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 TEX A ECO METAL 2: 75-NC,**
UFI : **27M1-107A-K00J-NDX3**

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 **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 2	H225	Highly flammable liquid and vapour.
Eye irritation, category 2	H319	Causes serious eye irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

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:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P370+P378	In case of fire: use chemical powder, CO2 or dry send to extinguish.
P261	Avoid breathing dust, gas or vapours.
P233	Keep container tightly closed.
P312	Call a POISON CENTRE or a doctor if you feel unwell.

Contains: 2-ETHOSSI-1-METHYL ETHYL ACETATE
2-METHOXY-1-METHYLETHYL ACETATE
PROPAN-2-OL

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	**x = Conc. %**	**Classification (EC) 1272/2008 (CLP)**
2-ETHOSSI-1-METHYL ETHYL ACETATE		
INDEX 603-177-00-8	24 ≤ x < 25,5	Flam. Liq. 3 H226, STOT SE 3 H336
EC 259-370-9		
CAS 54839-24-6		
REACH Reg. 01-2119475116-39xxxx		
2-METHOXY-1-METHYLETHYL ACETATE		
INDEX 607-195-00-7	16,5 ≤ x < 18	Flam. Liq. 3 H226, STOT SE 3 H336
EC 203-603-9		
CAS 108-65-6		

REACH Reg. 01-2119475791-29-xxxx **4-HYDROXY-4-METHYLPENTAN-2-ONE**		
INDEX 603-016-00-1 EC 204-626-7 CAS 123-42-2 REACH Reg. 01-2119473975-21xxxx **ALUMINIUM POWDER (STABILIZED)**	15 ≤ x < 16,5	Flam. Liq. 3 H226, Eye Irrit. 2 H319
INDEX 013-002-00-1 EC 231-072-3 CAS 7429-90-5 REACH Reg. 01-2119529243-45 **PROPAN-2-OL**	8 ≤ x < 9	Flam. Sol. 1 H228, Classification note according to Annex VI to the CLP Regulation: T
INDEX 603-117-00-0 EC 200-661-7 CAS 67-63-0 REACH Reg. 01-2119457558-25-xxxx **DIPROPYLEN GLYCOL MONOMETHYL ETHER**	5 ≤ x < 6	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336
INDEX - EC 252-104-2 CAS 34590-94-8 REACH Reg. 01-2119450011-60xxxx **UOP-L Paste**	2,5 ≤ x < 3	Substance with a community workplace exposure limit.
INDEX - EC 930-915-9 CAS 1318-02-1 REACH Reg. 01-2119429034-49	0,9 ≤ x < 1	Substance with a community workplace exposure limit.

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. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.
INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless 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. 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:

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
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 şi pentru modificarea şi 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
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 2021

2-ETHOSSI-1-METHYL ETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations

		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	120	20	240	40	SKIN	14
MAK	DEU	120	20	240	40	SKIN	Hinweis

Predicted no-effect concentration - PNEC		
Normal value in fresh water	2	mg/l
Normal value in marine water	0,8	mg/l
Normal value for fresh water sediment	8,2	mg/kg
Normal value for marine water sediment	0,6	mg/kg
Normal value for water, intermittent release	2	mg/l
Normal value of STP microorganisms	62,5	mg/kg
Normal value for the food chain (secondary poisoning)	117	mg/kg
Normal value for the terrestrial compartment	0,6	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	13,1 mg/kg				
Inhalation	VND	365 mg/m3	VND	181 mg/m3	VND	608 mg/m3	VND	302 mg/m3
Skin			VND	62 mg/kg			VND	103 mg/kg

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			SKIN	E
VLA	ESP	275	50	550	100	SKIN	
VLEP	FRA	275	50	550	100	SKIN	
VLEP	ITA	275	50	550	100	SKIN	
TGG	NLD	550					
VLE	PRT	275	50	550	100	SKIN	
NDS/NDSCh	POL	260		520		SKIN	
TLV	ROU	275	50	550	100	SKIN	
NGV/KGV	SWE	275	50	550	100	SKIN	
ESD	TUR	275	50	550	100	SKIN	
WEL	GBR	274	50	548	100	SKIN	
OEL	EU	275	50	550	100	SKIN	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,635	mg/l
Normal value in marine water	0,0635	mg/l
Normal value for fresh water sediment	3,29	mg/kg
Normal value for marine water sediment	0,329	mg/l

Normal value for water, intermittent release	6,35	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,29	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,67 mg/kg				
Inhalation			33 mg/m3	33 mg/m3	550 mg/m3		VND	275 mg/m3
Skin			VND	54,8 mg/kg			VND	153,5 mg/kg

4-HYDROXY-4-METHYLPENTAN-2-ONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		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)	
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

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				3,4 mg/kg				
Inhalation				11,8 mg/m3				66,4 mg/m3
Skin				3,4 mg/kg				9,4 mg/kg

ALUMINIUM POWDER (STABILIZED)

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min	Remarks / Observations

		mg/m3	ppm	mg/m3	ppm		
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					
NDS/NDSCh	POL	2,5				INHAL	
NGV/KGV	SWE	5					Som Al, Totaldamm
NGV/KGV	SWE	2				RESP	Som Al
WEL	GBR	10				INHAL	
WEL	GBR	4				RESP	
TLV-ACGIH		1	0,9			RESP	Al

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

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				3,95 mg/kg bw/d				
Inhalation							3,72 mg/m3	3,72 mg/m3

PROPAN-2-OL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	980		1225		
TLV	CZE	500	200	1000	400	
AGW	DEU	500	200	1000	400	
MAK	DEU	500	200	1000	400	
TLV	DNK	490	200			
VLA	ESP	500	200	1000	400	
VLEP	FRA			980	400	
TGG	NLD	650				
NDS/NDSCh	POL	900		1200		SKIN
TLV	ROU	200	81	500	203	
NGV/KGV	SWE	350	150	600 (C)	250 (C)	
WEL	GBR	999	400	1250	500	
TLV-ACGIH		492	200	983	400	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	140,9	mg/l
Normal value in marine water	140,9	mg/l

Normal value for fresh water sediment	552	mg/kg
Normal value for marine water sediment	552	mg/kg
Normal value of STP microorganisms	2251	mg/l
Normal value for the terrestrial compartment	28	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	26 mg/kg				
Inhalation			VND	89 mg/m3			VND	500 mg/m3
Skin			VND	319 mg/kg			VND	888 mg/kg

DIPROPYLEN GLYCOL MONOMETHYL ETHER

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR	308	50			SKIN	
TLV	CZE	270	43,74	550	89,1	SKIN	
AGW	DEU	310	50	310	50		
MAK	DEU	310	50	310	50		
TLV	DNK	309	50			SKIN	E
VLA	ESP	308	50			SKIN	
VLEP	FRA	308	50			SKIN	
VLEP	ITA	308	50			SKIN	
TGG	NLD	300					
VLE	PRT	308	50			SKIN	
NDS/NDSCh	POL	240		480		SKIN	
TLV	ROU	308	50			SKIN	
NGV/KGV	SWE	300	50	450 (C)	75 (C)	SKIN	
ESD	TUR	308	50			SKIN	
WEL	GBR	308	50			SKIN	
OEL	EU	308	50			SKIN	
TLV-ACGIH			50				

Predicted no-effect concentration - PNEC

Normal value in fresh water	19	mg/l
Normal value in marine water	1,9	mg/l
Normal value for fresh water sediment	70,2	mg/kg
Normal value for marine water sediment	7,02	mg/kg
Normal value for the terrestrial compartment	2,74	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1,67 mg/kg bw/d				
Inhalation			VND	37,2 mg/m3			VND	310 mg/m3

Skin			VND	15 mg/kg bw/d			VND	65 mg/kg bw/d

Pigment C.I. Yellow 83

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	28 mg/kg/d				
Inhalation							3 mg/m3	VND
Skin			VND	28 mg/kg/d	VND	45 mg/kg/d		

Modified amorphous silicon

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	3				INHAL
VLEP	ITA	10				RESP

UOP-L Paste

Threshold Limit Value

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

Alkyl (C12-14) dimethylamine

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,00026	mg/l
Normal value in marine water	0,00003	mg/l
Normal value for fresh water sediment	1,25	mg/kg
Normal value for marine water sediment	0,125	mg/kg
Normal value for water, intermittent release	0,00026	mg/l
Normal value of STP microorganisms	0,13	mg/l
Normal value for the terrestrial compartment	1	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation					1 mg/m3		1 mg/m3	

Alkyl (C16-C18) dimethylamine

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,00026	mg/l
Normal value in marine water	0,00003	mg/l
Normal value for fresh water sediment	1,25	mg/kg
Normal value for marine water sediment	0,125	mg/kg
Normal value for water, intermittent release	0,00026	mg/l
Normal value of STP microorganisms	0,13	mg/l

Normal value for the terrestrial compartment	1	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation					1 mg/m3		1 mg/m3	

Alkyl (C12-16) dimethylamine

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00026	mg/l
Normal value in marine water	0,00003	mg/l
Normal value for fresh water sediment	1,25	mg/kg
Normal value for marine water sediment	0,125	mg/kg
Normal value for water, intermittent release	0,00026	mg/l
Normal value of STP microorganisms	0,13	mg/l
Normal value for the terrestrial compartment	1	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation					1 mg/m3		1 mg/m3	

hexadecyldimethylamine

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00026	mg/l
Normal value in marine water	0,00003	mg/l
Normal value for fresh water sediment	1,25	mg/kg
Normal value for marine water sediment	0,125	mg/kg
Normal value for water, intermittent release	0,00026	mg/l
Normal value of STP microorganisms	0,13	mg/l
Normal value for the terrestrial compartment	1	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation					1 mg/m3		1 mg/m3	

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 I 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, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (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.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	not available	
Colour	not available	
Odour	not available	
Melting point / freezing point	not available	
Initial boiling point	> 35 °C	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	< 23 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	not available	
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)	66,63 %

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.

4-HYDROXY-4-METHYLPENTAN-2-ONE

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

DIPROPYLEN GLYCOL MONOMETHYL ETHER

Forms peroxides with: air.

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.

4-HYDROXY-4-METHYLPENTAN-2-ONE

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

DIPROPYLEN GLYCOL MONOMETHYL ETHER

May react violently with: strong oxidising agents.

10.4. Conditions to avoid

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

4-HYDROXY-4-METHYLPENTAN-2-ONE

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

DIPROPYLEN GLYCOL MONOMETHYL ETHER

Avoid exposure to: sources of heat.Possibility of explosion.

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.

4-HYDROXY-4-METHYLPENTAN-2-ONE

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).

4-HYDROXY-4-METHYLPENTAN-2-ONE
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) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

2-ETHOSSI-1-METHYL ETHYL ACETATE

LD50 (Dermal):	13,42 ml/Kg Coniglio / Rabbit
LD50 (Oral):	> 5000 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	6,99 mg/l/4h Rat

Poliuretainc Resin

LD50 (Dermal):	> 2000 mg/kg Ratto / Rat
LD50 (Oral):	> 5000 mg/kg Ratto / Rat

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

4-HYDROXY-4-METHYLPENTAN-2-ONE

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

ALUMINIUM POWDER (STABILIZED)

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

PROPAN-2-OL

LD50 (Dermal):	13900 mg/kg Rat
LD50 (Oral):	5840 mg/kg Rat
LC50 (Inhalation vapours):	> 25 mg/l/6h Ratto (6h) / Rat (6h)

DIPROPYLEN GLYCOL MONOMETHYL ETHER

LD50 (Dermal):	19020 mg/kg Coniglio / Rabbit
LD50 (Oral):	5660 mg/kg Ratto / Rat

Pigment C.I. Yellow 83

LD50 (Oral):	> 2000 mg/kg Stimato, metodo di calcolo

Modified amorphous silicon

LD50 (Oral):	> 5000 mg/kg Ratto / Rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

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

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

Poliuretainc Resin	
LC50 - for Fish	> 100 mg/l/96h Danio rerio
EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna
DIPROPYLEN GLYCOL MONOMETHYL ETHER	
LC50 - for Fish	> 10000 mg/l/96h Pimephales promelas
EC50 - for Crustacea	1919 mg/l/48h Daphnia Magna
EC10 for Algae / Aquatic Plants	> 969 mg/l/48h
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 Dapnia magna 21 gg OECD 202

2-ETHOSSI-1-METHYL ETHYL ACETATE

LC50 - for Fish	140 mg/l/48h Oncorhynchus mykiss (test 48h)
EC50 - for Crustacea	110 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Scenedesmus subspicatus

4-HYDROXY-4-METHYLPENTAN-2-ONE

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

PROPAN-2-OL

LC50 - for Fish	9640 mg/l/96h Pimephales promelas
EC50 - for Crustacea	> 1000 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Scenedesmus sp.
Chronic NOEC for Crustacea	30 mg/l Daphnia magna, prova semistatica, 21 d

Modified amorphous silicon

LC50 - for Fish	> 10000 mg/l/96h Brachydanio rerio OECD 203
EC50 - for Crustacea	> 10000 mg/l/24h Daphnia Magna OCSE 202 - 24 h

12.2. Persistence and degradability

Poliuretainc Resin

NOT rapidly degradable

Biodegradazione 1% 28 d Metodo di prova diretiva 92/69/CEE studi su prodotto analogo
ALUMINIUM POWDER (STABILIZED)

Solubility in water	0 mg/l

Degradability: information not available

DIPROPYLEN GLYCOL MONOMETHYL ETHER

Solubility in water	1000 - 10000 mg/l

Rapidly degradable
OECD 301 F - 75% 10 d - 79% 28 d
2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water	> 10000 mg/l

Rapidly degradable
OECD Gl 301F 83% 10 d
2-ETHOSSI-1-METHYL ETHYL ACETATE

Solubility in water	> 10000 mg/l

Rapidly degradable
Activated sludge - 89%/15 d - 100%/28 d
4-HYDROXY-4-METHYLPENTAN-2-ONE

Solubility in water	1000 - 10000 mg/l

Rapidly degradable
AFNOR T 90-312 70% 10 d
PROPAN-2-OL

Rapidly degradable
Modified amorphous silicon

Solubility in water	> 1 mg/l

12.3. Bioaccumulative potential

DIPROPYLEN GLYCOL MONOMETHYL ETHER	
Partition coefficient: n-octanol/water	0,0043
2-METHOXY-1-METHYLETHYL ACETATE	
Partition coefficient: n-octanol/water	1,2
BCF	100
2-ETHOSSI-1-METHYL ETHYL ACETATE	
Partition coefficient: n-octanol/water	0,76
BCF	3,162
4-HYDROXY-4-METHYLPENTAN-2-ONE	
Partition coefficient: n-octanol/water	-0,09
PROPAN-2-OL	
Partition coefficient: n-octanol/water	0,05

12.4. Mobility in soil

2-METHOXY-1-METHYLETHYL ACETATE	
Partition coefficient: soil/water	1,7
2-ETHOSSI-1-METHYL ETHYL ACETATE	
Partition coefficient: soil/water	1

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 ≥ 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: II

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special provision: 163, 367, 640D		
IMDG:	EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 364
	Pass.:	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

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 ≥ 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
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

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
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)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- 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:
02 / 03 / 08 / 09 / 11 / 12 / 14 / 15 / 16.