

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2020/878)

## 870021200000N-CATALIZADOR C-212-N

**IRURENA**GROUP  
ADVANCED TECH COATINGS

Version 1 Date of compilation: 28/10/2019

Version 468 (replaces version 467)

Revision date: 09/06/2022

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### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING.

#### 1.1 Product identifier.

Product Name: CATALIZADOR C-212-N  
UFI: R48W-61QD-D008-CAS4

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

Reaction component for varnish and paints

#### Uses advised against:

Uses other than those recommended.

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

Company: **Industrias Químicas Irurena, S.A.**  
Address: Ctra. de Tolosa, s/nº. Apdo. 30  
City: 20730 - Azpeitia  
Province: Gipuzkoa  
Telephone: 943 15 70 99  
E-mail: [irurena@irurenagroup.com](mailto:irurena@irurenagroup.com)  
Web: <https://www.irurenagroup.com>

#### 1.4 Emergency telephone number: 915 620 420 (Inst.Toxicologia) (Available 24 hours)

### SECTION 2: HAZARDS IDENTIFICATION.

#### 2.1 Classification of the substance or mixture.

In accordance with Regulation (EU) No 1272/2008:

Asp. Tox. 1 : May be fatal if swallowed and enters airways.  
Flam. Liq. 2 : Highly flammable liquid and vapour.  
Repr. 2 : Suspected of damaging fertility or the unborn child.  
STOT RE 2 : May cause damage to organs through prolonged or repeated exposure.  
STOT SE 3 : May cause respiratory irritation.  
STOT SE 3 : May cause drowsiness or dizziness.  
Skin Irrit. 2 : Causes skin irritation.  
Skin Sens. 1 : May cause an allergic skin reaction.

#### 2.2 Label elements.

##### Labelling in accordance with Regulation (EU) No 1272/2008:

Pictograms:



Signal Word:

**Danger**

Hazard statements:

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

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### Precautionary statements:

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P321 Specific treatment needed, see medical advice  
P331 Do NOT induce vomiting.  
P370+P378 In case of fire: Use extinguisher powder or CO2 to extinguish.

### EUH statements:

- EUH204 Contains isocyanates. May produce an allergic reaction.  
As from 24 August 2023 adequate training is required before industrial or professional use.

### Contains:

toluene  
n-butyl acetate  
Hexamethylene diisocyanate, oligomers

### 2.3 Other hazards.

The mixture does not contain substances classified as PBT.  
The mixture does not contain substances classified as vPvB.  
The mixture does not contain any endocrine disrupting properties substances.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

### 3.1 Substances.

Not Applicable.

### 3.2 Mixtures.

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	Specifics concentration limits and Acute toxicity estimate
Index No: 601-021-00-3 CAS No: 108-88-3 EC No: 203-625-9 Registration No: 01-2119471310-51-XXXX	[1] [2] toluene	20 - 50 %	Asp. Tox. 1, H304 - Flam. Liq. 2, H225 - Repr. 2, H361d *** - STOT RE 2 *, H373 ** - STOT SE 3, H336 - Skin Irrit. 2, H315	-
CAS No: 28182-81-2 Registration No: 01-2119485796-17-XXXX	Hexamethylene diisocyanate, oligomers	20 - 50 %	Acute Tox. 4, H332 - STOT SE 3, H335 - Skin Sens. 1, H317	-
Index No: 607-025-00-1 CAS No: 123-86-4 EC No: 204-658-1 Registration No: 01-2119485493-29-XXXX	[2] n-butyl acetate	1 - 20 %	Flam. Liq. 3, H226 - STOT SE 3, H336	-

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Index No: 601-022-00-9 CAS No: 1330-20-7 EC No: 215-535-7 Registration No: 01-2119488216-32-XXXX	[1] [2] xylene	1 - 10 %	Acute Tox. 4 *, H312 - Acute Tox. 4 *, H332 - Flam. Liq. 3, H226 - Skin Irrit. 2, H315	-
Index No: 615-011-00-1 CAS No: 822-06-0 EC No: 212-485-8 Registration No: 01-2119457571-37-XXXX	[2] hexamethylene-di-isocyanate	0.1 - 0.5 %	Acute Tox. 3 *, H331 - Eye Irrit. 2, H319 - Resp. Sens. 1, H334 - STOT SE 3, H335 - Skin Irrit. 2, H315 - Skin Sens. 1, H317	Resp. Sens. 1, H334: C ≥ 0,5 % Skin Sens. 1, H317: C ≥ 0,5 %

(\*) The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

\* \*\* \*\*\* See Regulation (EC) No. 1272/2008, Annex VI, section 1.2.

[1] Substance with a European Union exposure limit in the workplace (see section 8.1).

[2] Substance with a national workplace exposure limit (see section 8.1).

### SECTION 4: FIRST AID MEASURES.

IRRITANT MIXTURE. Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

#### 4.1 Description of first aid measures.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

#### Inhalation.

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

#### Eye contact.

Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

#### Skin contact.

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners.

#### Ingestion.

If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

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

Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate.

Harmful Product, prolonged exposure due to inhalation may cause anaesthetic effects and the need for immediate medical assistance.

Long-term chronic exposure may result in injury to certain organs or tissues.

It may cause an allergic reaction, dermatitis, redness or inflammation of the skin.

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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious. Keep the person comfortable. Turn him/her over to the left side and stay there while waiting for medical care.

### SECTION 5: FIREFIGHTING MEASURES.

The product is Highly flammable, it can cause or considerably worsen a fire, the necessary prevention measures should be taken and risks avoided. In case of fire, the following measures are recommended:

#### 5.1 Extinguishing media.

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### Suitable extinguishing media:

Extinguisher powder or CO<sub>2</sub>. In case of more serious fires, also alcohol-resistant foam and water spray.

### Unsuitable extinguishing media:

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

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

#### **Special risks.**

Exposure to combustion or decomposition products can be harmful to your health.

During a fire and depending on its magnitude the following may occur:

- Carbon monoxide, carbon dioxide.
- Flammable vapors or gases.

### **5.3 Advice for firefighters.**

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways. Follow the instructions given in the emergency or fire evacuation plan or plans if available.

### **Fire protection equipment.**

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots. During extinction and depending on the magnitude and proximity to the fire, additional protective equipment such as chemical protection gloves, heat-reflecting suits or gas-tight suits may be required.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES.**

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

Eliminate possible ignition points and ventilate the area. No smoking. Avoid breathing fumes. For exposure control and individual protection measures, see section 8.

### **6.2 Environmental precautions.**

Product not classified as hazardous for the environment, avoid spillage as much as possible.

### **6.3 Methods and material for containment and cleaning up.**

Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant.

Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations (see section 13).

### **6.4 Reference to other sections.**

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

## **SECTION 7: HANDLING AND STORAGE.**

### **7.1 Precautions for safe handling.**

The fumes are heavier than air and can spread across the ground. They can form explosive mixtures with air. Prevent the creation of flammable or explosive fume concentrations in the air; prevent fume concentrations above work exposure limits. The product must only be used in areas where all unprotected flames and other ignition points have been eliminated. Electrical equipment has to be protected according to applicable standards.

The product can be electrostatically charged: always use earth grounds when transferring the product. Operators must use anti-static footwear and clothing, and floors must be conductors.

Keep the container tightly closed and isolated from heat sources, sparks, and fire. Do not use tools that can cause sparks. For personal protection, see section 8.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

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

Store according to local legislation. Observe indications on the label. Store the containers between 5 and 25 °C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from oxidising

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agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

Classification and threshold amount of storage in accordance with Annex I to Directive 2012/18/EU (SEVESO III):

Code	Description	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
P5b	FLAMMABLE LIQUIDS	50	200

## 7.3 Specific end use(s).

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

### 8.1 Control parameters.

Work exposure limit for:

Name	CAS No.	Country	Limit value	ppm	mg/m <sup>3</sup>
toluene	108-88-3	European Union [1]	Eight hours	50 (skin)	192 (skin)
			Short term	100 (skin)	384 (skin)
		United Kingdom [2]	Eight hours	50	191
			Short term	100	384
		Éire [3]	Eight hours	50	192
			Short term	100	384
		United States [4] (Cal/OSHA)	Eight hours	10	
			Short term	150 (Ceiling) 500	
		United States [5] (NIOSH)	Eight hours	100	
			Short term	150	
n-butyl acetate	123-86-4	United States [6] (OSHA)	Eight hours	200	
			Short term	300 Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift: 500 [10 min]	
		United Kingdom [2]	Eight hours	150	724
			Short term	200	966
		Éire [3]	Eight hours	150	710
			Short term	200	950
		United States [4] (Cal/OSHA)	Eight hours	150	
			Short term	200	
		United States [5] (NIOSH)	Eight hours	150	
			Short term	200	
xylene	1330-20-7	European Union [1]	Eight hours	50 (skin)	221 (skin)
			Short term	100 (skin)	442 (skin)
		United Kingdom [2]	Eight hours	50	220
			Short term	100	441
		Éire [3]	Eight hours	50	221
			Short term	100	442
		United States [4] (Cal/OSHA)	Eight hours	100	
			Short term	150 (Ceiling) 300	
		United States [5] (NIOSH)	Eight hours	100	
			Short term	150	

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		United States [6] (OSHA)	<b>Eight hours</b>	100	435
			<b>Short term</b>		
hexamethylene-di-isocyanate	822-06-0	Éire [3]	<b>Eight hours</b>	0,005	
			<b>Short term</b>		

[1] According both Binding Occupational Exposure Limits (BOELVs) and Indicative Occupational Exposure Limits (IOELVs) adopted by Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL).

[2] According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adopted by Health and Safety Executive.

[3] According Code of Practice for the Safety, Health and Welfare at Work (Chemicals Agents) Regulations adopted by Health and Safety Authority (HSA).

[4] California Division of Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).

[5] National Institute for Occupational Safety and Health. NIOSH Recommendations for occupational safety and health, Compendium of Policy Documents and Statements, January, 1992, DHHS (NIOSH) Publication No. 92-100.

[6] Occupational Safety and Health Administration, United States Department of Labor. Permissible Exposure limits (PELs), California Division of Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).

The product does NOT contain substances with Biological Limit Values.

Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
toluene CAS No: 108-88-3 EC No: 203-625-9	DNEL (Workers)	Inhalation, Chronic, Local effects	192 (mg/m <sup>3</sup> )
	DNEL (Consumers)	Inhalation, Chronic, Local effects	56,5 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Chronic, Systemic effects	192 (mg/m <sup>3</sup> )
	DNEL (Consumers)	Inhalation, Chronic, Systemic effects	56,5 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Short term, Systemic effects	384 (mg/m <sup>3</sup> )
	DNEL (Consumers)	Inhalation, Short term, Systemic effects	226 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Short term, Local effects	384 (mg/m <sup>3</sup> )
	DNEL (Consumers)	Inhalation, Short term, Local effects	226 (mg/m <sup>3</sup> )
	DNEL (Workers)	Dermal, Chronic, Systemic effects	384 (mg/kg bw/day)
	DNEL (Consumers)	Dermal, Chronic, Systemic effects	226 (mg/kg bw/day)
	DNEL (Consumers)	Oral, Chronic, Systemic effects	8,13 (mg/kg bw/day)
	DNEL (Workers)	Inhalation, Chronic, Systemic effects	480 (mg/m <sup>3</sup> )
n-butyl acetate CAS No: 123-86-4 EC No: 204-658-1	DNEL (Consumers)	Inhalation, Chronic, Systemic effects	102,34 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Short term, Systemic effects	960 (mg/m <sup>3</sup> )
	DNEL (Consumers)	Inhalation, Short term, Systemic effects	859,7 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Chronic, Local effects	480 (mg/m <sup>3</sup> )
	DNEL (Consumers)	Inhalation, Chronic, Local effects	102,34 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Short term, Local effects	960 (mg/m <sup>3</sup> )
	DNEL (Consumers)	Inhalation, Short term, Local effects	859,7 (mg/m <sup>3</sup> )
	DNEL (Consumers)	Oral, Chronic, Systemic effects	3,4 (mg/kg bw/day)
	DNEL (Consumers)	Dermal, Chronic, Systemic effects	3,4 (mg/kg bw/day)

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xylene CAS No: 1330-20-7 EC No: 215-535-7	DNEL (Workers)	Inhalation, Chronic, Systemic effects	77 (mg/m <sup>3</sup> )
hexamethylene-di-isocyanate CAS No: 822-06-0 EC No: 212-485-8	DNEL (Workers)	Inhalation, Chronic, Local effects	0,035 (mg/m <sup>3</sup> )
	DNEL (Workers)	Inhalation, Chronic, Systemic effects	0,035 (mg/m <sup>3</sup> )

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

Concentration levels PNEC:

Name	Details	Value
toluene CAS No: 108-88-3 EC No: 203-625-9	aqua (freshwater)	0,68 (mg/L)
	aqua (marine water)	0,68 (mg/L)
	aqua (intermittent releases)	0,68 (mg/L)
	STP	13,61 (mg/L)
	sediment (freshwater)	16,39 (mg/kg sediment dw)
	sediment (marine water)	16,39 (mg/kg sediment dw)
n-butyl acetate CAS No: 123-86-4 EC No: 204-658-1	aqua (freshwater)	0,18 (mg/l)
	aqua (marine water)	0,018 (mg/l)
	aqua (intermittent releases)	0,36 (mg/l)
	STP	35,6 (mg/l)
	sediment (freshwater)	0,981 (mg/kg sediment dw)
	sediment (marine water)	0,0981 (mg/kg sediment dw)

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

### 8.2 Exposure controls.

#### Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

<b>Concentration:</b>		<b>100 %</b>	
<b>Uses:</b>		<b>Reaction component for varnish and paints</b>	
<b>Breathing protection:</b>			
PPE:	Filter mask for protection against gases and particles.		
Characteristics:	«CE» marking, category III. The mask must have a wide field of vision and an anatomically designed form in order to be sealed and watertight.		
CEN standards:	EN 136, EN 140, EN 405		
Maintenance:	Should not be stored in places exposed to high temperatures and damp environments before use. Special attention should be paid to the state of the inhalation and exhalation valves in the face adaptor.		
Observations:	Read carefully the manufacturer's instructions regarding the equipment's use and maintenance. Attach the necessary filters to the equipment according to the specific nature of the risk (Particles and aerosols: P1-P2-P3, Gases and vapours: A-B-E-K-AX), changing them as advised by the manufacturer.		
Filter Type needed:	A2		
<b>Hand protection:</b>			
PPE:	Protective gloves against chemicals.		
Characteristics:	«CE» marking, category III.		
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420		
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.		
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight. Always use with clean, dry hands.		
Material:	PVC (polyvinyl chloride)	Breakthrough time (min.):	> 480
		Material thickness (mm):	0,35

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### Eye protection:

PPE:	Protective goggles with built-in frame.	
Characteristics:	«CE» marking, category II. Eye protector with built-in frame for protection against dust, smoke, fog and vapour.	
CEN standards:	EN 165, EN 166, EN 167, EN 168	
Maintenance:	Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.	
Observations:	Some signs of wear and tear include: yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.	

### Skin protection:

PPE:	Anti-static protective clothing.	
Characteristics:	«CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.	
CEN standards:	EN 340, EN 1149-1, EN 1149-2, EN 1149-3, EN 1149-5	
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.	
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.	

PPE:	Anti-static safety footwear.	
Characteristics:	«CE» marking, category II.	
CEN standards:	EN ISO 13287, EN ISO 20344, EN ISO 20346	
Maintenance:	The footwear should be checked regularly	
Observations:	The level of comfort during use and acceptability are factors that are assessed very differently depending on the user. Therefore, it is advisable to try on different footwear models and, if possible, different widths.	

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

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

Physical state: Liquid

Colour: 0

Odour: With solvent

Odour threshold: Not applicable/Not available due to the nature/properties of the product

Melting point: < 0 °C

Freezing point: Not applicable/Not available due to the nature/properties of the product

Boiling point or initial boiling point and boiling range: 60 °C

Flammability: Not applicable/Not available due to the nature/properties of the product

Lower explosion limit: 0,8% Aprox.

Upper explosion limit: Not applicable/Not available due to the nature/properties of the product

Flash point: 13 °C

Auto-ignition temperature: > 200 °C

Decomposition temperature: > 200 (Catalyst 60 °C)

pH: Not applicable (Substance/mixture is non-soluble (in water)).

Kinematic viscosity: Not applicable/Not available due to the nature/properties of the product

Solubility: In solvents

Hydrosolubility: Partially miscible

Liposolubility: Miscible

Partition coefficient n-octanol/water (log value): Not applicable/Not available due to the nature/properties of the product

Vapour pressure: Not applicable/Not available due to the nature/properties of the product

Absolute density: Not applicable/Not available due to the nature/properties of the product

Relative density: .975

Relative vapour density: Bigger than the air

Particle characteristics: Not applicable/Not available due to the nature/properties of the product

### 9.2 Other information

Viscosity: See Technical Data Sheet

Explosive properties: Not Explosive, but may form explosive mixtures with air

Oxidizing properties: Non-Oxidizing (Except Catalyst)

Dropping point: Not applicable/Not available due to the nature/properties of the product

Blink: Not applicable/Not available due to the nature/properties of the product

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### SECTION 10: STABILITY AND REACTIVITY.

#### 10.1 Reactivity.

The product does not present hazards by their reactivity.

#### 10.2 Chemical stability.

Stable under the recommended handling and storage conditions (see section 7).

#### 10.3 Possibility of hazardous reactions.

The product does not present possibility of hazardous reactions.

#### 10.4 Conditions to avoid.

Avoid any improper handling.

#### 10.5 Incompatible materials.

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

#### 10.6 Hazardous decomposition products.

Depending on conditions of use, can be generated the following products:

- COx (carbon oxides).
- Organic compounds.
- Aromatics compounds.

### SECTION 11: TOXICOLOGICAL INFORMATION.

**IRRITANT MIXTURE.** The inhalation of spray mist or suspended particulates can irritate the respiratory tract. It can also cause serious respiratory difficulties, central nervous system disorders, and in extreme cases, unconsciousness.

**IRRITANT MIXTURE.** Its repeated or prolonged contact with the skin or mucous membranes can cause irritant symptoms such as reddening of the skin, blisters, or dermatitis. Some of the symptoms may not be immediate. They can cause allergic reactions on the skin.

#### 11.1 Information on hazard classes as defined in Regulation (EC) Nº 1272/2008.

There are no tested data available on the product.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

Exposure to concentrations of solvent fumes above the work exposure limit can have negative effects (for example, irritation of the mucous membranes and respiratory system, adverse effects on the kidneys, liver, and the central nervous system). Among the symptoms are headaches, vertigo, fatigue, muscular weakness, drowsiness, and in extreme cases, unconsciousness.

Based on the properties of isocyanates and taking into account existing technical data on similar products, it appears that this product may cause irritation and / or acute awareness of the respiratory system, leading to an asthmatic condition, a wheezing and chest pressure. Therefore, sensitized individuals may show asthmatic symptoms when exposed to atmospheres containing concentrations below the level of exposure. Repeated exposure can lead to chronic respiratory diseases.

a) acute toxicity;

Not conclusive data for classification.

Acute Toxicity Estimate (ATE):

Mixtures:

ATE (Dermal) = 18.070 mg/kg

b) skin corrosion/irritation;

Product classified:

Skin irritant, Category 2: Causes skin irritation.

c) serious eye damage/irritation;

Based on available data, the classification criteria are not met.

d) respiratory or skin sensitisation;

Product classified:

Skin sensitizer, Category 1: May cause an allergic skin reaction.

e) germ cell mutagenicity;

Not conclusive data for classification.

f) carcinogenicity;

Not conclusive data for classification.

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g) reproductive toxicity;

Product classified:

Reproductive toxicant, Category 2: Suspected of damaging fertility or the unborn child.

h) STOT-single exposure;

Product classified:

Specific target organ toxicity following a single exposure, Category 3: May cause respiratory irritation.

i) STOT-repeated exposure;

Product classified:

Specific target organ toxicity following a repeated exposure, Category 2: May cause damage to organs through prolonged or repeated exposure.

j) aspiration hazard;

Product classified:

Aspiration toxicity, Category 1: May be fatal if swallowed and enters airways.

### 11.2 Information on other hazards.

#### Endocrine disrupting properties

This product does not contain components with endocrine-disrupting properties with effects on human health.

#### Other information

There is no information available on other adverse health effects.

## SECTION 12: ECOLOGICAL INFORMATION.

### 12.1 Toxicity.

No information is available regarding the ecotoxicity of the substances present.

### 12.2 Persistence and degradability.

No information is available regarding the biodegradability of the substances present.

No information is available on the degradability of the substances present.

No information is available about persistence and degradability of the product.

### 12.3 Bioaccumulative potential.

Information about the bioaccumulation of the substances present.

Name	Bioaccumulation			
	Log Pow	BCF	NOECs	Level
toluene CAS No: 108-88-3      EC No: 203-625-9	2,73	-	-	Low
n-butyl acetate CAS No: 123-86-4      EC No: 204-658-1	1,78	-	-	Very low

### 12.4 Mobility in soil.

No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways.

Prevent penetration into the ground.

### 12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

### 12.6 Endocrine disrupting properties.

This product doesn't contain components with environmental endocrine disrupting properties.

### 12.7 Other adverse effects.

No information is available about other adverse effects for the environment.

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### SECTION 13: DISPOSAL CONSIDERATIONS.

#### 13.1 Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

### SECTION 14: TRANSPORT INFORMATION.

Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA for air transport.

**Land:** Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions

**Sea:** Transport by ship: IMDG.

Transport documentation: Bill of lading

**Air:** Transport by plane: ICAO/IATA.

Transport document: Airway bill.

#### 14.1 UN number or ID number.

UN No: UN1263

#### 14.2 UN proper shipping name.

Description:

ADR/RID: UN 1263, PAINT, 3, PG II, (D/E)

IMDG: UN 1263, PAINT, 3, PG II

ICAO/IATA: UN 1263, PAINT, 3, PG II

#### 14.3 Transport hazard class(es).

Class(es): 3

#### 14.4 Packing group.

Packing group: II

#### 14.5 Environmental hazards.

Marine pollutant: No

Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): F-E,S-E

#### 14.6 Special precautions for user.

Labels: 3



Hazard number: 33

ADR LQ: 5 L

IMDG LQ: 5 L

ICAO LQ: 1 L

Provisions concerning carriage in bulk ADR: Not authorized carriage in bulk in accordance with ADR. Proceed in accordance with point 6.

#### 14.7 Maritime transport in bulk according to IMO instruments.

The product is not transported in bulk.

### SECTION 15: REGULATORY INFORMATION.

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

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The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

### Volatile organic compound (VOC)

VOC content (p/p): 63,475 %

VOC content: 618,881 g/l

Product classification according to Annex I of Directive 1218/2006 (SEVESO III): P5b

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles:

Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
48. Toluene CAS No 108-88-3 EC No 203-625-9	Shall not be placed on the market, or used, as a substance or in mixtures in a concentration equal to or greater than 0,1 % by weight where the substance or mixture is used in adhesives or spray paints intended for supply to the general public.
74. Diisocyanates, $O = C = N - R - N = C = O$ , where R is an aliphatic or aromatic hydrocarbon structure of unspecified length	<p>1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:</p> <p>(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or</p> <p>(b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).</p> <p>2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:</p> <p>(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or</p> <p>(b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: 'As from 24 August 2023 adequate training is required before industrial or professional use'.</p> <p>3. For the purpose of this entry 'industrial and professional user(s)' means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.</p> <p>4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:</p> <p>(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).</p> <p>(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:</p> <p>- handling open mixtures at ambient temperature (including foam tunnels);</p>

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	<ul style="list-style-type: none"><li>- spraying in a ventilated booth;</li><li>- application by roller;</li><li>- application by brush;</li><li>- application by dipping and pouring;</li><li>- mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore;</li><li>- cleaning and waste;</li><li>- any other uses with similar exposure through the dermal and/or inhalation route;</li></ul> <p>(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:</p> <ul style="list-style-type: none"><li>- handling incompletely cured articles (e.g. freshly cured, still warm);</li><li>- foundry applications;</li><li>- maintenance and repair that needs access to equipment;</li><li>- open handling of warm or hot formulations (&gt; 45 °C);</li><li>- spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers);</li><li>- and any other uses with similar exposure through the dermal and/or inhalation route.</li></ul> <p>5. Training elements:</p> <p>(a) general training, including on-line training, on:</p> <ul style="list-style-type: none"><li>- chemistry of diisocyanates;</li><li>- toxicity hazards (including acute toxicity);</li><li>- exposure to diisocyanates;</li><li>- occupational exposure limit values;</li><li>- how sensitisation can develop;</li><li>- odour as indication of hazard;</li><li>- importance of volatility for risk;</li><li>- viscosity, temperature, and molecular weight of diisocyanates;</li><li>- personal hygiene;</li><li>- personal protective equipment needed, including practical instructions for its correct use and its limitations;</li><li>- risk of dermal contact and inhalation exposure;</li><li>- risk in relation to application process used;</li><li>- skin and inhalation protection scheme;</li><li>- ventilation;</li></ul>
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- cleaning, leakages, maintenance;
  - discarding empty packaging;
  - protection of bystanders;
  - identification of critical handling stages;
  - specific national code systems (if applicable);
  - behaviour-based safety;
  - certification or documented proof that training has been successfully completed
- (b) intermediate level training, including on-line training, on:
- additional behaviour-based aspects;
  - maintenance;
  - management of change;
  - evaluation of existing safety instructions;
  - risk in relation to application process used;
  - certification or documented proof that training has been successfully completed
- (c) advanced training, including on-line training, on:
- any additional certification needed for the specific uses covered;
  - spraying outside a spraying booth;
  - open handling of hot or warm formulations (> 45 °C);
  - certification or documented proof that training has been successfully completed
6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture(s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.
7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.
8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.
9. Member States shall include in their reports pursuant to Article 117(1) the following information:
- (a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law;

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	(b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates;  (c) national exposure limits for diisocyanates, if there are any;  (d) information about enforcement activities related to this restriction.  10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace.
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### 15.2 Chemical safety assessment.

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## SECTION 16: OTHER INFORMATION.

Complete text of the H phrases that appear in section 3:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Classification codes:

Acute Tox. 3 : Acute toxicity (Inhalation), Category 3  
Acute Tox. 4 : Acute toxicity (Dermal), Category 4  
Acute Tox. 4 : Acute toxicity (Inhalation), Category 4  
Asp. Tox. 1 : Aspiration toxicity, Category 1  
Eye Irrit. 2 : Eye irritation, Category 2  
Flam. Liq. 2 : Flammable liquid, Category 2  
Flam. Liq. 3 : Flammable liquid, Category 3  
Repr. 2 : Reproductive toxicant, Category 2  
Resp. Sens. 1 : Respiratory sensitiser, Category 1  
STOT RE 2 : Specific target organ toxicity following a repeated exposure, Category 2  
STOT SE 3 : Specific target organ toxicity following a single exposure, Category 3  
Skin Irrit. 2 : Skin irritant, Category 2  
Skin Sens. 1 : Skin sensitiser, Category 1

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards	On basis of test data
Health hazards	Calculation method
Environmental hazards	Calculation method

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

### Information on the TSCA Inventory (Toxic Substances Control Act) USA:

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CAS No	Name	State
108-88-3	toluene	Registered
28182-81-2	Hexamethylene diisocyanate, oligomers	Registered
123-86-4	n-butyl acetate	Registered
1330-20-7	xylene	Registered
822-06-0	hexamethylene-di-isocyanate	Registered

Abbreviations and acronyms used:

ADR/RID: European Agreement concerning the International Carriage of Dangerous Goods by Road.

BCF: Bioconcentration factor.

CEN: European Committee for Standardization.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

EC50: Half maximal effective concentration.

PPE: Personal protection equipment.

IATA: International Air Transport Association.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Code for Dangerous Goods.

LC50: Lethal concentration, 50%.

LD50: Lethal dose, 50%.

NOEC: No observed effect concentration.

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2020/878.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemical substances and mixtures (REACH).

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.