

## Safety data sheet

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

#### 1.1. Product identifier

Code: C4108  
Product name: LEVANTE - FIBRA DI VETRO LEGGERA

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

Intended use: Putty to repair, Professional use only.

Uses advised against: no one in particular

#### 1.3. Details of the supplier of the safety data sheet

Name: ILPA ADESIVI SRL  
Full address: Via Ferorelli, 4  
District and Country: 70132 BARI (BARI)  
ITALIA  
Tel. + 39 0805383837  
Fax + 39 0805377807

e-mail address of the competent person responsible for the Safety Data Sheet

aborricelli@ilpa.it

#### 1.4. Emergency telephone number

For urgent inquiries refer to

+ 39 3355405598 (Technical support - 8,00 - 17,00 - LUN-VEN; MON-FRI)(Italian time zone)  
Safety Executive (HSE) Chemicals Regulation Directorate 5S.1 Redgrave Court, Merton Road, Bootle, Merseyside. L20 7HS.  
Phone: +44 151 9513317

### 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 EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Reproductive toxicity, category 2	H361d	Suspected of damaging the unborn child.
Specific target organ toxicity - repeated exposure, category 1	H372	Causes damage to organs through prolonged or repeated exposure.
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.

#### 2.2. Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.



Signal words:

Danger

Hazard statements:

**H226** Flammable liquid and vapour.  
**H361d** Suspected of damaging the unborn child.  
**H372** Causes damage to organs through prolonged or repeated exposure.  
**H319** Causes serious eye irritation.  
**H315** Causes skin irritation.  
**H335** May cause respiratory irritation.

Precautionary statements:

**P201** Obtain special instructions before use.  
**P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
**P260** Do not breathe dust / fume / gas / mist / vapours / spray.  
**P280** Wear protective gloves / eye protection / face protection.  
**P308+P313** IF exposed or concerned: Get medical advice / attention.  
**P370+P378** In case of fire: use carbon dioxide, foam, chemical powder to extinguish.

**Contains:** STYRENE

**2.3. Other hazards.**

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

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

**3.1. Substances.**

Information not relevant.

**3.2. Mixtures.**

Contains:

Identification.	Conc. %.	Classification 1272/2008 (CLP).
<b>STYRENE</b>		
CAS. 100-42-5	35 - 37,5	Flam. Liq. 3 H226, Repr. 2 H361d, Acute Tox. 4 H332, STOT RE 1 H372, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Note D
EC. 202-851-5		
INDEX. 601-026-00-0		

Reg. no. 01-2119457861-32

Note: Upper limit is not included into the range.

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.

**PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS:** for PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

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

For symptoms and effects caused by the contained substances, see chap. 11.

### 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.

### 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. Check incompatibility for container material in section 7. 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 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).

No use other than specified in Section 1.2 of this safety data sheet.

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

**8.1. Control parameters.**

Regulatory References:

AUS	Österreich	Grenzwerteverordnung 2011 - GKV 2011
BEL	Belgique	AR du 11/3/2002. La liste est mise à jour pour 2010
BGR	България	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г
CHE	Suisse / Schweiz	Valeurs limites d'exposition aux postes de travail 2012. / Grenzwerte am Arbeitsplatz
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
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
EST	Eesti	Töökeskkonna keemiliste ohutegurite piirnormid 1. Vastu võetud 18.09.2001 nr 293 RT I 2001, 77, 460 - Redaktsiooni jõustumise kp: 01.01.2008
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveystieteiden tutkimuskeskus julkaisuja 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GRB	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012
HRV	Hrvatska	NN13/09 - Ministarstvo gospodarstva, rada i poduzetništva
HUN	Magyarország	50/2011. (XII. 22.) NGM rendelet a munkahelyek kémiai biztonságáról
IRL	Éire	Code of Practice Chemical Agent Regulations 2011
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
LTU	Lietuva	DĖL LIETUVOS HIGIENOS NORMOS HN 23:2007 CHEMINIŲ MEDŽIAGŲ 2007 m. spalio 15 d. Nr. V-827/A1-287
LVA	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012
NLD	Nederland	Databank of the social and Economic Council of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning i arbeidsatmosfære
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
SVK	Slovensko	NARIADENIE VLÁDY Slovenskej republiky z 20. júna 2007
SVN	Slovenija	Uradni list Republike Slovenije 15. 6. 2007
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
	TLV-ACGIH	ACGIH 2014

**STYRENE**

**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
VLEP	BEL	216	50	432	100	SKIN.
TLV	BGR	85		215		
TLV	CZE	1000		400		SKIN.

**ILPA ADESIVI SRL**

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AGW	DEU	86	20	172	40	
MAK	DEU	86	20	172	40	
TLV	DNK	105	25			SKIN.
VLA	ESP	86	20	172	40	
TLV	EST	90	20	200	50	SKIN.
HTP	FIN	86	20	430	100	
VLEP	FRA	215	50			
WEL	GRB	430	100	1080	250	
TLV	GRC	425	100	1050	250	
GVI	HRV	430	100	1080	250	
AK	HUN	50		50		
OEL	IRL	85	20	170	40	
RD	LTU	90	20	200	50	SKIN.
RV	LVA	10		30		
OEL	NLD	107				
TLV	NOR	105	25			
NDS	POL	50		200		
NPHV	SVK	86	20	172		
MV	SVN	86	20			
MAK	SWE	43	10	86	20	SKIN.
TLV-ACGIH		85	20	170	40	

Predicted no-effect concentration - PNEC.

Normal value in fresh water	0,028	mg/l
Normal value in marine water	0,014	mg/l
Normal value for fresh water sediment	0,614	mg/kg/d
Normal value for marine water sediment	0,0614	mg/kg/d
Normal value for water, intermittent release	0,04	mg/l
Normal value of STP microorganisms	5	mg/l
Normal value for the terrestrial compartment	0,2	mg/kg/d

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

Route of exposure	Effects on consumers.			Chronic systemic	Effects on workers			Chronic systemic
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local	
Oral.			VND	2,1 mg/kg bw/d				
Inhalation.	182,75 mg/m3	174,25 mg/m3	VND	10,2 mg/m3	306 mg/m3	289 mg/m3	VND	85 mg/m3
Skin.			VND	343 mg/kg bw/d			VND	406 mg/kg bw/d

**HYDROCARBONS C9-C11 n-ISO ALKANES CYCLICAL <2% AROMATIC**

**Threshold Limit Value.**

Type	Country	TWA/8h	ppm	STEL/15min	ppm	SDS supplier
		mg/m3		mg/m3		
TLV	ITA	1200			197	

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

Route of exposure	Effects on consumers.			Chronic systemic	Effects on workers			Chronic systemic
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local	
Oral.	VND	VND	VND	300 mg/kg bw/d				
Inhalation.	VND	VND	VND	900 mg/m3	VND	VND	VND	1500 mg/m3
Skin.	VND	VND	VND	300 mg/kg bw/d	VND	VND	VND	300 mg/kg bw/d

**COBALT BIS 2-ETHYL HEXANOATE**

**Threshold Limit Value.**

**C4108 - LEVANTE - FIBRA DI VETRO LEGGERA**

Type	Country	TWA/8h	STEL/15min
		mg/m3 ppm	mg/m3 ppm
TLV-ACGIH		350	SDS supplier

**Predicted no-effect concentration - PNEC.**

Normal value in fresh water	0,0006	mg/l
Normal value in marine water	0,00236	mg/l
Normal value for fresh water sediment	9,5	mg/kg/d
Normal value for marine water sediment	9,5	mg/kg/d
Normal value of STP microorganisms	0,37	mg/l
Normal value for the terrestrial compartment	10,9	mg/kg/d

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

Route of exposure	Effects on consumers.			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral.	NPI	VND	VND	0,0558 mg/kg bw/d				
Inhalation.	NPI	NPI	0,037 mg/m3	NPI	NPI	NPI	0,235 mg/m3	VND
Skin.	VND	NPI	VND	NPI	VND	NPI	VND	NPI

**N-BUTYL ACETATE**

**Threshold Limit Value.**

Type	Country	TWA/8h	STEL/15min
		mg/m3 ppm	mg/m3 ppm
MAK	AUS	480	100
VLEP	BEL	723	150
TLV	BGR	710	
VEL	CHE	480	100
MAK	CHE	480	100
TLV	CZE	950	
MAK	DEU	480	100
VLA	ESP	724	150
VLEP	FRA	710	150
WEL	GRB	724	150
TLV	GRC	710	150
GVI	HRV	724	150
AK	HUN	950	
OEL	IRL	710	150
OEL	NLD	150	
TLV	NOR		75
NDS	POL	200	
NPHV	SVK	480	100
MAK	SWE	500	100
TLV-ACGIH		713	150

**Predicted no-effect concentration - PNEC.**

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

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

Route of exposure	Effects on consumers.			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation.	859,7 mg/m3	859,7 mg/m3	102,34 mg/m3	102,34	960 mg/m3	960 mg/m3	480 mg/m3	480 mg/m3

mg/m<sup>3</sup>

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.

STYRENE: Biological Exposure Indices (BEI): mandelic acid + phenylglyoxylic acid in urine: 400 mg / g creatinine. Sampling time: End of shift (ACGIH 2014)

STYRENE: Biological Exposure Indices (BEI): styrene in venous blood: 0.2 mg / l. Sampling time: End of shift (ACGIH 2014).

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

Provide an emergency shower with face and eye wash station.

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

### HAND PROTECTION

Protect hands with category III work gloves (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 III 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.

## SECTION 9. Physical and chemical properties.



**9.1. Information on basic physical and chemical properties.**

Appearance	paste
Colour	various
Odour	aromatic
Odour threshold.	0,32 ppm (STYRENE: <i>Journal of Applied Toxicology</i> , 3(6):272-290. 1983.)
pH.	Not applicable.
Melting point / freezing point.	-30,7 °C (STYRENE)
Initial boiling point.	145 °C (STYRENE)
Boiling range.	Not applicable.
Flash point.	23 ≤ T ≤ 60 °C.
Evaporation rate	12,4 (di-ethylether = 1) (STYRENE: CEFIC Styrene Distribution Group) 0,49 (butyl acetate = 1) (STYRENE: Occupational health guideline for styrene)*
Flammability (solid, gas)	Not applicable.
Lower inflammability limit.	1,2 Vol% (STYRENE)
Upper inflammability limit.	8,9 Vol% (STYRENE)
Lower explosive limit.	Not applicable.
Upper explosive limit.	Not applicable.
Vapour pressure.	6,67 hPa (T= 20°C) (STYRENE)
Vapour density	3,6 (air = 1) (STYRENE)
Relative density.	1,160 Kg/l
Solubility	water: 0,24 g/l; soluble in organic solvents. (STYRENE)
Partition coefficient: n-octanol/water	2,96 log POW (STYRENE)
Auto-ignition temperature.	490°C (1,013 hPa) (STYRENE)
Decomposition temperature.	Not applicable.
Viscosity	950 ± 100 Pas (T=25°C)
Explosive properties	Product is not explosive. (STYRENE)
Oxidising properties	Not applicable.

\*(centers for disease control and prevention: <http://www.cdc.gov/niosh/docs/81>)

**9.2. Other information.**

VOC (Directive 2010/75/EC) :	35,44 % - 411,11 g/litre.
VOC (volatile carbon) :	32,66 % - 378,91 g/litre.

**SECTION 10. Stability and reactivity.****10.1. Reactivity.**

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

STYRENE: polymerises readily above 65°C/149°F with risk of fire and explosion; added with an inhibitor that requires a small amount of dissolved oxygen at temperatures < 25°C/77°F.

**10.2. Chemical stability.**

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

**10.3. Possibility of hazardous reactions.**

The vapours may also form explosive mixtures with the air.

STYRENE: can react dangerously with peroxides and strong acids. May polymerise on contact with: aluminium trichloride, azobisisobutyronitrile,

dibenzoyl peroxide, sodium. Risk of explosion on contact with: butyllithium, chlorosulphuric acid, diterbutyl peroxide, oxidising agents, oxygen.

#### 10.4. Conditions to avoid.

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

#### 10.5. Incompatible materials.

STYRENE: avoid oxidising agents, copper and strong acids; it dissolves various types of plastic materials, but not polychloroprene and polyvinyl alcohol.

#### 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.

This product must be handled carefully because of its possible teratogenic effects, which may be toxic and damage the foetus development.

This product may cause functional disorders or morphological mutations after repeated or prolonged exposure and/or may accumulate inside the human body and is thus graded as dangerous.

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

Acute effects: contact with skin may cause: irritation, erythema, edema, dryness and chapped skin. Ingestion may cause health disorders, including stomach pain and sting, nausea and sickness.

Acute effects: inhalation of this product may irritate the lower and upper respiratory tract and cause cough and respiratory disorders; at higher concentrations it can also cause pulmonary edema. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

#### 11.1. Information on toxicological effects.

##### Data refers to the mix:

ACUTE TOXICITY: No data available

SKIN CORROSION/IRRITATION: Causes skin irritation (section 3.2 of the safety data sheet)

SERIOUS EYE DAMAGE/IRRITATION: Causes serious eye irritation (section 3.2 of the safety data sheet)

RESPIRATORY OR SKIN SENSITISATION: No data available

GERM CELL MUTAGENICITY: No data available

CARCINOGENICITY: No data available

REPRODUCTIVE TOXICITY: Suspected of damaging the unborn child (section 3.2 of the safety data sheet)

STOT-SINGLE EXPOSURE: May cause respiratory irritation. (section 3.2 of the safety data sheet)

STOT-REPEATED EXPOSURE: Causes damage to auditory organs through prolonged or repeated exposure (section 3.2 of the safety data sheet)

ASPIRATION HAZARD: not relevant to viscosity values (section 9 of the safety data sheet)

##### Data relating to substances hazardous mixture:

#### STYRENE

ACUTE TOXICITY:

LD50 (Oral).2650 mg/kg Rat (MSDS Supplier)

LD50 (Dermal).> 2000 mg/kg Rat (OECD Guideline 402)

LC50 (Inhalation).11,8 mg/l/4h Rat (Archives of Environmental Health 18: 878-882 - sito ECHA)

LD50 (Oral). > 5000 mg/kg Rat (AMA Arch Ind Health 14: 387-398 ECHA website)

Acute toxicity following inhalation at 1000 ppm involves the central nervous system with headache and dizziness, lack of coordination; irritation of the mucous membranes of the eyes and respiratory tract occurs at 500 ppm concentrations. Chronic exposure produces depression of the Central and peripheral nervous system with loss of memory, headache and somnolence starting at 20 ppm; digestive disorders with nausea and loss of appetite; irritation of the respiratory tract with chronic bronchitis and dermatosis.

SKIN CORROSION/IRRITATION: Moderate "definite erythema" with "slight necrosis" (development of a thin layer of devitalized tissue which resulted in exfoliation) on the surface skin. (AMA Arch Ind Health 14: 387-398)

SERIOUS EYE DAMAGE/IRRITATION: Moderate conjunctival irritation (inflammation and slight swelling of the eyelids) and slight, transient corneal injury (perceptible superficial necrosis involving <50% of the lens) were reported. (AMA Arch Ind Health 14: 387-398)

RESPIRATORY OR SKIN SENSITISATION: not sensitising, test in vivo, species: guinea pig (Acta Dermatovener (Sockholm) 58: 121-124)

GERM CELL MUTAGENICITY: negative, test in vitro, bacterial reverse mutation assay (e.g. Ames test) (OECD Guideline 471). Test in vivo, species : rat = negative (Toxicol Sci. 57(2): 203-216)

CARCINOGENICITY: NOAEC systemic (carcinogenicity)  $\geq$  4.34 mg/L, test in GLP, species: rat (OECD Guideline 453)

REPRODUCTIVE TOXICITY: NOAEL: 125 ppm, LOAEL : 250 ppm, species: rat (European risk assessment report, Styrene – ECHA)

STOT-SINGLE EXPOSURE: May cause respiratory irritation. (Data available in the supplier's safety data sheet)

STOT-REPEATED EXPOSURE: studies demonstrate that styrene is ototoxic in rats following inhalation exposure at concentrations of 650 ppm and above, with a clear NOAEL being identified at 500 ppm. (Neurotoxicol Teratol 21: 689-697).

Oral exposure (mouse): LOAEL: 300 mg/kg/day systemic toxicity (hepatic necrosis); NOAEL: 150 mg/kg/day systemic toxicity and LOAEL: 150 mg/kg/day carcinogenicity (bronchoalveolar neoplasms)

ASPIRATION HAZARD: May be fatal if swallowed and enters airways. (Annex VI, REGULATION (EC) No 1272/2008).

## 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.

#### STYRENE

LC50 - for Fish.	10 mg/l/96h Pimephales promelas (OECD Guideline 203, GLP)
EC50 - for Crustacea.	4,7 mg/l/48h Daphnia magna (OECD Guideline 202, GLP)
EC50 - for Algae / Aquatic Plants.	4,9 mg/l/72h Selenastrum capricornutum (EPA OTS 797.1050, GLP)
Chronic NOEC for Crustacea.	1,01 mg/l/21d Daphnia magna (OECD Guideline 211, GLP)

### 12.2. Persistence and degradability.

#### STYRENE

Solubility in water.	320 mg/l
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### 12.3. Bioaccumulative potential.

#### STYRENE

Partition coefficient: n-octanol/water.	2,96
BCF.	74

### 12.4. Mobility in soil.

#### STYRENE

Partition coefficient: soil/water.	352 (Section 4.3 of Chapter on QSAR in the TGD)
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### 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 greater than 0,1%.

### 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: 3269

### 14.2. UN proper shipping name.

ADR / RID: POLYESTER RESIN KIT

IMDG: POLYESTER RESIN KIT

IATA: POLYESTER RESIN KIT

### 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

### 14.6. Special precautions for user.

ADR / RID: HIN - Kemler: -- Limited Quantities: 5 L

Tunnel restriction code: (E)

Special Provision: -

IMDG: EMS: F-E, S-D Limited Quantities: 5 L

IATA:	Cargo:	Maximum quantity: 10 Kg	Packaging instructions: 370
	Pass.:	Maximum quantity: 10 Kg	Packaging instructions: 370
	Special Instructions:	A66, A163	

**14.7. Transport in bulk according to Annex II of MARPOL73/78 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. P5b FLAMMABLE LIQUIDS

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

Product.

Point *3. Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:*  
 (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;  
 (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;  
 (c) hazard class 4.1;  
 (d) hazard class 5.1.

Point *40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.*

Substances in Candidate List (Art. 59 REACH).

None.

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.

A chemical safety assessment has been performed for the following contained substances.

STYRENE

## SECTION 16. Other information.

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

<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Repr. 2</b>	Reproductive toxicity, category 2
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>STOT RE 1</b>	Specific target organ toxicity - repeated exposure, category 1
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>H226</b>	Flammable liquid and vapour.
<b>H361d</b>	Suspected of damaging the unborn child.
<b>H332</b>	Harmful if inhaled.
<b>H372</b>	Causes damage to organs through prolonged or repeated exposure.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.

### 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
- 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).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EU) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 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
- 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
  - ECHA website

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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.

**Training for workers:**

Worker training should include content, updates and duration depending on the risk profiles assigned to the business sectors they belong.

**Classification according to Regulation (EC) Nr. 1272/2008**

Flam. Liq. 3, H226

Eye Irrit. 2, H319

Repr. 2, H361d

STOT RE 1, H372

Skin Irrit. 2, H315

STOT SE 3, H335

**Classification procedure**

Calculation method

Calculation method

Calculation method

Calculation method

Calculation method

Calculation method