

Safety Data Sheet

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

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

1.1. Product identifier

Product name **PLT 31 METAL: 79-050,**
 UFI : **3FG2-G015-P00E-AMNJ**

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 Cavarina (VA)**
ITALIA
 Tel. **+39 0331 219516**
 Fax **+39 0331 216161**

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

1.4. Emergency telephone number

For urgent inquiries refer to **CENTRO ANTIVELENI OSPEDALE NIGUARDA MILANO Tel. 02/66101029 (24/24h) -**
CENTRO ANTIVELENI POLICLINICO A.GEMELL ROMA Tel. 06/3054343 (24/24h) -

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.
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	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.
H318 Causes serious eye damage.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains: 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: CYCLOHEXANONE
 2-METHOXY-1-METHYLETHYL ACETATE
 AROMATIC HYDROCARBONS, C9
 BUTANOL

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)
2-METHOXY-1-METHYLETHYL ACETATE		
INDEX 607-195-00-7	22,5 \leq x < 24	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

19,5 ≤ x < 21

Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315

EC 203-631-1

LD50 Oral: 1535 mg/kg, LD50 Dermal: 1100 mg/kg, LC50 Inhalation vapours: 11 mg/l/4h

CAS 108-94-1

REACH Reg. 01-2119453616-35-xxxx

BUTYLGLYCOL ACETATE

INDEX 607-038-00-2

12 ≤ x < 13,5

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

EC 203-933-3

LD50 Oral: 1880 mg/kg, LD50 Dermal: 1500 mg/kg, STA Inhalation vapours: 11 mg/l

CAS 112-07-2

REACH Reg. 01-2119475112-47xxxx

ALUMINIUM POWDER (STABILIZED)

INDEX 013-002-00-1

10,5 ≤ 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

BUTANOL

INDEX 603-004-00-6

2 ≤ x < 2,5

Flam. Liq. 3 H226, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336
STA Oral: 500 mg/kg

EC 200-751-6

CAS 71-36-3

REACH Reg. 01-2119484630-38

AROMATIC HYDROCARBONS, C9

INDEX -

2 ≤ x < 2,5

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-xxxx

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

INDEX -

2 ≤ 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

UOP-L Paste

INDEX -

1,5 ≤ x < 2

Substance with a community workplace exposure limit.

EC 930-915-9

CAS 1318-02-1

REACH Reg. 01-2119429034-49

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

INDEX -

0,32 ≤ x < 0,34

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

EC 219-470-5
CAS 2440-22-4
REACH Reg. 01-2119583811-34-0000

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

SECTION 4. First aid measures

4.1. Description of first aid measures

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

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

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

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

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

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

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

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

UNSUITABLE EXTINGUISHING EQUIPMENT

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

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

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

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
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 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS

COMEC ITALIA SRL

Revision nr. 4

Dated 30/01/2023

PLT 31 METAL: 79-050,

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Replaced revision:3 (Dated: 27/07/2021)

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			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	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

**BUTYLGLYCOL ACETATE
Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	

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TLV	BGR	133	20	333	50	SKIN	
TLV	CZE	130	19,5	300	45	SKIN	
AGW	DEU	65	10	130 (C)	20 (C)	SKIN	11
MAK	DEU	66	10	132	20	SKIN	Hinweis
TLV	DNK	134	20			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
Normal value for fresh water sediment	2,03	mg/l
Normal value for marine water sediment	0,203	mg/l
Normal value for water, intermittent release	0,56	mg/l
Normal value of STP microorganisms	90	mg/l
Normal value for the food chain (secondary poisoning)	60	mg/kg
Normal value for the terrestrial compartment	0,415	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	VND	36 mg/kg/d	VND	4,3 mg/kg/d				
Inhalation	200 mg/m3	499 mg/m3	VND	80 mg/m3	333 mg/m3	773 mg/m3	VND	133 mg/m3
Skin		72 mg/kg bw/d	VND	102 mg/kg/d	102 mg/kg/d	27 mg/kg/d	VND	169 mg/kg/d

ALUMINIUM POWDER (STABILIZED)

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	
TLV	BGR	2			
MAK	DEU	4			INHAL
MAK	DEU	1,5			RESP
TLV	DNK	5			
TLV	DNK	2			RESP
VLA	ESP	1			RESP
VLEP	FRA	5			

Oral	VND	3125 mg/kg		
Inhalation	55 mg/m3	VND	310 mg/m3	VND

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

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	FRA	275	50	550	100	SKIN
VLEP	ITA	275	50	550	100	SKIN
WEL	GBR	274	50	548	100	SKIN
OEL	EU	275	50	550	100	SKIN
TLV-ACGIH		1200	184			

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

AROMATIC HYDROCARBONS, C9

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	100	20			1,2,3 trimetilbenzene
OEL	EU	100	20			1,2,3 trimetilbenzene
TLV-ACGIH			25			1,2,3 trimetilbenzene

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	11 mg/kg				11 mg/kg bw/d
Inhalation			VND	32 mg/m3			VND	150 mg/m3
Skin			VND	11 mg/kg			VND	25 mg/kg

UOP-L Paste

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	1				RESP

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

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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

reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,018	mg/l
Normal value in marine water	0,0018	mg/l
Normal value for fresh water sediment	2	mg/kg/d
Normal value for marine water sediment	0,2	mg/kg/d
Normal value for water, intermittent release	0,018	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the food chain (secondary poisoning)	41,33	mg/kg
Normal value for the terrestrial compartment	10	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				0,93 mg/kg bw/d				
Inhalation				1,62 mg/m3				6,6 mg/m3
Skin				0,83 mg/kg bw/d				1,67 mg/kg bw/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

HYDROM HYDROPHONE SILICATE

Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	4				INHAL
MAK	DEU	4				INHAL

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 (see standard EN 374).

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

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

SKIN PROTECTION

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

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

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, 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). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

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

ENVIRONMENTAL EXPOSURE CONTROLS

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

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

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	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 ≤ T ≤ 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

VOC (Directive 2010/75/EU) 64,59 %

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.

BUTANOL

Attacks various types of plastic materials.

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.

BUTANOL

Reacts violently developing heat on contact with: aluminium, strong oxidising agents, strong reducing agents, hydrochloric acid. 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.

BUTANOL

Avoid exposure to: sources of heat, naked flames.

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.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

Metabolism, toxicokinetics, mechanism of action and other information

2-METHOXY-1-METHYLETHYL ACETATE

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

2-METHOXY-1-METHYLETHYL ACETATE

WORKERS: inhalation; contact with the skin.

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

2-METHOXY-1-METHYLETHYL ACETATE

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

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - 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

LD50 (Dermal):	1100 mg/kg 794 - 3160 / Coniglio / Rabbit
LD50 (Oral):	1535 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	11 mg/l/4h Ratto / Rat (4h)

BUTYLGLYCOL ACETATE

LD50 (Dermal):	1500 mg/kg Coniglio / Rabbit
LD50 (Oral):	1880 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	0,4 mg/l/4h Ratto - Rat

STA (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)

ALUMINIUM POWDER (STABILIZED)

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

BUTANOL

LD50 (Dermal): 3400 mg/kg Rabbit
 LD50 (Oral): 2290 mg/kg Rat
 STA (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): 17,76 mg/l/4h 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

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

Tillplast ATBC

LD50 (Oral): 31400 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'

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.
 Contains:

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

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

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 have negative effects on aquatic environment.

12.1. Toxicity

Tillplast ATBC

LC50 - for Fish

> 38 mg/l/96h

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

BUTANOL

LC50 - for Fish

1376 mg/l/96h Pimephales promelas

EC50 - for Crustacea

1328 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic Plants

225 mg/l/96h 96h - Selenastrum capricornutum

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 (STABILIZED)

Solubility in water 0 mg/l

Degradability: information not available

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water > 10000 mg/l

Rapidly degradable
OECD GI 301F 83% 10 d
BUTANOL

Solubility in water 78 mg/l

Rapidly degradable
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).

Tillplast ATBC

Partition coefficient: n-octanol/water 4,86

2-METHOXY-1-METHYLETHYL ACETATE

Partition coefficient: n-octanol/water 1,2

BCF 100

BUTANOL

Partition coefficient: n-octanol/water 1

BCF 3,16

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

2-METHOXY-1-METHYLETHYL ACETATE

Partition coefficient: soil/water 1,7

BUTANOL

Partition coefficient: soil/water 0,388

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.

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: 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: NO

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
	Pass.:	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

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Flam. Sol. 1	Flammable solid, category 1
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2

STOT SE 3	Specific target organ toxicity - single exposure, category 3
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
H226	Flammable liquid and vapour.
H228	Flammable solid.
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.
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 as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament

2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
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15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
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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.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 08 / 09 / 11 / 12 / 14 / 15 / 16.