Safety data sheet

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

1.1. Product identifier

Code: **M3102, M3103, M3104, M3105, M3106, M3107, M3108, M3109, M3110, M3111, M3113, M3114, M3115, M3116, M3117, M3118, M3119, M3120, M3121, M3122, M3123, M3124, M3125, M3126, M3127, M3128, M3129, M3130, M3131, M3132, M3133, M3134, M3135, M3136, M3137, M3138, M3139, M3140, M3141, M3142, M3143, M3144, M3145, M3146, M3147**

Product name **EXTRAKITT MASTICE PER MARMO SEMISOLIDO (various colors)**

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

Intended use **Mastic for marble, 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.

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.
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.

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).**
STYRENE		
CAS. 100-42-5	15 - 16,5	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		
XYLENE (MIXTURE OF ISOMERS)		
CAS. 1330-20-7	0 - 0,05	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Note C
EC. 215-535-7		
INDEX. 601-022-00-9		
Reg. no. 01-2119488216-32		
ETHYLBENZENE		
CAS. 100-41-4	0 - 0,05	Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Aquatic Chronic 3 H412
EC. 202-849-4		
INDEX. 601-023-00-4		
Reg. no. 01-2119489370-35		

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. 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).

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
CYP	Κύπρος	Κ.Δ.Π. 268/2001; Κ.Δ.Π. 55/2004; Κ.Δ.Π. 295/2007; Κ.Δ.Π. 70/2012
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

		terveysministeriön julkaisuja 2012:5
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
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 Concil 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
TUR	Türkiye	2000/39/EC sayılı Direktifin ekidir
EU	OEL EU	Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.
	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.
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	GBR	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. Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers Acute local	Acute systemic	Chronic local	Chronic systemic
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

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	221	50	442	100	SKIN.
VLEP	BEL	221	50	442	100	SKIN.
TLV	BGR	221		442		SKIN.
TLV	CYP	221	50	442	100	SKIN.
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.
TLV	EST	221	50	442	100	SKIN.
HTP	FIN	220	50	440	100	SKIN.
VLEP	FRA	221	50	442	100	SKIN.
WEL	GBR	220	50	441	100	
TLV	GRC	435	100	650	150	
GVI	HRV	221	50	442	100	SKIN.
AK	HUN	221		442		SKIN.
OEL	IRL	221	50	442	100	SKIN.
TLV	ITA	221	50	442	100	SKIN.
OEL	NLD	210		442		SKIN.
TLV	NOR	108	25			SKIN.
NDS	POL	100				
NPHV	SVK	221	50	442		SKIN.
MV	SVN	221	50			SKIN.
MAK	SWE	221	50	442	100	SKIN.
ESD	TUR	221	50	442	100	SKIN.

OEL	EU	221	50	442	100	SKIN.
TLV-ACGIH		434	100	651	150	

Predicted no-effect concentration - PNEC.		
Normal value in fresh water	0,327	mg/l
Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg/d
Normal value for marine water sediment	12,46	mg/kg/d
Normal value for water, intermittent release	0,327	mg/l
Normal value of STP microorganisms	6,58	mg/l
Normal value for the terrestrial compartment	2,31	mg/kg/d

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	1,6 mg/kg bw/d				
Inhalation.	174 mg/m3	174 mg/m3	VND	14,8 mg/m3	289 mg/m3	289 mg/m3	VND	77 mg/m3
Skin.			VND	108 mg/kg bw/d			VND	180 mg/kg bw/d

ETHYLBENZENE

Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	440	100	880	200	SKIN.
VLEP	BEL	442	100	551	125	SKIN.
TLV	BGR	435		545		SKIN.
TLV	CYP	442	100	884	200	SKIN.
TLV	CZE	200		500		SKIN.
AGW	DEU	440	100	880	200	SKIN.
MAK	DEU	88	20	176	40	SKIN.
TLV	DNK	217	50			
VLA	ESP	441	100	884	200	SKIN.
TLV	EST	442	100	884	200	SKIN.
HTP	FIN	220	50	880	200	SKIN.
VLEP	FRA	88,4	20	442	100	SKIN.
WEL	GBR	441	100	552	125	SKIN.
TLV	GRC	435	100	545	125	
GVI	HRV	442	100	884	200	SKIN.
AK	HUN	442		884		
OEL	IRL	442	100	884	200	SKIN.
TLV	ITA	442	100	884	200	SKIN.
RD	LTU	442	100	884	200	SKIN.
RV	LVA	442	100	884	200	SKIN.
OEL	NLD	215		430		SKIN.
TLV	NOR	20	5			SKIN.
NDS	POL	200		400		
NPHV	SVK	442	100	884		SKIN.
MAK	SWE	200	50	450	100	
ESD	TUR	442	100	884	200	SKIN.
OEL	EU	442	100	884	200	SKIN.

TLV-ACGIH	87	20

Predicted no-effect concentration - PNEC.		
Normal value in fresh water	1	mg/l
Normal value in marine water	1	mg/l
Normal value for fresh water sediment	137	mg/kg/d
Normal value for marine water sediment	137	mg/kg/d
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	96	mg/l
Normal value for the terrestrial compartment	268	mg/kg/d

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.			NPI	1,6 mg/kg bw/d				
Inhalation.	NPI	VND	NPI	15 mg/m3	293 mg/m3	VND	NPI	77 mg/m3
Skin.	NPI	NPI	NPI	NPI	NPI	NPI	NPI	180 mg/kg bw/d

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.

XYLENI: Biological Exposure Indices (IBE): Hippuric Acid in urine: 1.5 g/g creatinina. Sampling time: End of shift. (ACGIH 2014).

ETHYLBENZENE: Biological Exposure Indices (IBE): mandelic acid + phenylglyoxylic acid in urine: 0,7 g/g creatinine. Sampling time: End of shift (ACGIH 2014)
ethylbenzene end-expiratory air: not critical (ACGIH 2014).

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: *Journal of Applied Toxicology*, 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.	1,800 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	>20,5 mm2/sec (40°C)
Explosive properties	Product is not explosive. (STYRENE)
Oxidising properties	Not applicable.

9.2. Other information.

VOC (Directive 2010/75/EC) :	15,54 %	-	279,79	g/litre.
VOC (volatile carbon) :	14,30 %	-	257,49	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.

XYLENE (MIXTURE OF ISOMERS): stable, but may develop violent reactions in the presence of strong oxidising agents such as sulphuric and nitric acids and perchlorates. May form explosive mixtures with the air.
ETHYLBENZENE: reacts violently with strong oxidising agents and attacks various types of plastics. Can 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.

ETHYLBENZENE: methane, styrene, hydrogen, ethane.

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.

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: No data available
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:

XYLENE (MIXTURE OF ISOMERS): has a toxic effect on the CNS (encephalopathies). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.
ACUTE TOXICITY:
LD50 (Oral).3523 mg/kg Rat (equivalent or similar to EU Method B.1)
LD50 (Dermal).4200 mg/kg Rabbit (Industrial Medicine 39, 215-200, 1970)
LC50 (Inhalation).26 mg/l/4h Rat(equivalent or similar to EU Method B.2)
SKIN CORROSION/IRRITATION: Causes skin irritation. (test in vivo, Rabbit, Industrial Medicine 39, 215-200.)
SERIOUS EYE DAMAGE/IRRITATION: Causes eyes irritation (Draize Test, Rabbit, exposure time 24h)
RESPIRATORY OR SKIN SENSITISATION: not sensitizing. (mouse, OECD Guideline 429)
GERM CELL MUTAGENICITY: negative, (Mouse, test in vivo, Equivalent or similar to OECD Guideline 478)
CARCINOGENICITY: negative, (mouse, Equivalent or similar to EU Method B.32)
REPRODUCTIVE TOXICITY: NOEC = 100 ppm (parental systemic toxicity), NOAEC >500 ppm (reproductive and developmental toxicity) (Rat, Equivalent or similar to EPA OPPTS 870.3800)
STOT-SINGLE EXPOSURE: May cause respiratory irritation. (Environmental Toxicology and Pharmacology, Vol 14, pp 129-137)
STOT-REPEATED EXPOSURE: Causes damage to organs: central nervous system, liver and kidneys, through prolonged or repeated exposure, (Rat, Metodo OECD Guideline 408).
ASPIRATION HAZARD: May be fatal if swallowed and enters airways. (Annex VI, REGULATION (EC) No 1272/2008).

ETHYLBENZENE: like the benzene homologues, may exert an effect on the CNS with depression, narcosis, often preceded by dizziness and accompanied by headache. It is irritating to the skin, conjunctivae and respiratory apparatus.
ACUTE TOXICITY:
LD50 (Oral).3500 mg/kg Rat (standard acute method)
LD50 (Dermal).15354 mg/kg Rabbit (standard acute method)
LC50 (Inhalation).17,8 mg/l/4h Rat (standard acute method)

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

SECTION 12. Ecological information.

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil and waterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

12.1. Toxicity.

XYLENE (MIXTURE OF ISOMERS)

LC50 - for Fish.	2,6 mg/l/96h Oncorhynchus mykiss (OECD TG 203)
Chronic NOEC for Fish.	1,3 mg/l 56d Oncorhynchus mykiss (Appl. Sci. Branch, Eng. Res. Cent. Denver, CO: 15p.)
Chronic NOEC for Crustacea.	1,17 mg/l 7d Ceriodaphnia dubia (Ecotoxicology and Environmental Safety 39, 136-146)

ETHYLBENZENE

LC50 - for Fish.	4,2 mg/l/96h Oncorhynchus mykiss, according to (OECD Guideline 203)
EC50 - for Crustacea.	2,4 mg/l/48h Daphnia magna, According to EPA method F
EC50 - for Algae / Aquatic Plants.	5,4 mg/l/72h Selenastrum capricornutum, according to (U.S. EPA.1985 Federal register, Volume 50, Number 188)

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.

XYLENE (MIXTURE OF ISOMERS)

Solubility in water. mg/l 100 - 1000 Handbook of aqueous solubility data.

Rapidly biodegradable.

OECD Guideline 301 F, GLP

ETHYLBENZENE

Solubility in water. mg/l 1000 - 10000

Rapidly biodegradable.

ISO 14593-CO2-Headspace Test, GLP

STYRENE

Solubility in water. 320 mg/l

12.3. Bioaccumulative potential.

XYLENE (MIXTURE OF ISOMERS)		
Partition coefficient: n-octanol/water.	3,12	American Chemical Society, Washington DC
BCF.	25,9	Appl. Sci. Branch, Eng. Res. Cent. Denver, CO: 15p.
ETHYLBENZENE		
Partition coefficient: n-octanol/water.	3,6	
STYRENE		
Partition coefficient: n-octanol/water.	2,96	
BCF.	74	

12.4. Mobility in soil.

XYLENE (MIXTURE OF ISOMERS)		
Partition coefficient: soil/water.	2,73	equivalent or similar to OECD Guideline 121
STYRENE		
Partition coefficient: soil/water.	352	(Section 4.3 of Chapter on QSAR in the TGD)

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: 1866

The product, if packaged in packages of less than 450 litres, is not subject to ADR regulations as stated in 2.2.3.1.5.
The product, if packaged in packages of less than 30 litres, is not subject to obligations relating to marking, labelling and package testing in accordance with 2.3.2.5 of the IMDG CODE.

14.2. UN proper shipping name.

ADR / RID:	RESIN MIXTURE
IMDG:	RESIN MIXTURE
IATA:	RESIN MIXTURE

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:	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	

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 authorisarion (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.

Product not intended for uses provided for by Dir. 2004/42/CE.

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:

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
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
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

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

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5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
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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	**Classification procedure**
Flammable liquid, category 3, H226	Calculation method
Reproductive toxicity, category 2, H361d	Calculation method
Specific target organ toxicity - repeated exposure, category 1, H372	Calculation method
Eye irritation, category 2, H319	Calculation method
Skin irritation, category 2, H315	Calculation method