

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 **PLT 22 METAL: B 79, 79-050,**
UFI : **9RY2-J0VU-600H-2DD1**

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

Intended use **Pad printing ink.**

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 Cavaria (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

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.
Reproductive toxicity, category 2	H361	Suspected of damaging fertility or the unborn child.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory 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:

H226	Flammable liquid and vapour.
H361	Suspected of damaging fertility or the unborn child.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains: METHYL METHACRYLATE, Sodiumdicianoamide, 2-(2H-benzotriazol-2-il)-p-cresolo May produce an allergic reaction.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P310	Immediately call a POISON CENTER or a doctor.

P370+P378 In case of fire: use chemical powder, CO2 or dry send to extinguish.

P261 Avoid breathing dust, gas or vapours.

Contains: DIACETONE ALCOHOL
CYCLOHEXANONE
2-METHOXY-1-METHYLETHYL ACETATE
AROMATIC HYDROCARBONS, C9

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

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
2-METHOXY-1-METHYLETHYL ACETATE		
INDEX 607-195-00-7	$18 \leq x < 19,5$	Flam. Liq. 3 H226, STOT SE 3 H336
EC 203-603-9		
CAS 108-65-6		
REACH Reg. 01-2119475791-29-xxxx		
CYCLOHEXANONE		
INDEX 606-010-00-7	$12 \leq x < 13,5$	Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335 LD50 Oral: 1890 mg/kg, ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l
EC 203-631-1		
CAS 108-94-1		
REACH Reg. 01-2119453616-35-xxxx		
DIACETONE ALCOHOL		
INDEX 603-016-00-1	$12 \leq x < 13,5$	Flam. Liq. 3 H226, Repr. 2 H361, Eye Irrit. 2 H319, STOT SE 3 H335
EC 204-626-7		
CAS 123-42-2		
REACH Reg. 01-2119473975-21xxxx		
ALUMINIUM POWDER (STABILISED)		
INDEX 013-002-00-1	$10,5 \leq x < 12$	Flam. Sol. 1 H228, Classification note according to Annex VI to the CLP

Regulation: T

EC 231-072-3

CAS 7429-90-5

REACH Reg. 01-2119529243-45

BUTYLGLYCOL ACETATE

INDEX 607-038-00-2

$9 \leq x < 10,5$

Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332

EC 203-933-3

ATE Oral: 500 mg/kg, ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l

CAS 112-07-2

REACH Reg. 01-2119475112-

47xxxx

AROMATIC HYDROCARBONS, C9

INDEX -

$3,5 \leq x < 4$

Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411, EUH066, Classification note according to Annex VI to the CLP Regulation: P

EC 918-668-5

CAS -

REACH Reg. 01-2119455851-35

HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, CYCLIC, <2% AROMATIC

INDEX -

$2 \leq x < 2,5$

Asp. Tox. 1 H304, EUH066, Classification note according to Annex VI to the CLP Regulation: P

EC 918-481-9

CAS -

REACH Reg. 01-2119457273-39-

xxxx

2-(2H-benzotriazol-2-il)-p-cresolo

INDEX -

$0,5 \leq x < 0,6$

Skin Sens. 1B H317, Aquatic Chronic 1 H410 M=1

EC 219-470-5

CAS 2440-22-4

REACH Reg. 01-2119583811-34-0000

Sodiumdicianoamide

INDEX -

$0,25 \leq x < 0,26$

Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Sens. 1 H317

EC 217-703-5

LD50 Oral: 500 mg/kg

CAS 1934-75-4

REACH Reg. 01-2120103918-55

METHYL METHACRYLATE

INDEX 607-035-00-6

$0,09 \leq x < 0,11$

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

EC 201-297-1

CAS 80-62-6

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.

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

Immediately call a POISON CENTER or a doctor.

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 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.

2-METHOXY-1-METHYLETHYL ACETATE

Store in an inert atmosphere, sheltered from moisture because it hydrolyses easily.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

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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	NAŘIZENÍ 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 France Décret 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

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

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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								
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			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

CYCLOHEXANONE
Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	40,8	10	81,6	20	SKIN
TLV	CZE	40	9,8	80	196	SKIN
AGW	DEU	80	20	80	20	SKIN
TLV	DNK	41	10	81,6	20	SKIN E
VLA	ESP	41	10	82	20	SKIN
VLEP	FRA	40,8	10	81,6	20	
VLEP	ITA	40,8	10	81,6	20	SKIN
TGG	NLD			50		SKIN
VLE	PRT	40,8	10	81,6	20	SKIN
NDS/NDSch	POL	40		80		SKIN
TLV	ROU	40,8	10	81,6	20	SKIN
NGV/KGV	SWE	41	10	81	20	SKIN
ESD	TUR	40,8	10	81,6	20	SKIN
WEL	GBR	41	10	82	20	SKIN
OEL	EU	40,8	10	81,6	20	SKIN
TLV-ACGIH		80	20	201	50	SKIN

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	0,512	mg/kg
Normal value for marine water sediment	0,0512	mg/kg
Normal value for water, intermittent release	0,329	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,0435	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
Oral			VND	1,67 mg/kg
Inhalation			33 mg/m3	33 mg/m3
Skin			VND	54,8 mg/kg

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Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				1,5 mg/kg bw/d				
Inhalation			VND	10 mg/m3			VND	40 mg/m3
Skin			VND	1 mg/kg bw/d			VND	4 mg/kg bw/d

DIACETONE ALCOHOL

Threshold Limit Value

Type	Country	TWA/8h	Chronic local	Chronic systemic	Remarks / Observations
		mg/m3	ppm	mg/m3	ppm
TLV	CZE	200	41,4	300	62,1
AGW	DEU	96	20	192	40 SKIN
MAK	DEU	96	20	192	40 SKIN
TLV	DNK	240	50		
VLA	ESP	241	50		
VLEP	FRA	240	50		
TGG	NLD	120			SKIN
NDS/NDSch	POL	240			
TLV	ROU	150	32	250	53
NGV/KGV	SWE	120	25	240 (C)	50 (C)
ESD	TUR	240	50		
WEL	GBR	241	50	362	75
TLV-ACGIH		238	50		

Predicted no-effect concentration - PNEC

Normal value in fresh water	2	mg/l
Normal value in marine water	0,2	mg/l
Normal value for fresh water sediment	9,06	mg/kg
Normal value for marine water sediment	0,91	mg/kg
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	82	mg/l
Normal value for the terrestrial compartment	0,63	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				3,4 mg/kg				
Inhalation				11,8 mg/m3				66,4 mg/m3
Skin				3,4 mg/kg				9,4 mg/kg

ALUMINIUM POWDER (STABILISED)

Threshold Limit Value

Type	Country	TWA/8h	Chronic local	Chronic systemic	Remarks / Observations
		mg/m3	ppm	mg/m3	ppm
TLV	BGR	2			
MAK	DEU	4			INHAL

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MAK	DEU	1,5		RESP
TLV	DNK	5		
TLV	DNK	2		RESP
VLA	ESP	1		RESP
VLEP	FRA	5		
NDS/NDSch	POL	2,5		INHAL
NGV/KGV	SWE	5		Som AI, Totaldamm
NGV/KGV	SWE	2		RESP Som AI
WEL	GBR	10		INHAL
WEL	GBR	4		RESP
TLV-ACGIH		1	0,9	RESP AI

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0749	mg/l
Normal value of STP microorganisms	20	mg/l

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				3,95 mg/kg bw/d				
Inhalation							3,72 mg/m3	3,72 mg/m3

BUTYLGLYCOL ACETATE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	133	20	333	50	SKIN
TLV	CZE	130	19,5	300	45	SKIN
AGW	DEU	65	10	130	20	SKIN 11
MAK	DEU	66	10	132	20	SKIN Hinweis
TLV	DNK	134	20	333	50	SKIN E
VLA	ESP	133	20	333	50	SKIN
VLEP	FRA	66,5	10	333	50	
VLEP	ITA	133	20	333	50	SKIN
TGG	NLD	135		333		SKIN
VLE	PRT	133	20	333	50	SKIN
NDS/NDSch	POL	100		300		SKIN
TLV	ROU	133	20	333	50	SKIN
NGV/KGV	SWE	70	10	333	50	SKIN
ESD	TUR	133	20	333	50	SKIN
WEL	GBR	133	20	332	50	SKIN
OEL	EU	133	20	333	50	SKIN
TLV-ACGIH		131	20			

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,304	mg/l
Normal value in marine water	0,03	mg/l

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Oral	300 mg/kg/d	
Inhalation	900 mg/m3	
Skin	300 mg/kg/d	300 mg/kg/d

Soybean oil, epoxidized

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		5 mg/kg/d		0,8 mg/kg/d				
Inhalation		17,5 mg/m3		2,8 mg/m3		70 mg/m3		11,9 mg/m3
Skin		5 mg/kg/d		0,8 mg/kg/d	10 mg/kg/d	10 mg/kg/d		1,7 mg/kg/d

2-(2H-benzotriazol-2-il)-p-cresolo

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00026	mg/l
Normal value in marine water	0,000026	mg/l
Normal value for fresh water sediment	0,136	mg/kg
Normal value for marine water sediment	0,0136	mg/kg
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	1	mg/l
Normal value for the terrestrial compartment	11	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			VND	1,2 mg/kg				
Inhalation							VND	1 mg/m3
Skin			VND	1,2 mg/kg			VND	2,5 mg/kg

METHYL METHACRYLATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR		50		100		
TLV	CZE	50	12	150	36		
AGW	DEU	210	50	420	100		
MAK	DEU	210	50	420	100		
TLV	DNK	102	25		100	SKIN	E
VLA	ESP		50		100		
VLEP	FRA	205	50	410	100		
AK	HUN	208	50	415	100	SKIN	
VLEP	ITA		50		100		
TGG	NLD	205		410			
VLE	PRT		50		100		
NDS/NDSch	POL	100		300			

TLV	ROU	205	50	410	100
NGV/KGV	SWE	200	50	400	100
ESD	TUR		50		100
WEL	GBR	208	50	416	100
OEL	EU		50		100
TLV-ACGIH		205	50	410	100

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.

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.

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	silver	
Odour	characteristic of solvent	
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	$23 \leq T \leq 60$ °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	not available	
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

SECTION 10. Stability and reactivity

10.1. Reactivity

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

2-METHOXY-1-METHYLETHYL ACETATE

Stable in normal conditions of use and storage.

With the air it may slowly develop peroxides that explode with an increase in temperature.

CYCLOHEXANONE

Attacks various types of plastic materials.

May condense under the effect of heat to form resinous compounds.

DIACETONE ALCOHOL

Decomposes at temperatures above 90°C/194°F.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

2-METHOXY-1-METHYLETHYL ACETATE

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

CYCLOHEXANONE

Risk of explosion on contact with: hydrogen peroxide, nitric acid, heat, mineral acids. May react violently with: oxidising agents. Forms explosive mixtures with: air.

DIACETONE ALCOHOL

Risk of explosion on contact with: air, sources of heat. May react dangerously with: alkaline metals, amines, oxidising agents, acids.

AROMATIC HYDROCARBONS, C9

May react with: strong oxidising agents.

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.

10.4. Conditions to avoid

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

CYCLOHEXANONE

Avoid exposure to: sources of heat, naked flames.

DIACETONE ALCOHOL

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

METHYL METHACRYLATE

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

10.5. Incompatible materials

2-METHOXY-1-METHYLETHYL ACETATE

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

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

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.

DIACETONE ALCOHOL

WORKERS: inhalation; contact with the skin.

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

2-METHOXY-1-METHYLETHYL ACETATE

Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

DIACETONE ALCOHOL

Acute toxicity causes irritation of the eyes, nose and throat in humans at 100 ppm (476 mg/kg) and pulmonary disorders at 400 ppm. No chronic effects on humans have been reported. The substance may have a depressive effect on the respiratory centres and cause death from respiratory failure.

Interactive effects

Information not available

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

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

CYCLOHEXANONE

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

DIACETONE ALCOHOL

LD50 (Dermal): > 1875 mg/kg Ratto / Rat
 LD50 (Oral): 3002 mg/kg Rat
 LC50 (Inhalation vapours): > 7,6 mg/l Ratto / Rat

ALUMINIUM POWDER (STABILISED)

LC50 (Inhalation mists/powders): > 5 mg/l Ratto / Rat (4h)

BUTYLGLYCOL ACETATE

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)
 ATE (Oral): 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP
 (figure used for calculation of the acute toxicity estimate of the mixture)
 LC50 (Inhalation vapours): > 2,66 mg/l/4h Rat
 ATE (Inhalation vapours): 11 mg/l estimate from table 3.1.2 of Annex I of the CLP
 (figure used for calculation of the acute toxicity estimate of the mixture)

AROMATIC HYDROCARBONS, C9

LD50 (Dermal): > 3160 mg/kg Ratto / Rat
 LD50 (Oral): 3492 mg/kg Ratto / Rat
 LC50 (Inhalation vapours): > 6193 mg/l/4h Ratto / Rat

HYDROCARBONS, C10-C13, n-alkanes, isoalkanes, CYCLIC, <2% AROMATIC

LD50 (Dermal): > 2000 mg/kg bw Rat
 LD50 (Oral): > 5000 mg/kg bw Rat
 LC50 (Inhalation vapours): > 5000 mg/m3 8h Rat

Soybean oil, epoxidized

LD50 (Dermal): > 20 ml/kg Coniglio / Rabbit
 LD50 (Oral): > 5000 mg/kg Ratto / Rat

2-(2H-benzotriazol-2-il)-p-cresolo

LD50 (Dermal): > 2000 mg/kg ratto (OECD - linea guida 402) Analogismo: valutazione derivante da prodotti chimicamente simili.
 LD50 (Oral): > 10000 mg/kg (OECD-Linea guida 423)
 LC50 (Inhalation mists/powders): > 0,59 mg/l 4 h ratto (OCSE - linea guida 403) concentrazione a piu' alta testabilita'

Sodiumdicianoamide
LD50 (Oral): 500 mg/kg Ratto

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.

Contains:

METHYL METHACRYLATE

Sodiumdicianoamide

2-(2H-benzotriazol-2-il)-p-cresolo

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Suspected of damaging fertility or the unborn child

STOT - SINGLE EXPOSURE

May cause respiratory irritation

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

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

SECTION 12. Ecological information

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

12.1. Toxicity

Soybean oil, epoxidized

LC50 - for Fish 900 mg/l/48h 48h - *Leuciscus idus melanotus*

EC50 - for Crustacea > 100 mg/l/24h 24h - *Daphnia magna*

EC50 - for Algae / Aquatic Plants 8 mg/l/72h *Scenedsmus subspicatus*

HYDROCARBONS, C10-C13, n-alkanes,
isoalkanes, CYCLIC, <2% AROMATIC

LC50 - for Fish > 1000 mg/l/96h *Oncorhynchus mykiss* OECD 203

EC50 - for Crustacea > 1000 mg/l/48h *Daphnia magna*

AROMATIC HYDROCARBONS, C9

LC50 - for Fish > 9,2 mg/l/96h *Oncorhynchus mykiss*

EC50 - for Crustacea > 3,2 mg/l/48h *Daphnia magna*

EC50 - for Algae / Aquatic Plants > 2,9 mg/l/72h *Pseudokirchneriella subcapitata*

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

DIACETONE ALCOHOL

LC50 - for Fish > 100 mg/l/96h *Oryzias latipes*

EC50 - for Crustacea > 1000 mg/l/48h *Daphnia magna*

EC50 - for Algae / Aquatic Plants < 1000 mg/l/72h *Pseudokirchneriella subcapitata*

CYCLOHEXANONE

LC50 - for Fish 527 mg/l/96h 527 - 732 / *Pimephales promelas*

EC50 - for Crustacea > 100 mg/l/48h *Daphnia magna*

EC50 - for Algae / Aquatic Plants > 100 mg/l/72h *Scenedesmus subspicatus*

BUTYLGLYCOL ACETATE

LC50 - for Fish > 20 mg/l/96h Fish 20-40 mg/kg (48h)

EC50 - for Crustacea 145 mg/l/24h *Daphnia Magna* (24h)

EC50 - for Algae / Aquatic Plants 1570 mg/l/72h *Scenedesmus subspicatus*

2-(2H-benzotriazol-2-il)-p-cresolo

LC50 - for Fish > 0,17 mg/l/96h *Oncorhynchus mykiss* (OECD - linea guida 203, semistatico)

EC50 - for Crustacea > 1000 mg/l/48h CE50 (24 h), *Daphnia magna* (OECD - linea guida 202, parte 1, statico)

EC50 - for Algae / Aquatic Plants > 100 mg/l/72h *Desmodesmus subspicatus*

Chronic NOEC for Crustacea 0,013 mg/l *Daphnia magna*

Chronic NOEC for Algae / Aquatic Plants 33 mg/l/72h (biomassa) *Desmodesmus subspicatus* (OECD - linea guida 201)

12.2. Persistence and degradability

2-(2H-benzotriazol-2-il)-p-cresolo

Not readily biodegradable.

HYDROCARBONS, C10-C13, n-alkanes,
isoalkanes, CYCLIC, <2% AROMATIC

Rapidly degradable

AROMATIC HYDROCARBONS, C9

Rapidly degradable

ALUMINIUM POWDER (STABILISED)

Solubility in water

0 mg/l

Degradability: information not available

METHYL METHACRYLATE

Solubility in water

15300 mg/l

Rapidly degradable

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water

> 10000 mg/l

Rapidly degradable

OECD GI 301F 83% 10 d

DIACETONE ALCOHOL

Solubility in water

1000 - 10000 mg/l

Rapidly degradable

AFNOR T 90-312 70% 10 d

CYCLOHEXANONE

Solubility in water

86 mg/l

Rapidly degradable

BUTYLGLYCOL ACETATE

Solubility in water

15000 mg/l

Rapidly degradable

2-(2H-benzotriazol-2-il)-p-cresolo

Solubility in water

0,173 mg/l @20°C

NOT rapidly degradable

12.3. Bioaccumulative potential

2-(2H-benzotriazol-2-il)-p-cresolo

Assessment of bioaccumulation potential: The product can accumulate in the body. Bioaccumulative potential: Bioconcentration factor: 548 - 895 (70 d), Cyprinus carpio (OECD - guideline 305 C) The product has not been tested. The statement has been derived from products of a similar structure and composition. Bioconcentration factor: 44 to 220 (56 d), Cyprinus carpio (OECD - guideline 305 C).

METHYL METHACRYLATE

Partition coefficient: n-octanol/water

1,38

2-METHOXY-1-METHYLETHYL ACETATE

Partition coefficient: n-octanol/water

1,2

BCF

100

DIACETONE ALCOHOL

Partition coefficient: n-octanol/water

-0,09

CYCLOHEXANONE

Partition coefficient: n-octanol/water

0,86

BUTYLGLYCOL ACETATE

Partition coefficient: n-octanol/water	1,51
2-(2H-benzotriazol-2-il)-p-cresolo	
Partition coefficient: n-octanol/water	4,2 mg/l @25°C
BCF	548 548 - 895 / Cyprinus carpio - 70d

12.4. Mobility in soil

METHYL METHACRYLATE	
Partition coefficient: soil/water	0,94
2-METHOXY-1-METHYLETHYL ACETATE	
Partition coefficient: soil/water	1,7
CYCLOHEXANONE	
Partition coefficient: soil/water	1,18
2-(2H-benzotriazol-2-il)-p-cresolo	
Partition coefficient: soil/water	3,71

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 1210

14.2. UN proper shipping name

ADR / RID: PRINTING INK
 IMDG: PRINTING INK
 IATA: PRINTING INK

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 L	Tunnel restriction code: (D/E)
	Special provision: 163, 367		
IMDG:	EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Passengers:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3, A72, A192	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P5c

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

Product

Point 3 - 40

Contained substance

Point	75	CYCLOHEXANONE REACH Reg.: 01-2119453616-35-xxxx
Point	75	DIACETONE ALCOHOL REACH Reg.: 01-2119473975-21xxxx
Point	75	ALUMINIUM POWDER (STABILISED) REACH Reg.: 01- 2119529243-45
Point	75	METHYL METHACRYLATE

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. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Flam. Sol. 1	Flammable solid, category 1
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H361	Suspected of damaging fertility or the unborn child.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	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
- 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).

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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.

Changes to previous review:

The following sections were modified:

02 / 03 / 04 / 05 / 07 / 08 / 10 / 11 / 12 / 13 / 14 / 15 / 16.