

## Safety Data Sheet

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

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

#### 1.1. Product identifier

Code: **052**  
Product name: **NORDCOTTO ESTERNI**  
UFI: **4FA0-20VX-700A-SJ1X**

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

Intended use: **WET EFFECT WATERPROOFING**

#### 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:

**Ireland**  
National Poisons Information Centre  
+353 018092166  
+353 018092566

**Malta**  
Malta Competition and Consumer Affairs Authority (MCCAA)  
+356 2395 2000

**Belgium**  
Centre Antipoisons: +32 022649636

**Germany**  
BfR Bundesinstitut für Risikobewertung: +49 30184120

**Netherlands**  
National Poisons Information Center / University Medical Center Utrecht  
+31 88 75 585 61

**Croatia**  
Croatian Institute of Public Health, Division for Toxicology: +38514686910

**Sveden**  
Swedish Poisons Information Centre: +46104566750

### 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.

**SECTION 2. Hazards identification** ... / >>

Hazard classification and indication:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Reproductive toxicity, category 2	H361d	Suspected of damaging the unborn child.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
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	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

Hazard statements:

<b>H225</b>	Highly flammable liquid and vapour.
<b>H361d</b>	Suspected of damaging the unborn child.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H315</b>	Causes skin irritation.
<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.

Precautionary statements:

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P331</b>	Do NOT induce vomiting.
<b>P280</b>	Wear protective gloves/ protective clothing / eye protection / face protection.
<b>P301+P310</b>	IF SWALLOWED: immediately call a POISON CENTER / doctor.
<b>P370+P378</b>	In case of fire: use carbon anhydride, foam, nebulized water to extinguish.
<b>P261</b>	Avoid breathing fume / gas / mist / vapours / spray.

**Contains:** TOLUENE  
N-BUTYL ACETATE  
ETHYL METHYL KETONE  
METHYL 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>N-BUTYL ACETATE</b>		
INDEX 607-025-00-1	35 ≤ x < 50	<b>Flam. Liq. 3 H226, STOT SE 3 H336, EUH066</b>
EC 204-658-1		
CAS 123-86-4		
REACH Reg. 01-2119485493-29		
<b>TOLUENE</b>		
INDEX 601-021-00-3	35 ≤ x < 50	<b>Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 3 H412</b>
EC 203-625-9		
CAS 108-88-3		
REACH Reg. 01-2119471310-51		
<b>ETHYL METHYL KETONE</b>		
INDEX 606-002-00-3	3 ≤ x < 5	<b>Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066</b>
EC 201-159-0		
CAS 78-93-3		
REACH Reg. 01-2119457290-43		
<b>METHYL ACETATE</b>		
INDEX 607-021-00-X	1 ≤ x < 3	<b>Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066</b>
EC 201-185-2		
CAS 79-20-9		
REACH Reg. 01-2119459211-47		
<b>METHANOL</b>		
INDEX 603-001-00-X	1 ≤ x < 3	<b>Flam. Liq. 2 H225, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, STOT SE 1 H370 STOT SE 2 H371: ≥ 3% - &lt; 10% ATE Oral: 100 mg/kg, ATE Dermal: 300 mg/kg, ATE Inhalation vapours: 3 mg/l</b>
EC 200-659-6		
CAS 67-56-1		
REACH Reg. 01-2119433307-44		
<b>METHYL METHACRYLATE</b>		
INDEX 607-035-00-6	0 < x < 0,1	<b>Flam. Liq. 2 H225, Skin Irrit. 2 H315, STOT SE 3 H335, Skin Sens. 1 H317, Classification note according to Annex VI to the CLP Regulation: D</b>
EC 201-297-1		
CAS 80-62-6		
REACH Reg. 01-2119452498-28		

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 contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice.

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.

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

### 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

IF exposed or concerned: Get medical advice / attention.

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment: see section 4.1

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

Running water for skin and eye wash.

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

#### SUITABLE EXTINGUISHING EQUIPMENT

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

#### UNSUITABLE EXTINGUISHING EQUIPMENT

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

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

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

#### METHYL METHACRYLATE

Heat may cause the product to polymerise, which could lead to explosion.

### 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

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

13.

#### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

### SECTION 7. Handling and storage

#### 7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

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

Information not available

### SECTION 8. Exposure controls/personal protection

#### 8.1. Control parameters

Regulatory references:

ALB	Shqipëria	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES "PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË"
CZE	Česká Republika	NAŘÍZENÍ VLÁDY ze dne 18. října 2023, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	WirkungDosisNOAELMAK-und BAT-Werte-Liste 2024 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe
ESP	España	Límites de exposición profesional para agentes químicos en España 2024
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France Décret n° 2021-1849 du 28 décembre 2021
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
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Regeling van de Minister van Sociale Zaken en Werkgelegenheid van 13 mei 2024, nr. 2024-0000092805, tot wijziging van de Arbeidsomstandighedenregeling in verband met de implementatie van Richtlijn 2022/431
PRT	Portugal	Decreto-Lei n.º 102/2024, de 4 de dezembro. Sumário: Transpõe para a ordem jurídica interna a Diretiva (UE) 2022/431, relativa à proteção dos trabalhadores contra riscos ligados à exposição a agentes cancerígenos ou mutagénicos e procede à quarta alteração
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 24 czerwca 2024 r. zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	HOTĂRÂRE nr. 179 din 28 februarie 2024 pentru modificarea și completarea Hotărârii Guvernului nr. 1.093/2006 privind stabilirea cerințelor minime de securitate și sănătate pentru protecția lucrătorilor împotriva riscurilor legate de expunerea la agenți ca
RUS	Россия	ПОСТАНОВЛЕНИЕ от 13 февраля 2018 г. N 25 ОБ УТВЕРЖДЕНИИ ГИГИЕНИЧЕСКИХ НОРМАТИВОВ ГН 2.2.5.3532-18 "ПРЕДЕЛЬНО ДОПУСТИМЫЕ КОНЦЕНТРАЦИИ (ПДК) ВРЕДНЫХ ВЕЩЕСТВ В ВОЗДУХЕ РАБОЧЕЙ ЗОНЫ"
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti rakotvornim, mutagenim ali

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

GBR United Kingdom reprotoksičnim snovem pri delu. Ljubljana, četrtek 4. 4. 2024  
EU OEL EU EH40/2005 Workplace exposure limits (Fourth Edition 2020)  
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.  
ACGIH ACGIH 2025

**METHYL METHACRYLATE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	ALB	50		100		
TLV	CZE	50	12	150	36	
AGW	DEU	210	50	420	100	
MAK	DEU	210	50	420	100	
VLA	ESP		50		100	
VLEP	FRA	205	50	410	100	
TLV	GRC		50		100	
AK	HUN	208	50	415	100	SKIN
GVI/KGVI	HRV	50		100		SKIN
VLEP	ITA		50		100	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	205		410		
VLE	PRT		50		100	
NDS/NDSch	POL	100		300		
TLV	ROU	205	50	410	100	
ПДК	RUS	10		20		n
MV	SVN	210	50	420	100	
WEL	GBR	208	50	416	100	
OEL	EU		50		100	
ACGIH		205	50	410	100	

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,94	mg/l
Normal value in marine water	0,094	mg/l
Normal value for fresh water sediment	10,2	mg/kg/d
Normal value for marine water sediment	1,02	mg/kg/d
Normal value for marine water, intermittent release	0,69	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	1,48	mg/kg/d

**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		NPI		8,2 mg/kg bw/d				
Inhalation	208 mg/m3	NPI	104 mg/m3	74,3 mg/m3	416 mg/m3	NPI	208 mg/m3	384,4 mg/m3
Skin	1,5 mg/cm2	NPI	1,5 mg/cm2	8,2 mg/kg bw/d	1,5 mg/cm2	NPI	1,5 mg/cm2	13,67 mg/kg bw/d

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

**METHANOL**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	ALB	260	200			SKIN
TLV	CZE	250	188	1000	751	SKIN
AGW	DEU	130	100	260	200	SKIN
MAK	DEU	130	100	260	200	SKIN
VLA	ESP	266	200			SKIN
VLEP	FRA	260	200			SKIN
TLV	GRC	260	200	325	250	
AK	HUN	260	200			SKIN
GVI/KGVI	HRV	260	200			SKIN
VLEP	ITA	260	200			SKIN Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	133				SKIN
VLE	PRT	260	200			SKIN
NDS/NDSch	POL	100		300		SKIN
TLV	ROU	260	200			SKIN
ПДК	RUS	5		15		n
MV	SVN	260	200	1040	800	SKIN
WEL	GBR	266	200	333	250	SKIN
OEL	EU	260	200			
ACGIH		262	200	328	250	SKIN

**ETHYL METHYL KETONE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	ALB	600	200	900	300	
TLV	CZE	600	200	900	300	
AGW	DEU	600	200	600	200	SKIN
MAK	DEU	600	200	600	200	SKIN
VLA	ESP	600	200	900	300	
VLEP	FRA	600	200	900	300	SKIN
TLV	GRC	600	200	900	300	
AK	HUN	600	200	900	300	SKIN
GVI/KGVI	HRV	600	200	900	300	
VLEP	ITA	600	200	900	300	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	590		500		SKIN
VLE	PRT	600	200	900	300	
NDS/NDSch	POL	450		900		SKIN
TLV	ROU	600	200	900	300	
ПДК	RUS	200		400		n
MV	SVN	600	200	900	300	SKIN
WEL	GBR	600	200	899	300	SKIN
OEL	EU	600	200	900	300	
ACGIH			75		150	SKIN

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	55,8	mg/l
Normal value in marine water	55,8	mg/l
Normal value for fresh water sediment	284,74	mg/kg
Normal value of STP microorganisms	709	mg/l
Normal value for the food chain (secondary poisoning)	100	mg/kg
Normal value for the terrestrial compartment	22,5	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				31				
Inhalation				mg/kg bw/d				
				106				600
				mg/m3				mg/m3
Skin				412				1161
				mg/kg bw/d				mg/kg bw/d

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

**METHYL ACETATE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	600	195	800	260	
AGW	DEU	620	200	1240	400	
MAK	DEU	310	100	1240	400	
VLA	ESP	616	200	770	250	
VLEP	FRA	610	200	760	250	SKIN
TLV	GRC	610	200	760	250	
AK	HUN	310	200	1240	400	SKIN
GVI/KGVI	HRV	616	200	770	250	
TGG	NLD	100				
NDS/NDSch	POL	250		600		
TLV	ROU	200	63	600	188	
ПДК	RUS			100		n
MV	SVN	620	200	1240	400	
WEL	GBR	616	200	770	250	
ACGIH		606	200	757	250	

**N-BUTYL ACETATE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	241	50	723	150	
AGW	DEU	300	62	600	124	
MAK	DEU	480	100	960	200	
VLA	ESP	241	50	723	150	
VLEP	FRA	241	50	723	150	
TLV	GRC	710	150	950	200	
AK	HUN	241	50	723	150	
GVI/KGVI	HRV	241	50	723	150	
VLEP	ITA	241	50	723	150	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	150				
VLE	PRT	241	50	723	150	
NDS/NDSch	POL	240		720		
TLV	ROU	241	50	723	150	
ПДК	RUS			0,1		n
MV	SVN	241	50	723	150	
WEL	GBR	724	150	966	200	
OEL	EU	241	50	723	150	
ACGIH			50		150	

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,18	mg/l
Normal value in marine water	0,018	mg/l
Normal value for fresh water sediment	0,981	mg/kg/d
Normal value for marine water sediment	0,0981	mg/kg/d
Normal value for water, intermittent release	0,36	mg/l
Normal value of STP microorganisms	35,6	mg/l
Normal value for the terrestrial compartment	0,0903	mg/kg

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

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
Oral	local	systemic	local	systemic	local	systemic	local	systemic
Inhalation	300	300	35,7	35,7	600	600	300	300
Skin		6		6		11		11
		mg/kg/d		mg/kg/d		mg/kg		mg/kg
						bw/d		bw/d

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

**TOLUENE**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	192	50,112	384	100,224	SKIN
AGW	DEU	190	50	760	200	SKIN
MAK	DEU	190	50	380	100	SKIN
VLA	ESP	192	50	384	100	SKIN
VLEP	FRA	76,8	20	384	100	SKIN
TLV	GRC	192	50	384	100	
AK	HUN	192	50	384	100	SKIN
GVI/KGVI	HRV	192	50	384	100	SKIN
VLEP	ITA	192	50			SKIN Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	150		384		
VLE	PRT	192	50	384	100	SKIN
NDS/NDSch	POL	100		200		SKIN
TLV	ROU	192	50	384	100	SKIN
ПДК	RUS	50		150		n
MV	SVN	192	50	384	100	SKIN
WEL	GBR	191	50	384	100	SKIN
OEL	EU	192	50	384	100	SKIN
ACGIH			20			

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,68	mg/l
Normal value in marine water	0,68	mg/l
Normal value for fresh water sediment	16,39	mg/kg/d
Normal value for marine water sediment	16,39	mg/kg/d
Normal value of STP microorganisms	13,61	mg/l
Normal value for the terrestrial compartment	2,89	mg/kg/d

**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	226 mg/m3	226 mg/m3	56,5 mg/m3	56,5 mg/m3	384 mg/m3	384 mg/m3	192 mg/m3	192 mg/m3
Skin	LOW	NPI	NPI	226 mg/kg bw/d	LOW	NPI	NPI	384 mg/kg bw/d

**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.

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

**HAND PROTECTION**

Protect hands with category III work gloves.

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

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

Protect your hands with gloves of the following type:

Material: Laminated film - LLDPE

Thickness: > 0,06 mm

Breakthrough time: 480 min

Material: Polyvinyl alcohol (PVA)

Breakthrough time: 480 min

**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.

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

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 AX filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387).

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

#### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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 determined	
Initial boiling point	> 35 °C	
Flammability	flammable liquid	
Lower explosive limit	not determined	
Upper explosive limit	not determined	
Flash point	< 23 °C	
Auto-ignition temperature	not determined	
Decomposition temperature	not determined	
pH	not applicable	Reason for missing data:substance/mixture is non-polar/aprotic (eg: an organic solvent mixture)
Kinematic viscosity	not determined	
Solubility	soluble in organic solvents	
Partition coefficient: n-octanol/water	not applicable	
Vapour pressure	not determined	
Density and/or relative density	0,9 kg/l	
Relative vapour density	not determined	
Particle characteristics	not applicable	

#### Supplementary information for nanoforms

##### Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica

###### Shape 1:

D50	50 - 550	µm
Specific surface area by mass	50 - 350	m <sup>2</sup> /g

#### Crystallinity

##### Crystalline structure 1:

Structure	amorphous
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#### Surface functionalisation / treatment

##### Surface treatments 1:

Surface treatment applied	no
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#### 9.2. Other information

##### 9.2.1. Information with regard to physical hazard classes

Information not available

##### 9.2.2. Other safety characteristics

## SECTION 9. Physical and chemical properties ... / >>

VOC (Directive 2010/75/EU)	91,54 %	-	823,84	g/litre
VOC (volatile carbon)	67,72 %	-	609,49	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 METHYL KETONE

Reacts with: light metals, strong oxidants. Attacks various types of plastic materials. Decomposes under the effect of heat.

#### N-BUTYL ACETATE

Decomposes on contact with: water.

#### TOLUENE

Avoid exposure to: light.

### 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.

#### METHYL METHACRYLATE

May polymerise on contact with: ammonia, organic peroxides, persulphates. Risk of explosion on contact with: dibenzoyl peroxide, di-tert-butyl peroxide, propionaldehyde. May react dangerously with: strong oxidising agents. Forms explosive mixtures with: air.

#### ETHYL METHYL KETONE

May form peroxides with: air, light, strong oxidising agents. Risk of explosion on contact with: hydrogen peroxide, nitric acid, sulphuric acid. May react dangerously with: oxidising agents, trichloromethane, alkalis. Forms explosive mixtures with: air.

#### N-BUTYL ACETATE

Risk of explosion on contact with: strong oxidising agents. May react dangerously with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

#### TOLUENE

Risk of explosion on contact with: fuming sulphuric acid, nitric acid, silver perchlorate, nitrogen dioxide, non-metal halogenates, acetic acid, organic nitrocompounds. May form explosive mixtures with: air. May react dangerously with: strong oxidising agents, strong acids, sulphur.

### 10.4. Conditions to avoid

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

#### METHYL METHACRYLATE

Avoid exposure to: heat, UV rays. Avoid contact with: oxidising substances, reducing substances, acids, bases.

#### ETHYL METHYL KETONE

Avoid exposure to: sources of heat.

#### N-BUTYL ACETATE

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

### 10.5. Incompatible materials

#### ETHYL METHYL KETONE

Incompatible with: strong oxidants, inorganic acids, ammonia, copper, chloroform.

#### N-BUTYL ACETATE

Incompatible with: water, nitrates, strong oxidants, acids, alkalis, zinc.

### 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.

#### METHYL METHACRYLATE

When heated to decomposition releases: harsh fumes, zinc alloys.

## 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

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

Information not available

Information on likely routes of exposure

**N-BUTYL ACETATE**

WORKERS: inhalation; contact with the skin.

**TOLUENE**

WORKERS: inhalation; contact with the skin.

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

**METHANOL**

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

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

**N-BUTYL ACETATE**

In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

**TOLUENE**

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

**METHANOL**

The minimum lethal dose for humans by ingestion is considered to be in the range from 300 to 1000 mg/kg. Ingestion of 4-10 ml of the substance may cause permanent blindness in adult humans (IPCS).

Interactive effects

**N-BUTYL ACETATE**

A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

**TOLUENE**

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

ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture: > 20 mg/l  
ATE (Oral) of the mixture: >2000 mg/kg  
ATE (Dermal) of the mixture: >2000 mg/kg

**N-BUTYL ACETATE**

LD50 (Dermal): > 14112 mg/kg Rabbit  
LD50 (Oral): 10760 mg/kg Rat  
LC50 (Inhalation vapours): 21,1 mg/l/4h Rat

**TOLUENE**

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

**ETHYL METHYL KETONE**

LD50 (Dermal): 6480 mg/kg Rabbit  
LD50 (Oral): 2737 mg/kg Rat  
LC50 (Inhalation vapours): 23,5 mg/l/8h Rat

**METHANOL**

ATE (Dermal): 300 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)  
ATE (Oral): 100 mg/kg estimate from table 3.1.2 of Annex I of the CLP

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

LC50 (Inhalation vapours): (figure used for calculation of the acute toxicity estimate of the mixture)  
 > 87,6 mg/l/4h Rat  
 ATE (Inhalation vapours): 3 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)

METHYL METHACRYLATE  
 LD50 (Dermal): 5000 mg/kg Rabbit  
 LD50 (Oral): > 7900 mg/kg Rat  
 LC50 (Inhalation mists/powders): 29,8 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation  
 Repeated exposure may cause skin dryness or cracking.

N-BUTYL ACETATE  
 Species: rabbit  
 Result: non-irritating  
 Method: OECD 404

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

N-BUTYL ACETATE  
 Species: rabbit  
 Result: non-irritating  
 Method: OECD 405

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

N-BUTYL ACETATE  
 Species: guinea pig  
 Result: non-sensitizing  
 Method: OECD 406

Skin sensitization

METHYL METHACRYLATE  
 Species: mouse  
 Result: skin sensitizer  
 Method: OECD 429

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

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

REPRODUCTIVE TOXICITY

Suspected of damaging the unborn child

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

## SECTION 11. Toxicological information ... / >>

May cause damage to organs

### ASPIRATION HAZARD

Toxic for aspiration

### 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 has negative effects on the aquatic environment.

### 12.1. Toxicity

#### N-BUTYL ACETATE

LC50 - for Fish	18 mg/l/96h Pimephales promelas
EC50 - for Crustacea	44 mg/l/48h Daphnia magna
Chronic NOEC for Crustacea	23 mg/l Daphnia magna

#### TOLUENE

LC50 - for Fish	5,5 mg/l/96h
EC50 - for Crustacea	3,78 mg/l/48h
EC50 - for Algae / Aquatic Plants	> 134 mg/l/72h

#### METHYL METHACRYLATE

LC50 - for Fish	> 79 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	69 mg/l/48h Danio Rerio
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Selenastrum capricornutum

### 12.2. Persistence and degradability

#### N-BUTYL ACETATE

Solubility in water	1000 - 10000 mg/l
Rapidly degradable	>90% (28 d)

#### TOLUENE

Solubility in water	100 - 1000 mg/l
Rapidly degradable	

#### ETHYL METHYL KETONE

Solubility in water	> 10000 mg/l
Rapidly degradable	

#### METHYL ACETATE

Solubility in water	243500 mg/l
Rapidly degradable	

#### METHANOL

Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

#### METHYL METHACRYLATE

Solubility in water	15300 mg/l
Rapidly degradable	

### 12.3. Bioaccumulative potential

#### N-BUTYL ACETATE

Partition coefficient: n-octanol/water	2,3 25°C - OECD 117
BCF	15,3

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

TOLUENE	
Partition coefficient: n-octanol/water	2,73
BCF	90
ETHYL METHYL KETONE	
Partition coefficient: n-octanol/water	0,3
METHYL ACETATE	
Partition coefficient: n-octanol/water	0,18
METHANOL	
Partition coefficient: n-octanol/water	-0,77
BCF	0,2
METHYL METHACRYLATE	
Partition coefficient: n-octanol/water	1,38

#### 12.4. Mobility in soil

N-BUTYL ACETATE	
Partition coefficient: soil/water	< 3
METHYL ACETATE	
Partition coefficient: soil/water	0,18
METHYL METHACRYLATE	
Partition coefficient: soil/water	0,94

#### 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 1263

#### 14.2. UN proper shipping name

ADR / RID:            PAINT  
 IMDG:                PAINT  
 IATA:                 PAINT

**SECTION 14. Transport information** ... / >>

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

ADR / RID: Class: 3 Label: 3



IMDG: Class: 3 Label: 3



IATA: Class: 3 Label: 3



**14.4. Packing group**

ADR / RID, IMDG, IATA: II

**14.5. Environmental hazards**

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

**14.6. Special precautions for user**

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

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

Information not relevant

**SECTION 15. Regulatory information**

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

Seveso Category - Directive 2012/18/EU: P5c

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

<u>Product</u>			
Point	3 - 40		
<u>Contained substance</u>			
Point	75		
Point	69	METHANOL	
		REACH Reg.: 01-2119433307-44	
Point	48	TOLUENE	
		REACH Reg.: 01-2119471310-51	

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

## SECTION 15. Regulatory information ... / >>

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 been performed for the following contained substances  
ETHYL METHYL KETONE  
N-BUTYL ACETATE

## 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>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Repr. 2</b>	Reproductive toxicity, category 2
<b>Acute Tox. 3</b>	Acute toxicity, category 3
<b>STOT SE 1</b>	Specific target organ toxicity - single exposure, category 1
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>STOT SE 2</b>	Specific target organ toxicity - single exposure, 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>H226</b>	Flammable liquid and vapour.
<b>H361d</b>	Suspected of damaging the unborn child.
<b>H301</b>	Toxic if swallowed.
<b>H311</b>	Toxic in contact with skin.
<b>H331</b>	Toxic if inhaled.
<b>H370</b>	Causes damage to organs.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin 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>H371</b>	May cause damage to organs.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.

### 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

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

- 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)
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)
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21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
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- 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.

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

Changes to previous review:  
The following sections were modified:  
01 / 02 / 09 / 14.