

MPE56A - PURO

Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878

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

1.1. Product identifier

Code: **MPE56A**
Product name: **PURO**
Chemical name and synonym: **Mixture of epoxy-acrylate resins and polyester containing styrene**

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

Intended use: **Special high-strength mastic**

Identified Uses	Industrial	Professional	Consumer
Professional uses: public sector (administration, education, entertainment, services, crafts)	-	ERC: 8b, 8e. PROC: 10, 11, 19. PC: 1.	-

1.3. Details of the supplier of the safety data sheet

Name: **Industria Chimica General S.r.l.**
Full address: **Via Repubblica di San Marino 8**
District and Country: **41122 Modena (MO) Italy**
Tel.: **(+39) 059 450991 / 059 450978**
Fax: **(+39) 059 450615**

e-mail address of the competent person responsible for the Safety Data Sheet: **ricerca@generalchemical.it**

Supplier: **Industria Chimica General S.r.l.**

1.4. Emergency telephone number

For urgent inquiries refer to:

- Milano, Italy (+39) 02 66101029 Centro Antiveleni Ospedale Niguarda Ca' Granda**
- Pavia, Italy (+39) 0382 24444 Centro Antiveleni IRCSS Fondazione Maugeri**
- Bergamo, Italy (+39) 800 883300 Centro Antiveleni Ospedali Riuniti**
- Firenze, Italy (+39) 055 7947819 Centro Antiveleni Ospedale Careggi**
- Roma, Italy (+39) 06 3054343 Centro Antiveleni Policlinico Gemelli**
- Roma, Italy (+39) 06 49978000 Centro Antiveleni Policlinico Umberto I**
- Napoli, Italy (+39) 081 7472870 Centro Antiveleni Ospedale Cardarelli**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
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.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.

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SECTION 2. Hazards identification ... / >>

Hazardous to the aquatic environment, chronic toxicity, category 3

H412

Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms:



Signal words: Danger

Hazard statements:

H226 Flammable liquid and vapour.
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.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/ protective clothing / eye protection / face protection.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P201 Obtain special instructions before use.
P308+P313 IF exposed or concerned: Get medical advice / attention.
P501 Dispose of the product / container in an authorized installation according to national and local regulations.

Contains: styrene
maleic anhydride

2.3. Other hazards

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

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
styrene		
CAS	100-42-5	$25 \leq x < 35$
EC	202-851-5	
INDEX	601-026-00-0	
REACH Reg.	01-2119457861-32	
AMORPHOUS SILICA		
CAS	67762-90-7	$5 \leq x < 10$
EC	614-122-2	
INDEX		

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, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: D
LC50 Inhalation vapours: 11,8 mg/l/4h

Substance with a community workplace exposure limit.

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

triethanolamine

CAS 102-71-6 1 ≤ x < 5

EC 203-049-8

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REACH Reg. 01-2119486482-31

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics

CAS 0,1 ≤ x < 1

Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336, Aquatic Chronic 3 H412, EUH066

EC 927-241-2

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REACH Reg. 01-2119471843-32

methacrylic acid 2-methylpropenoic acid

CAS 79-41-4 0,1 ≤ x < 1

Acute Tox. 3 H311, Acute Tox. 4 H302, Acute Tox. 4 H332, Skin Corr. 1A H314, Eye Dam. 1 H318, STOT SE 3 H335

EC 201-204-4

INDEX

STOT SE 3 H335: ≥ 1%
LD50 Oral: 1060 mg/kg, LD50 Dermal: 500 mg/kg, STA Inhalation vapours: 11 mg/l

REACH Reg. 01-2119463884-26

maleic anhydride

CAS 108-31-6 0,001 ≤ x < 0,1

Acute Tox. 4 H302, STOT RE 1 H372, Skin Corr. 1B H314, Eye Dam. 1 H318, Resp. Sens. 1 H334, Skin Sens. 1A H317, EUH071

EC 203-571-6

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REACH Reg. 01-2119472428-31

Skin Sens. 1A H317: ≥ 0,001%

LD50 Oral: 1090 mg/kg

ETHYLBENZENE

CAS 100-41-4 0 ≤ x < 0,1

Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
STA Inhalation vapours: 11 mg/l

EC 202-849-4

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REACH Reg. 01-2119489370-35

p-XYLENE

CAS 106-42-3 0 ≤ x < 0,1

Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
STA Dermal: 1100 mg/kg, STA Inhalation vapours: 11 mg/l

EC 203-396-5

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REACH Reg. 01-2119484661-33

o-XYLENE

CAS 95-47-6 0 ≤ x < 0,1

Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
STA Dermal: 1100 mg/kg, STA Inhalation vapours: 11 mg/l, STA Inhalation mists/powders: 1,5 mg/l, STA Inhalation gas: 4500 ppm

EC 202-422-2

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REACH Reg. 01-2119485822-30

m-XYLENE

CAS 108-38-3 0 ≤ x < 0,1

Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
STA Dermal: 1100 mg/kg, STA Inhalation vapours: 11 mg/l, STA Inhalation mists/powders: 1,5 mg/l, STA Inhalation gas: 4500 ppm

EC 203-576-3

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REACH Reg. 01-2119484621-37

2-ETHYLEXAN-1-OL

CAS 104-76-7 0 ≤ x < 0,1

Acute Tox. 4 H332, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
STA Inhalation vapours: 11 mg/l

EC 203-234-3

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REACH Reg. 01-2119487289-20

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

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

AMORPHOUS SILICA

Denomination
Other identifier

Siloxanes and Silicones, di-Me, reaction products with silica
Siloxanes and Silicones, di-Me, reaction products with silica

Surface functionalisation / treatment

Surface treatments 1:

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 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

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

styrene

Acute dose-dependent effects.

Skin: irritation, delipidization

Eyes: irritation

Nervous system: depression, dizziness, asthenia

Upper airways: irritation

Lungs: irritation, pulmonary edema

Acute dose-dependent effects.

Skin: irritation, delipidization

Eyes: irritation

Nervous system: depression, dizziness, asthenia

Upper airways: irritation

Lungs: irritation, pulmonary edema

Chronic effects.

Skin: irritative contact dermatitis

Nervous system: organic psychosyndrome, peripheral neuropathy, ototoxicity

Eyes: irritation, conjunctivitis

Lungs: irritation, chronic obstructive pulmonary disease

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

In case of accident or discomfort, consult a doctor immediately, showing the label and / or the safety data sheet. No special treatment provided.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING MEDIA

The means of extinction are the traditional ones: carbon dioxide, foam, chemical powder. For leaks and spills of the product that did not ignite the nebulized water can be used to disperse flammable vapours and protect people who are committed to stop the leak.

UNSUITABLE MEANS OF EXTINCTION

Do not use water jets: The water is not effective to extinguish the fire, however it can be used to cool the closed containers exposed to the flame by preventing bursts and explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS DUE TO EXPOSURE IN THE EVENT OF FIRE

Overpressure may occur in containers exposed to fire with danger of explosion. Avoid breathing combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Cool with jets of water the containers to avoid the combustion of the product and the development of substances potentially dangerous for

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the health. Always wear the complete fire protection equipment. Collect the extinguishing water that must not be discharged into the drains. Dispose of the contaminated water used for the extinction and the residue of the fire according to the regulations in force.

Equipment

Normal fire-fighting garments, such as a flameproof blanket, a polycarbonate helmet with a screen frame, full face mask with multipurpose ABEKP3 filter, gloves and anti-vibration coveralls, safety belt.

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

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

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

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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

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

6.4. Reference to other sections

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

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

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

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory References:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)

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

EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2020

styrene

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	86	20	172	40	
VLA	ESP	85	20	170	40	
VLEP	FRA	215	50			
VLEP	ITA	600	200	900	300	
NDS/NDSch	POL	50		200		
WEL	GBR	430	100	1080	250	
OEL	EU	600	200	900	300	
TLV-ACGIH			20		40	Biol. limit: 400mg/gKreatinina

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	0,418	mg/kg
Normal value for marine water sediment	0,307	mg/kg
Normal value for water, intermittent release	0,04	mg/l
Normal value of STP microorganisms	5	mg/l
Normal value for the terrestrial compartment	0,146	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,0077 mg/kg/d				
Inhalation	10 mg/m3	10 mg/m3	1 mg/m3	1 mg/m3	100 mg/m3	100 mg/m3	100 mg/m3	85 mg/m3
Skin				343 mg/kg/d				406 mg/kg/d

AMORPHOUS SILICA

Threshold Limit Value

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

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

triethanolamine

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	DEU	5		20		
VLA	ESP	5				
TLV-ACGIH		5				

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,32	mg/l
Normal value in marine water	0,032	mg/l
Normal value for fresh water sediment	1,7	mg/kg
Normal value for marine water sediment	0,17	mg/kg
Normal value for water, intermittent release	5,12	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,151	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral				13				
				mg/kg/d				
Inhalation				1,25				5
				mg/m3				mg/m3
Skin				3,1				6,3
				mg/kg/d				mg/kg/d

Hydrocarbons, C9-C10, n-alkanes, isoalkanes, cyclics, <2% aromatics

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral				125				
				mg/kg/d				
Inhalation				185				871
				mg/m3				mg/m3
Skin				125				208
				mg/kg/d				mg/kg/d

methacrylic acid 2-methylpropenoic acid

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH			20			

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,82	mg/l
Normal value in marine water	0,82	mg/l
Normal value for water, intermittent release	0,04	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	1,2	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Inhalation			6,55	6,3			88	29,6
			mg/m3	mg/m3			mg/m3	mg/m3
Skin				2,55				4,25
				mg/kg bw/d				mg/kg bw/d

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

MALEIC ANHYDRIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU		0,1			
TLV-ACGIH		0,01				

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	0,334	mg/kg
Normal value for marine water sediment	0,0334	mg/kg
Normal value for water, intermittent release	0,4281	mg/l
Normal value of STP microorganisms	0,00446	mg/l
Normal value for the food chain (secondary poisoning)	6,67	mg/kg
Normal value for the terrestrial compartment	0,0415	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		0,1 mg/kg bw/d		0,06 mg/kg bw/d				
Inhalation			0,08 mg/m3	0,05 mg/m3	0,8 mg/m3	0,8 mg/m3	0,32 mg/m3	0,19 mg/m3
Skin		0,1 mg/kg bw/d		0,1 mg/kg bw/d		0,2 mg/kg bw/d		0,2 mg/kg bw/d

m-XYLENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH			100		150	

o-XYLENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH			100		150	

p-XYLENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	221	50	442	100	
TLV-ACGIH			100		150	

ETHYLBENZENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	442	100	884	200	
OEL	EU	442	100	884	200	
TLV-ACGIH			20			

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

2-ETHYLEXAN-1-OL

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,017	mg/l
Normal value in marine water	0,0017	mg/l
Normal value for fresh water sediment	0,284	mg/kg
Normal value for marine water sediment	0,0284	mg/kg
Normal value for water, intermittent release	0,17	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	55	mg/kg
Normal value for the terrestrial compartment	0,047	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		1.1 mg/kg bw/d						
Inhalation	26.6 mg/m3		26.6 mg/m3	2.3 mg/m3	53.2 mg/m3		53.2 mg/m3	12.8 mg/m3
Skin				11,4 mg/kg/d		11.4		23 mg/kg/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.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

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

Provide an emergency shower with face and eye wash station.

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

Handle with protective gloves compliant with standard EN 374, in butyl rubber (0.7 mm) or viton (0.4 mm) and with a permeation time of at least 60 min. The permeation time may vary depending on the glove manufacturer. In the case of a mixture consisting of several substances, it is not possible to accurately estimate the protection time of the gloves. Gloves must be checked before being used and must be replaced as soon as they are damaged or worn. Use an appropriate technique for removing gloves to avoid skin contact with the product.

Wash and dry your hands.

SKIN PROTECTION

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

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

EYE PROTECTION

Wear splash goggles with side shields and / or protective visors complying with EN 166 and EN 165. Do not use eye lenses.

If there is a risk of being exposed to splashes or sprays in relation to the work performed, it is necessary to provide adequate protection of the mucous membranes (mouth, nose, eyes) in order to avoid accidental absorption through a face shield.

RESPIRATORY PROTECTION

Exposed workers must wear an appropriate half-face mask of respiratory protection approved according to EN 140 and / or EN 136, with A1-P2 filters (white-brown color code).

In the event of possible saturation of the environment and / or lack or absence of oxygen, the use of an auto-protector or air supply respirator is recommended.

ENVIRONMENTAL EXPOSURE CONTROLS

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

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

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	gel	
Colour	opalescent	
Odour	aromatic	
Odour threshold	0,15-25 ppm	Substance:styrene

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SECTION 9. Physical and chemical properties ... / >>

Melting point / freezing point	-31 °C	Substance:styrene
Initial boiling point	145 °C	Substance:styrene
Boiling range	Not determined	
Flammability	not applicable	Reason for missing data:as a pasta
Lower explosive limit	Not determined	
Upper explosive limit	Not determined	
Flash point	23 < T < 60 °C	Substance:styrene
Auto-ignition temperature	490 °C	Substance:styrene
Decomposition temperature	Not determined	Reason for missing data:does not decompose
pH	Not determined	Reason for missing data:as an organic mixture
Kinematic viscosity	>20,5 mm ² /sec @ 40°C	
Solubility	partially soluble in organic solvents	
Partition coefficient: n-octanol/water	2,96 LogPow	Substance:styrene
Vapour pressure	6 hPa	Substance:styrene Temperature: 20 °C
Density and/or relative density	1,22 g/cm ³	
Relative vapour density	3,6	Substance:styrene
Particle characteristics	Not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Evaporation rate	0,536	Substance:styrene
Total solids (250°C / 482°F)	0 %	
VOC (Directive 2010/75/EC)	32,26 % - 393,60 g/litre	
Explosive properties	not explosive	
Oxidising properties	non-oxidizing	
Water solubility	160 - 343 mg/l @25°C (STYRENE)	

SECTION 10. Stability and reactivity

10.1. Reactivity

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

styrene

Polymerises at temperatures above 65°C/149°F. Fire hazard. Possibility of explosion.

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

Cures at temperatures above 65 ° C / 149 ° F. Possibility of fire. Possibility of explosion.

It is 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

In normal use and storage conditions dangerous reactions are not predictable.

styrene

May react dangerously with: peroxides, 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 substances, oxygen.

ETHYLBENZENE

Reacts violently with: strong oxidants. Attacks various types of plastic materials. May form explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating. Avoid the accumulation of electrostatic charges. Avoid any source of ignition.

styrene

Avoid contact with: oxidising substances, copper, strong acids.

10.5. Incompatible materials

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

styrene

Incompatible materials: plastic materials.

10.6. Hazardous decomposition products

Due to thermal decomposition or in case of fire, potentially harmful gases and vapors can be released.

ETHYLBENZENE

May develop: methane, styrene, hydrogen, ethane.

SECTION 11. Toxicological information

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

styrene

WORKERS: inhalation; contact with the skin.

ETHYLBENZENE

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

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

styrene

Acute inhalation toxicity at 1000 ppm affects the central nervous system with headaches, dizziness and coordination difficulties; irritation of the mucous membranes of the eyes and respiratory tract occurs at 500 ppm. Chronic exposure gives depression of the central and peripheral nervous system with memory loss, headaches and drowsiness starting from 35 ppm; digestive disorders with nausea and loss of appetite; respiratory tract irritation with chronic bronchitis; dermatosis. Repeated exposure, at low doses of inhaled substance, causes irreversible changes in auditory function and can cause changes in color vision. There are no reliable data on the reversibility of visual impairment. Repeated skin exposures cause irritation. The substance decreases the skin, which can cause dryness and cracking.

ETHYLBENZENE

As the counterparts of benzene, may have an acute effect on the central nervous system, with depression, narcosis, often preceded by dizziness and associated with headache (Ispesi). Is irritating for skin, conjunctiva and respiratory tract.

Interactive effects

styrene

The metabolism of the substance is inhibited by ethanol. When styrene is photo-oxidised with ozone and nitrogen dioxide, as in the formation of smog, highly irritating products for the eyes can occur in humans.

ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	>2000 mg/kg

styrene

LD50 (Oral):	6000 mg/kg hamster
LD50 (Dermal):	2000 mg/kg rat
LC50 (Inhalation vapours):	11,8 mg/l/4h rat

AMORPHOUS SILICA

LD50 (Oral):	> 1000 mg/kg ratto (OECD 401)
LD50 (Dermal):	> 2000 mg/kg Coniglio (ORCD 402)

triethanolamine

LD50 (Oral):	6400 mg/kg rat
LD50 (Dermal):	> 2000 mg/kg rabbit

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SECTION 11. Toxicological information ... / >>

methacrylic acid 2-methylpropenoic acid
 LD50 (Oral): 1060 mg/kg rat
 LD50 (Dermal): 500 mg/kg rabbit
 LC50 (Inhalation vapours): 7,1 mg/l/4h rat
 STA (Inhalation vapours): 11 mg/l estimate from table 3.1.2 of Annex I of the CLP
 (figure used for calculation of the acute toxicity estimate of the mixture)

MALEIC ANHYDRIDE
 LD50 (Oral): 1090 mg/kg rat
 LD50 (Dermal): 2620 mg/kg rabbit
 LC50 (Inhalation vapours): 4,35 mg/l/1h rat

m-XYLENE
 LD50 (Oral): 5000 mg/kg rat
 LD50 (Dermal): 12126 mg/kg rabbit
 STA (Dermal): 1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP
 (figure used for calculation of the acute toxicity estimate of the mixture)

o-XYLENE
 LD50 (Oral): 3600 mg/kg rat

p-XYLENE
 LD50 (Oral): 5000 mg/kg rat
 LC50 (Inhalation vapours): 27124 mg/l/4h rat
 STA (Inhalation vapours): 11 mg/l estimate from table 3.1.2 of Annex I of the CLP
 (figure used for calculation of the acute toxicity estimate of the mixture)

ETHYLBENZENE
 LD50 (Oral): 3500 mg/kg rat
 LD50 (Dermal): 17800 mg/kg rabbit
 LC50 (Inhalation vapours): 4000 mg/l/4h rat
 STA (Inhalation vapours): 11 mg/l estimate from table 3.1.2 of Annex I of the CLP
 (figure used for calculation of the acute toxicity estimate of the mixture)

2-ETHYLEXAN-1-OL
 LD50 (Oral): 2047 mg/kg Ratto
 LD50 (Dermal): 3000 mg/kg Ratto
 LC50 (Inhalation vapours): 890 mg/l/4h rat
 STA (Inhalation vapours): 11 mg/l estimate from table 3.1.2 of Annex I of the CLP
 (figure used for calculation of the acute toxicity estimate of the mixture)

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

styrene
 Classified in group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2002).
 Classified as "probable carcinogen" by the US National Toxicology Program (NTP) - (US DHHS, 2014).

ETHYLBENZENE
 Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2000).
 Classified in Group D (not classifiable as a human carcinogen) by the US Environmental Protection Agency (EPA) - (US EPA file on-line 2014).

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SECTION 11. Toxicological information ... / >>

REPRODUCTIVE TOXICITY

Suspected of damaging the unborn child

STOT - SINGLE EXPOSURE

May cause respiratory irritation

STOT - REPEATED EXPOSURE

Causes damage to organs

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: >20,5 mm²/sec @ 40°C

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

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

12.1. Toxicity

triethanolamine

LC50 - for Fish	11800 mg/l/96h
EC50 - for Crustacea	2038 mg/l/48h
EC10 for Algae / Aquatic Plants	512 mg/l/72h
Chronic NOEC for Crustacea	16 mg/l

ETHYLBENZENE

LC50 - for Fish	48,5 mg/l/96h
EC50 - for Crustacea	75 mg/l/48h

styrene

LC50 - for Fish	4,02 mg/l/96h
EC50 - for Crustacea	4,7 mg/l/48h
EC50 - for Algae / Aquatic Plants	4,9 mg/l/72h
EC10 for Algae / Aquatic Plants	0,28 mg/l/4d
Chronic NOEC for Crustacea	1,01 mg/l/21d

MALEIC ANHYDRIDE

LC50 - for Fish	75 mg/l/96h
EC50 - for Crustacea	42,8 mg/l/48h
EC50 - for Algae / Aquatic Plants	74,35 mg/l/72h

methacrylic acid 2-methylpropenoic acid

LC50 - for Fish	85 mg/l/96h
EC50 - for Crustacea	> 130 mg/l/48h
EC50 - for Algae / Aquatic Plants	20 mg/l/72h
Chronic NOEC for Fish	10 mg/l 35d
Chronic NOEC for Crustacea	53 mg/l 21d
Chronic NOEC for Algae / Aquatic Plants	8,2 mg/l 72h

2-ETHYLEXAN-1-OL

LC50 - for Fish	17,1 mg/l/96h
EC50 - for Crustacea	39 mg/l/48h
EC50 - for Algae / Aquatic Plants	11,5 mg/l/72h
Chronic NOEC for Fish	14 mg/l

m-XYLENE

LC50 - for Fish	21 mg/l/96h
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SECTION 12. Ecological information ... / >>

o-XYLENE
LC50 - for Fish 21 mg/l/96h

12.2. Persistence and degradability

triethanolamine
Solubility in water > 1000000 mg/l
Rapidly degradable

ETHYLBENZENE
Rapidly degradable

styrene
Solubility in water 320 mg/l
Rapidly degradable

MALEIC ANHYDRIDE
Entirely degradable

2-ETHYLEXAN-1-OL
Solubility in water 900 mg/l

12.3. Bioaccumulative potential

triethanolamine
Partition coefficient: n-octanol/water -1,75
BCF < 3,9

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

12.4. Mobility in soil

triethanolamine
Partition coefficient: soil/water 1

styrene
Partition coefficient: soil/water 2,55

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

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SECTION 14. Transport information

14.1. UN number or ID 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
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30 Special provision: 640E	Limited Quantities: 5 L	Tunnel restriction code: (E)
IMDG:	EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo: Pass.: Special provision:	Maximum quantity: 10 Kg Maximum quantity: 10 Kg A66, A163	Packaging instructions: 370 Packaging instructions: 370

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso Category - Directive 2012/18/EC: P5c

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

<u>Product</u>	
Point	3 - 40
<u>Contained substance</u>	
Point	75

Regulation (EC) No. 2019/1148 - on the marketing and use of explosives precursors
Not applicable

Substances in Candidate List (Art. 59 REACH)

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

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SECTION 15. Regulatory information ... / >>

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

methacrylic acid 2-methylpropenoic acid

maleic anhydride

This safety data sheet contains one or more Exposure Scenarios in an integrated form. Contents have been included in sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet.

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. 3	Acute toxicity, category 3
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
Skin Corr. 1A	Skin corrosion, category 1A
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
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
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.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
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.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.

Use descriptor system:

ERC 8b	Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
ERC 8e	Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)

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SECTION 16. Other information ... / >>

PC	1	Adhesives, sealants
PROC	10	Roller application or brushing
PROC	11	Non industrial spraying
PROC	19	Manual activities involving hand contact

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- 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: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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- The Merck Index. - 10th Edition
 - Handling Chemical Safety
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 - IFA GESTIS website
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 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

MPE56A - PURO**SECTION 16. Other information ... / >>****Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

02 / 03 / 08 / 09 / 10 / 11 / 12 / 15.