Safety Data Sheet

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

1.1. Product identifier

Code:	**LVP--000016**
Product name	**Lustro verde**
	Prodotto metallo-organico per decorazione al terzo fuoco

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

Intended use	**third firing decoration in the glass/ceramics/porcelain sectors**

1.3. Details of the supplier of the safety data sheet

Name	**COLOROBBIA S.P.A.**
Full address	**Via Gramsci 14**
District and Country	**50056 Montelupo F.no (FI)**
	Italia
	Tel. +39 0571 7091
	Fax +39 0571 709.850
e-mail address of the competent person responsible for the Safety Data Sheet	**ambientemsds@colorobbia.it**

1.4. Emergency telephone number

For urgent inquiries refer to

CAV - Ospedale Pediatrico Bambino Gesù - Roma - tel. +39 06 68593726
Az. Ospedaliera Università Foggia - Foggia - tel. 800183459
Az. Ospedaliera - A. Cardarelli- Napoli- tel. +39 081 7472870
CAV - Policlinico Umberto I- Roma - tel. +39 06 49978000
CAV - Policlinico A. Gemelli - Roma - tel. +39 06 3054343
Az. Ospedaliera Careggi - U.O. Tossicologia Medica - Firenze - tel. +39 055 7947819
CAV - Centro Nazionale di Informazione Tossicologica - Pavia - tel. +39 0382 24444
Ospedale Niguarda Ca' Granda - Milano - tel. +39 02 66101029
Az. ospedaliera Papa Giovanni XXIII - Bergamo - tel. 800883300

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 2015/830.
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.
Acute toxicity, category 4	H302	Harmful if swallowed.
Acute toxicity, category 4	H332	Harmful if inhaled.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

SECTION 2. Hazards identification ... / >>

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.
H302+H332	Harmful if swallowed or if inhaled.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
EUH208	Contains: Alpha-Pinene May produce an allergic reaction.

Precautionary statements:

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

Contains:
TURPENTINE
Anethole
Eucalyptus Oil
ROSIN
(R)-P-MENTHA-1,8-DIENE

2.3. Other hazards

vPvB substances contained:
Camphene

PBT substances contained:
Camphene

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
ROSIN		
CAS *8050-09-7*	25 ≤ x < 40	**Skin Sens. 1 H317**
EC *232-475-7*		
INDEX *650-015-00-7*		

SECTION 3. Composition/information on ingredients ... / >>

TURPENTINE
CAS *8006-64-2* 10 ≤ x < 25 **Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411**
EC *232-350-7*
INDEX *650-002-00-6*
Reg. no. *01-2119553060-53*

CYCLOHEXANOL
CAS *108-93-0* 10 ≤ x < 20 **Acute Tox. 4 H302, Acute Tox. 4 H332, Skin Irrit. 2 H315, STOT SE 3 H335**
EC *203-630-6*
INDEX *603-009-00-3*

Eucalyptus Oil
CAS *8000-48-4* 9 ≤ x < 10 **Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Sens. 1 H317, Aquatic Chronic 2 H411**
EC
INDEX

Titanium tetraisopropanolate
CAS *546-68-9* 1 ≤ x < 5 **Eye Irrit. 2 H319**
EC *208-909-6*
INDEX

Decahydronaphthalene
CAS *91-17-8* 1 ≤ x < 2,5 **Flam. Liq. 3 H226, Acute Tox. 3 H331, Asp. Tox. 1 H304, Skin Corr. 1B H314, Aquatic Chronic 2 H411**
EC *202-046-9*
INDEX
Reg. no. *01-2119565127-37-XXXX*

Synthetic Camphor
CAS *76-22-2* 1 ≤ x < 5 **Aerosol 1 H222, Flam. Liq. 2 H225, Acute Tox. 4 H332, STOT SE 2 H371**
EC *200-945-0*
INDEX

(R)-P-MENTHA-1,8-DIENE
CAS *5989-27-5* 1 ≤ x < 2,5 **Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1, Classification note according to Annex VI to the CLP Regulation: C**
EC *227-813-5*
INDEX *601-029-00-7*

Linalool
CAS *78-70-6* 1 ≤ x < 5 **Skin Irrit. 2 H315**
EC *201-134-4*
INDEX

Anethole
CAS *104-46-1* 1 ≤ x < 5 **Skin Sens. 1 H317**
EC *2032055*
INDEX

Methylcyclohexanol
CAS *25639-42-3* 1 ≤ x < 5 **Acute Tox. 4 H332**
EC *247-152-6*
INDEX

CYCLOHEXANE
CAS *110-82-7* 0,5 ≤ x < 1 **Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1**
EC *203-806-2*
INDEX *601-017-00-1*

Alpha-Pinene
CAS *80-56-8* 0,5 ≤ x < 1 **Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1**
EC *201-291-8*
INDEX

TOLUENE
CAS *108-88-3* 0 ≤ x < 0,5 **Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336**
EC *203-625-9*
INDEX *601-021-00-3*

XYLENE (MIXTURE OF ISOMERS)
CAS *1330-20-7* 0 ≤ x < 0,5 **Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Irrit. 2 H315, Classification note according to Annex VI to the CLP Regulation: C**
EC *215-535-7*
INDEX *601-022-00-9*

SECTION 3. Composition/information on ingredients ... / >>

1,2,3,4-tetrahydronaphthalene

CAS	*119-64-2*	0 ≤ x < 0,5	**Carc. 2 H351, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Aquatic Chronic 2 H411, EUH019**
EC	*204-340-2*		
INDEX	*601-045-00-4*		
Reg. no.	*01-2119539463-37-XXXX*		

Camphene

CAS	*79-92-5*	0 ≤ x < 0,25	**Flam. Liq. 3 H226, Eye Irrit. 2 H319, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1**
EC	*201-234-8*		
INDEX			

ETHYL ACETATE

CAS	*141-78-6*	0 ≤ x < 0,5	**Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066**
EC	*205-500-4*		
INDEX	*607-022-00-5*		
Reg. no.	*01-2119475103-46*		

4-METHYLPENTAN-2-ONE

CAS	*108-10-1*	0 ≤ x < 0,5	**Flam. Liq. 2 H225, Acute Tox. 4 H332, Eye Irrit. 2 H319, STOT SE 3 H335, EUH066**
EC	*203-550-1*		
INDEX	*606-004-00-4*		
Reg. no.	*01-2119473980-30*		

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
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc).
The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.

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
Hardhat with visor, fireproof clothing (fireproof jacket and trousers with ties around arms, legs and waist), work gloves (fireproof, cut proof and dielectric), a depressurised mask with facemask covering the whole of the operator's face or a self-respirator (self-protector) in the

event of large quantities of fume.

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. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. 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 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:

CZE	Česká Republika	Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ -ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diaro da Republica I 26; 2012-02-06

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

SVN	Slovenija	Uradni list Republike Slovenije 15. 6. 2007
TUR	Türkiye	2000/39/EC sayılı Direktifin ekidir
EU	OEL EU	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 91/322/EEC.
	TLV-ACGIH	ACGIH 2018

ETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV	CZE	700		900	
AGW	DEU	1500	400	3000	800
MAK	DEU	1500	400	3000	800
VLA	ESP	1460	400		
VLEP	FRA	1400	400		
WEL	GBR		200		400
TLV	GRC	1400	400		
NDS	POL	200		600	
OEL	EU	734	200	1468	400
TLV-ACGIH		1441	400		

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,26	mg/l
Normal value in marine water	0,026	mg/l
Normal value for fresh water sediment	1,25	mg/kg
Normal value for marine water sediment	0,125	mg/kg
Normal value of STP microorganisms	650	mg/l
Normal value for the food chain (secondary poisoning)	0,2	g/Kg
Normal value for the terrestrial compartment	0,24	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	4,5 mg/kg				
Inhalation	734 mg/m3	734 mg/m3	VND	367 mg/m3	1468 mg/m3	1468 mg/m3	734 mg/m3	734 mg/m3
Skin			VND	37 mg/kg			VND	63 mg/kg

4-METHYLPENTAN-2-ONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	80		200		SKIN
AGW	DEU	83	20	166	40	SKIN
MAK	DEU	83	20	166	40	SKIN
VLA	ESP	83	20	208	50	
VLEP	FRA	83	20	208	50	
WEL	GBR	208	50	416	100	SKIN
TLV	GRC	410	100	410	100	
VLEP	ITA	83	20	208	50	
NDS	POL	83		200		
VLE	PRT	83	20	208	50	
ESD	TUR	83	20	208	50	
OEL	EU	83	20	208	50	
TLV-ACGIH		82	20	307	75	

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

TURPENTINE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	300		800		
VLA	ESP	113	20			
VLEP	FRA	560	100			
WEL	GBR	566	100	850	150	
TLV	GRC	560	100	840	150	
NDS	POL	112		300		
TLV-ACGIH		111	20			

CYCLOHEXANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	200		400		SKIN
MAK	DEU		50		50	
VLA	ESP	208	50			SKIN
VLEP	FRA	200	50	300	75	
WEL	GBR	208	50			
TLV	GRC	200	50			
NDS	POL	10				
MV	SVN	210	50			
TLV-ACGIH		205	50			

Decahydronaphthalene

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH		100			

Synthetic Camphor

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH		13	2		

(R)-P-MENTHA-1,8-DIENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	110	20	220	40	
MAK	DEU	28	5	112	20	SKIN

Methylcyclohexanol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH			50		

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

CYCLOHEXANE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	700		2000		
AGW	DEU	700	200	2800	800	
MAK	DEU	700	200	2800	800	
VLA	ESP	700	200			
VLEP	FRA	700	200	1300	375	
WEL	GBR	350	100	1050	300	
TLV	GRC	700	200			
VLEP	ITA	350	100			
NDS	POL	300		1000		
VLE	PRT	700	200			
MV	SVN	700	200			
OEL	EU	700	200			
TLV-ACGIH		344	100			

TOLUENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	200		500		SKIN
AGW	DEU	190	50	760	200	SKIN
MAK	DEU	190	50	760	200	
VLA	ESP	192	50	384	100	SKIN
VLEP	FRA	76,8	20	384	100	SKIN
WEL	GBR	191	50	384	100	SKIN
TLV	GRC	192	50	384	100	
VLEP	ITA	192	50			SKIN
NDS	POL	100		200		
VLE	PRT	192	50	384	100	SKIN
OEL	EU	192	50	384	100	SKIN
TLV-ACGIH		75,4	20			

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	200		400		SKIN
AGW	DEU	440	100	880	200	SKIN
MAK	DEU	440	100	880	200	SKIN
VLA	ESP	221	50	442	100	SKIN
VLEP	FRA	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	
TLV	GRC	435	100	650	150	
VLEP	ITA	221	50	442	100	SKIN
NDS	POL	100				
VLE	PRT	221	50	442	100	SKIN
MV	SVN	221	50			SKIN
ESD	TUR	221	50	442	100	SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH		434	100	651	150	

1,2,3,4-tetrahydronaphthalene

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m3	ppm	mg/m3	ppm
TLV-ACGIH		50			

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.

8.2. Exposure controls

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

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 Directive 89/686/EEC 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).
In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.
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

Appearance	liquid	
Colour	Not available	
Odour	characteristic	
Odour threshold	Not available	
pH	Not available	
Melting point / freezing point	Not available	
Initial boiling point	Not available	
Boiling range	Not available	
Flash point	32 T ≤ 37	°C
Evaporation Rate	Not available	
Flammability of solids and gases	Not available	
Lower inflammability limit	Not applicable	
Upper inflammability limit	Not applicable	
Lower explosive limit	Not applicable	
Upper explosive limit	Not applicable	
Vapour pressure	Not available	
Vapour density	Not available	
Relative density	Not available	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	Not available	
Auto-ignition temperature	Not applicable	
Decomposition temperature	Not available	
Viscosity	Not available	
Explosive properties	Not available	
Oxidising properties	Not available	

9.2. Other information

VOC (Directive 2010/75/EC) :	18,10 %

SECTION 10. Stability and reactivity

10.1. Reactivity

The product may react exothermically on contact with strong oxidising or reducing agents, strong acids or bases.

ETHYL ACETATE
Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

4-METHYLPENTAN-2-ONE
Reacts violently with: light metals.Attacks various types of plastic materials.

TURPENTINE
Dissolves rubber.

TOLUENE
Avoid exposure to: light.

10.2. Chemical stability

Excessively high temperatures can cause thermal decomposition.

10.3. Possibility of hazardous reactions

See paragraph 10.1.

ETHYL ACETATE
Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidising agents,chlorosulphuric acid,potassium tert-butoxide.Forms explosive mixtures with: air.

4-METHYLPENTAN-2-ONE
May react violently with: oxidising agents.Forms peroxides with: air.Forms explosive mixtures with: hot air.

TURPENTINE
Reacts violently with: strong oxidising agents,chlorine.On contact with: tin chloride.Fire hazard.Dissolves rubber.Develops heat on contact with: calcium hypochlorite,chromium trioxide,chromium oxychloride,tin (IV) chloride.Risk of explosion on contact with: nitric acid,fluorine.

In oxygen atmospheres it generates explosive peroxides.

CYCLOHEXANOL
Risk of explosion on contact with: nitric acid,strong oxidising agents.May react dangerously with: alkaline metals,chromium trioxide.Forms explosive mixtures with: air.

CYCLOHEXANE
May react violently with: strong oxidants,liquid nitric oxide.Forms explosive mixtures with: air.

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

XYLENE (MIXTURE OF ISOMERS)
Stable in normal conditions of use and storage.Reacts violently with: strong oxidants,strong acids,nitric acid,perchlorates.May form explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating.

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

4-METHYLPENTAN-2-ONE
Avoid exposure to: sources of heat.

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

SECTION 10. Stability and reactivity ... / >>

10.5. Incompatible materials

Oxidising or reducing agents. Strong acids or bases.

ETHYL ACETATE
Incompatible with: acids,bases,strong oxidants,aluminium,nitrates,chlorosulphuric acid.Incompatible materials: plastic materials.

4-METHYLPENTAN-2-ONE
Incompatible with: oxidising substances,reducing substances.

CYCLOHEXANOL
Incompatible with: strong oxidants.Incompatible materials: plastic materials.

CYCLOHEXANE
Incompatible materials: natural rubbers,neoprene,polyvinyl chloride,polyethylene.

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.

TURPENTINE
May develop: acyclic terpenes,monocyclic terpenes,hydroterpenes,pyrones,cymenes.

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.

1,2,3,4-tetrahydronaphthalene
Informazioni riferite al 1,2,3,4-tetraidronaftalene:
LD50 orale ratto : 2860 mg/Kg
LD50 pelle coniglio: 16710 mg/Kg
Pelle : moderatamente irritante
Non sensibilizzante
Occhi : non irritante.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

XYLENE (MIXTURE OF ISOMERS)
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

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

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

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

XYLENE (MIXTURE OF ISOMERS)
Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

CYCLOHEXANE
Irritating for the skin and mucous membranes, and may be absorbed by the skin; nerve damage can occur at high doses and is largely due to the cyclohexanone, its metabolite.

SECTION 11. Toxicological information ... / >>

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

Interactive effects

XYLENE (MIXTURE OF ISOMERS)
Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

CYCLOHEXANE
The substance may enhance the effects of agents such as tri-ortho-cresyl phosphate (TOCP).

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

ACUTE TOXICITY

LC50 (Inhalation - vapours) of the mixture:	18,59 mg/l
LC50 (Inhalation - mists / powders) of the mixture:	> 5 mg/l
LD50 (Oral) of the mixture:	1111 mg/kg
LD50 (Dermal) of the mixture:	>2000 mg/kg

XYLENE (MIXTURE OF ISOMERS)

LD50 (Oral)	3523 mg/kg Rat
LD50 (Dermal)	4350 mg/kg Rabbit
LC50 (Inhalation)	26 mg/l/4h Rat

TURPENTINE

LD50 (Oral)	5760 mg/kg Rat

CYCLOHEXANE

LD50 (Oral)	> 5000 mg/kg Rat
LD50 (Dermal)	> 2000 mg/kg Rabbit
LC50 (Inhalation)	13,9 mg/l/4h Rat

TOLUENE

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

4-METHYLPENTAN-2-ONE

LD50 (Oral)	2080 mg/kg Rat
LD50 (Dermal)	> 16000 mg/kg Rabbit
LC50 (Inhalation)	> 8,2 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin
May produce an allergic reaction.
Contains:
Alpha-Pinene

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

SECTION 11. Toxicological information ... / >>

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

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

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

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause respiratory irritation

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Toxic for aspiration

SECTION 12. Ecological information

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

12.1. Toxicity

(R)-P-MENTHA-1,8-DIENE	
LC50 - for Fish	35 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	69,6 mg/l/48h Daphnia pulex
CYCLOHEXANE	
LC50 - for Fish	4,53 mg/l/96h Pimephales promelas
EC50 - for Crustacea	3,89 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	32,7 mg/l/72h Chlorella vulgaris

12.2. Persistence and degradability

Petroleum distillates, charcoal, vegetable extracts: they are mixtures of paraffinic, naphthenic, diterpenic and aromatic hydrocarbons. Their behaviour on the environment depends on the concentration. In each case use, according to good working practices, avoiding disposal in the environment. As a rule, the product is poorly biodegradable.
TURPENTINE
Oil distillates, coal, plant extracts: they are blends of parafin hydrocarbons, naphthenes, diterpenes and aromatics. Their behaviour in the environment depends on their composition. In any case they should be used according to good working practice, avoiding discharge into the environment.

XYLENE (MIXTURE OF ISOMERS)	
Solubility in water	100 - 1000 mg/l
Degradability: information not available	
TURPENTINE	
Solubility in water	0,1 - 100 mg/l
Rapidly degradable	

SECTION 12. Ecological information ... / >>

ROSIN
Solubility in water 0,1 - 100 mg/l
Rapidly degradable

(R)-P-MENTHA-1,8-DIENE
Solubility in water 0,1 - 100 mg/l
Rapidly degradable

CYCLOHEXANE
Solubility in water 0,1 - 100 mg/l
Rapidly degradable

TOLUENE
Solubility in water 100 - 1000 mg/l
Rapidly degradable

CYCLOHEXANOL
Solubility in water 36000 mg/l
Rapidly degradable

4-METHYLPENTAN-2-ONE
Solubility in water > 10000 mg/l
Rapidly degradable

ETHYL ACETATE
Solubility in water > 10000 mg/l
Rapidly degradable

12.3. Bioaccumulative potential

XYLENE (MIXTURE OF ISOMERS)
Partition coefficient: n-octanol/water 3,12
BCF 25,9

ROSIN
Partition coefficient: n-octanol/water 3
BCF 56,23

(R)-P-MENTHA-1,8-DIENE
Partition coefficient: n-octanol/water 4,38
BCF 1022

CYCLOHEXANE
Partition coefficient: n-octanol/water 3,44

TOLUENE
Partition coefficient: n-octanol/water 2,73
BCF 90

CYCLOHEXANOL
Partition coefficient: n-octanol/water 1,25

4-METHYLPENTAN-2-ONE
Partition coefficient: n-octanol/water 1,9

ETHYL ACETATE
Partition coefficient: n-octanol/water 0,68
BCF 30

12.4. Mobility in soil

XYLENE (MIXTURE OF ISOMERS)
Partition coefficient: soil/water 2,73

SECTION 12. Ecological information ... / >>

ROSIN
Partition coefficient: soil/water 3,7289

CYCLOHEXANE
Partition coefficient: soil/water 2,89

4-METHYLPENTAN-2-ONE
Partition coefficient: soil/water 2,008

12.5. Results of PBT and vPvB assessment

vPvB substances contained:
Camphene

PBT substances contained:
Camphene

12.6. 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

ADR / RID, IMDG, IATA: 1263

14.2. UN proper shipping name

ADR / RID: PAINT or PAINT RELATED MATERIAL
IMDG: PAINT or PAINT RELATED MATERIAL (TURPENTINE)
IATA: PAINT or PAINT RELATED MATERIAL

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

SECTION 14. Transport information ... / >>

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous

IMDG: Marine Pollutant

IATA: NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special Provision: -		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special Instructions:	A3, A72, A192	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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/EC: P5c-E2

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

Product

Point	3 - 40	

Contained substance

Point	57	CYCLOHEXANE
Point	48	TOLUENE

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 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

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

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

Aerosol 1	Aerosol, category 1
Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Carc. 2	Carcinogenicity, category 2
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
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
STOT SE 2	Specific target organ toxicity - single exposure, category 2
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H331	Toxic if inhaled.
H302+H332	Harmful if swallowed or if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and 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.
H371	May cause damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 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 NUMBER: 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

SECTION 16. Other information ... / >>

- PNEC: Predicted no effect concentration- REACH: EC Regulation 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 STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

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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.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 04 / 08 / 09 / 10 / 11 / 12 / 14.
Changed TLVs in section 8.1 for following countries:
CZE,