- 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)
- 22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- 23. Delegated Regulation (UE) 2023/707
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- The Merck Index. - 10th Edition
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- 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.

For information on any exposure scenarios of the substances present in the mixture, contact Sericom Italia srl.

Changes to previous review:
The following sections were modified:
02 / 03 / 04 / 07 / 08 / 11 / 13 / 14 / 15 / 16.