Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: **SOLIDOTRASPARENTE**
Product name **SOLIDO TRASPARENTE**

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

Intended use **TRANSPARENT GLUE FOR STONE.**

Identified Uses	Industrial	Professional	Consumer
ADHESIVE SYSTEM/TREATMENT FOR STONE SECTOR	✓	✓	-

1.3. Details of the supplier of the safety data sheet

Name **TENAX SPA**
Full address **Via I Maggio, 226**
District and Country **37020 Volargne (VR)**
Italy
Tel. +39 045 6887593
Fax +39 045 6862456

e-mail address of the competent person responsible for the Safety Data Sheet **msds@tenax.it**

1.4. Emergency telephone number

For urgent inquiries refer to

Ireland
National Poisons Information Centre, Beaumont Hospital, PO Box 1297, Beaumont Road, Dublin 9
Members of the public: 01 809 2166 (8am to 10pm every day)
Healthcare professionals: 01 809 2566 or 01 837 9964 (24 hours)

Malta
112

0 800 314 7900 (Turkey) only, or +90 0312 433 70 01 - Toxicology Department and Poisons Centre
+98 21 6419306 / +98 21 6405569 - Poisons Information Centre (Tehran)
+91 484 4008056 - Poison Control Centre (South India)
(011) 642 2417 / (011) 488 3108 - Anti-Poison Centre (Johannesburg)

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.
Hazardous to the aquatic environment, chronic		

SECTION 2. Hazards identification ... / >>

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.
P370+P378	In case of fire: use CO2, sand, powder to extinguish.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.

Contains: STYRENE
MALEIC ANHYDRIDE
PHTHALIC ANHYDRIDE

2.3. Other hazards

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

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification		**x = Conc. %**	**Classification (EC) 1272/2008 (CLP)**
STYRENE			
CAS	*100-42-5*	30 ≤ x < 50	**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**
EC	*202-851-5*		**LC50 Inhalation vapours: 11,8 mg/l/4h**
INDEX	*601-026-00-0*		
REACH Reg.	*01-2119457861-32*		
PHTHALIC ANHYDRIDE			
CAS	*85-44-9*	0,7 ≤ x < 0,8	**Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317**
EC	*201-607-5*		**LD50 Oral: 1530 mg/kg**
INDEX	*607-009-00-4*		
REACH Reg.	*01-2119457017-41*		

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

DIISOPROPANOL-PARA-TOLUIDINE
CAS *38668-48-3* 0,3 ≤ x < 0,35 **Acute Tox. 2 H300, Eye Irrit. 2 H319, Aquatic Chronic 3 H412**
EC *254-075-1* **LD50 Oral: >25**
INDEX
REACH Reg. *01-2119980937-17*

N, N-DIMETHYLCYCLOHEYLAMINE
CAS *98-94-2* 0,1 ≤ x < 0,15 **Flam. Liq. 3 H226, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, Skin Corr. 1B H314, Eye Dam. 1 H318, Aquatic Chronic 2 H411**
EC *202-715-5* **STA Oral: 100 mg/kg, STA Dermal: 300 mg/kg, LC50 Inhalation vapours: 9 mg/l/1h**
INDEX
REACH Reg. *01-2119533030-60*

MALEIC ANHYDRIDE
CAS *108-31-6* 0,05 ≤ 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* **Skin Sens. 1A H317: ≥ 0,001%**
INDEX *607-096-00-9* **LD50 Oral: 1090**
REACH Reg. *01-2119472428-31*

DIPROPYLENE GLYCOL MONOMETHYL ETHER
CAS *34590-94-8* 0 ≤ x < 0,05 **Substance with a community workplace exposure limit.**
EC *252-104-2*
INDEX
REACH Reg. *01-2119450011-60*

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 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.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

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

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. 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:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÅRDSMINISTERIETS PUBLIKATIONER 2020:25
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των

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

		οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ ''σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία''»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NOR	Norge	Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
TUR	Türkiye	Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2022

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

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR	308	50			SKIN	
TLV	CZE	270	43,74	550	89,1	SKIN	
AGW	DEU	310	50	310	50		
MAK	DEU	310	50	310	50		
TLV	DNK	309	50			SKIN	E
VLA	ESP	308	50			SKIN	
VLEP	FRA	308	50			SKIN	
HTP	FIN	310	50			SKIN	
TLV	GRC	600	100	900	150		
AK	HUN	308					
GVI/KGVI	HRV	308	50			SKIN	
VLEP	ITA	308	50			SKIN	
TLV	NOR	300	50			SKIN	
TGG	NLD	300					
VLE	PRT	308	50			SKIN	
NDS/NDSCh	POL	240		480		SKIN	
TLV	ROU	308	50			SKIN	
NGV/KGV	SWE	300	50	450 (C)	75 (C)	SKIN	
MV	SVN	308	50			SKIN	
ESD	TUR	308	50			SKIN	
WEL	GBR	308	50			SKIN	
OEL	EU	308	50			SKIN	

Predicted no-effect concentration - PNEC

Normal value in fresh water	19	mg/l
Normal value in marine water	1,9	mg/l
Normal value for fresh water sediment	70,2	mg/kg
Normal value for marine water sediment	7,02	mg/kg
Normal value for water, intermittent release	190	mg/l
Normal value of STP microorganisms	4168	mg/l
Normal value for the terrestrial compartment	2,74	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				36 mg/kg bw/d				
Inhalation				37,2 mg/m3				308 mg/m3
Skin				121 mg/kg bw/d				283 mg/kg bw/d

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

STYRENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	85		215		
TLV	CZE	100	23,1	400	92,4	
AGW	DEU	86	20	172	40	
MAK	DEU	86	20	172	40	
TLV	DNK			105 (C)	25 (C)	SKIN
VLA	ESP	86	20	172	40	
VLEP	FRA	100	23,3	200	46,6	
HTP	FIN	86	20	430	100	Buller
TLV	GRC	425	100	1050	250	
AK	HUN	86		172		
GVI/KGVI	HRV	430	100	1080	250	SKIN
TLV	NOR	105	25			
TGG	NLD	107				
NDS/NDSCh	POL	50		100		
TLV	ROU	50	12	150	35	
NGV/KGV	SWE	43	10	86 (C)	20 (C)	SKIN
MV	SVN	86	20	344	80	
WEL	GBR	430	100	1080	250	
TLV-ACGIH		10		20		

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,028	mg/l
Normal value in marine water	0,0028	mg/l
Normal value for fresh water sediment	0,614	mg/kg
Normal value for marine water sediment	0,0614	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	0,2	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	2,1 mg/kg				
Inhalation	182,75 mg/m3	174,25 mg/m3	VND	85 mg/m3	306 mg/m3	289 mg/m3	VND	10,6 mg/m3
Skin			VND	343 mg/kg			VND	406 mg/kg

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	
TLV	BGR	1				
TLV	CZE	1	0,245	2	0,49	
AGW	DEU	0,081	0,02	0,081 (C)	0,02 (C)	
MAK	DEU	0,081	0,02	0,081 (C)	0,02 (C)	C = 0,20 mg/m3
TLV	DNK	0,4	0,1			
VLA	ESP	0,4	0,1			
VLEP	FRA			1		
HTP	FIN	0,41	0,1	0,81 (C)	0,2 (C)	
TLV	GRC	1				
AK	HUN	0,08		0,08		
GVI/KGVI	HRV	0,41	0,1	0,8	0,2	INHAL
GVI/KGVI	HRV	0,41	0,1	0,8	0,2	SKIN
TLV	NOR	0,8	0,2			
NDS/NDSCh	POL	0,5		1		SKIN
TLV	ROU	1	0,25	3	0,75	
NGV/KGV	SWE	0,2	0,05	0,4	0,1	
MV	SVN	0,41	0,1	0,41	0,1	
WEL	GBR	1		3		
TLV-ACGIH		0,01	0,0025			INHAL

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,04281	mg/l
Normal value in marine water	0,00428	mg/l
	1	
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	44,6	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation					0,8 mg/m3	0,8 mg/m3	0,4 mg/m3	0,4 mg/m3

DIISOPROPANOL-PARA-TOLUIDINE

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	0,0782	mg/kg
Normal value for marine water sediment	0,00782	mg/kg
Normal value for water, intermittent release	0,17	mg/l
Normal value of STP microorganisms	199,5	mg/l
Normal value for the terrestrial compartment	0,005	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			VND	0,4 mg/m3			VND	2,47 mg/m3
Skin			VND	0,3 mg/kg/d			VND	0,7 mg/kg/d

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

CASTOR OIL, HYDROGENATED

Threshold Limit Value

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

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation				83,04 mg/m3				336,75 mg/m3
Skin				23,875 mg/kg bw/d				47,75 mg/kg bw/d

PHTHALIC ANHYDRIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		0,002		0,005		

Predicted no-effect concentration - PNEC

Normal value in fresh water	1	mg/l
Normal value in marine water	0,1	mg/l
Normal value for fresh water sediment	3,8	mg/kg
Normal value for marine water sediment	0,38	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				5 mg/kg bw/d				
Inhalation				8,6 mg/m3		32,2 mg/m3		
Skin				5 mg/kg bw/d		10 mg/kg bw/d		

N, N-DIMETHYLCYCLOHEYLAMINE

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0035	mg/l
Normal value in marine water	0,00035	mg/l
Normal value for fresh water sediment	0,03692	mg/kg
Normal value for marine water sediment	0,00369	mg/kg
Normal value of STP microorganisms	20,6	mg/l
Normal value for the terrestrial compartment	0,00533	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation					8,3 mg/m3	35 mg/m3	8,3 mg/m3	0,53 mg/m3
Skin								0,6 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 ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

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

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.
The following should be considered when choosing work glove material (see standard EN 374): 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 Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.
EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).
In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.
RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.
ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.
Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

HAND PROTECTION: Protect hands with work gloves for protection from chemical agents in nitrile or fluoroelastomer (EN 374-1: 2016) at least type B or higher based on the risk assessment carried out by the company. Breakthrough time> 480 minutes.
Material thickness:
NITRILE
short contact> 0.38 mm
prolonged contact> 0.55 mm
FLUOROELASTOMER
short contact> 0.50 mm
prolonged contact> 1.50 mm

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	paste	
Colour	YELLOW-RED	
Odour	typical	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	32 °C	
Auto-ignition temperature	not available	
pH	not available	Reason for missing data:substance/mixture is non-polar/aprotic (eg: an organic solvent mixture)
Kinematic viscosity	>20,5 mm2/sec (40°C)	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	1,1 g/cm3	
Relative vapour density	not available	

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

Particle characteristics	not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU)	31,19 %	-	343,07	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.

DIPROPYLENE GLYCOL MONOMETHYL ETHER
Forms peroxides with: air.
STYRENE
Polymerises at temperatures above 65°C/149°F.Fire hazard.Possibility of 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.

DIPROPYLENE GLYCOL MONOMETHYL ETHER
May react violently with: strong oxidising agents.
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.

10.4. Conditions to avoid

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

DIPROPYLENE GLYCOL MONOMETHYL ETHER
Avoid exposure to: sources of heat.Possibility of explosion.
STYRENE
Avoid contact with: oxidising substances,copper,strong acids.

10.5. Incompatible materials

STYRENE
Incompatible materials: plastic materials.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

SECTION 11. Toxicological information ... / >>

STYRENE
WORKERS: inhalation; contact with the skin.

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

STYRENE
The acute toxicity by inhalation at 1000 ppm affects the central nervous system with headache and dizziness, lack of coordination; irritation of the eye and respiratory tract mucous membranes occurs at 500 ppm. Chronic exposure causes depression of the central and peripheral nervous system with loss of memory, headache and drowsiness starting at 20 ppm; digestive disorders with nausea and loss of appetite; irritation of the respiratory tract with chronic bronchitis; dermatosis. Repeated exposure, at low doses of inhaled substance, causes irreversible changes to hearing and may cause changes in colour vision. No certain data is available on the reversibility of the visual impairment. Repeated skin exposure causes irritation. The substance degreases the skin, which can cause dryness and cracking.

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, products highly irritating for the human eye may ensue.

ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

DIPROPYLENE GLYCOL MONOMETHYL ETHER

LD50 (Dermal):	9510 mg/kg Coniglio
LD50 (Oral):	> 5000 mg/kg Ratto
LC50 (Inhalation vapours):	3,35 mg/l/4h Ratto

STYRENE

LD50 (Dermal):	> 2000 mg/kg Rat
LD50 (Oral):	5000 mg/kg Rat
LC50 (Inhalation vapours):	11,8 mg/l/4h Rat

MALEIC ANHYDRIDE

LD50 (Dermal):	610 mg/kg Rat
LD50 (Oral):	1090 mg/kg Rat

DIISOPROPANOL-PARA-TOLUIDINE

LD50 (Dermal):	> 2000 mg/kg rat
LD50 (Oral):	> 25 mg/kg rat

PHTHALIC ANHYDRIDE

LD50 (Oral):	1530 mg/kg Ratto
LC50 (Inhalation vapours):	> 2,14 mg/l/4h Ratto

N, N-DIMETHYLCYCLOHEYLAMINE

STA (Dermal):	300 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)
LD50 (Oral):	380 mg/kg Ratto
STA (Oral):	100 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)
LC50 (Inhalation vapours):	9 mg/l/1h Ratto

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

SECTION 11. Toxicological information ... / >>

Respiratory sensitization

Information not available

Skin sensitization

Information not available

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).

REPRODUCTIVE TOXICITY

Suspected of damaging the unborn child

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSURE

May cause respiratory irritation

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Causes damage to organs

Target organs

Information not available

Route of exposure

Information not available

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

DIPROPYLENE GLYCOL MONOMETHYL ETHER	
LC50 - for Fish	> 100 mg/l/96h
EC50 - for Crustacea	1919 mg/l/48h
Chronic NOEC for Crustacea	> 0,5 mg/l Daphnia magna
STYRENE	
LC50 - for Fish	4,02 mg/l/96h Pimephales promelas
EC50 - for Crustacea	4,7 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	4,9 mg/l/72h Pseudokirchneriella subcapitata
EC10 for Algae / Aquatic Plants	0,28 mg/l/72h
DIISOPROPANOL-PARA-TOLUIDINE	
LC50 - for Fish	17 mg/l/96h Brachydanio rerio
EC50 - for Crustacea	28,8 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	245 mg/l/72h Desmodesmus subspicatus
PHTHALIC ANHYDRIDE	
LC50 - for Fish	560 mg/l/96h
EC50 - for Crustacea	> 640 mg/l/48h
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h
Chronic NOEC for Fish	10 mg/l
N, N-DIMETHYLCYCLOHEYLAMINE	
LC50 - for Fish	21,5 mg/l/96h
EC50 - for Crustacea	75 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 2 mg/l/72h

12.2. Persistence and degradability

DIPROPYLENE GLYCOL MONOMETHYL ETHER	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	
STYRENE	
Solubility in water	320 mg/l
Rapidly degradable	
MALEIC ANHYDRIDE	
Solubility in water	> 10000 mg/l
Entirely degradable	
DIISOPROPANOL-PARA-TOLUIDINE	
Solubility in water	7000 mg/l
NOT rapidly degradable	
N, N-DIMETHYLCYCLOHEYLAMINE	
Rapidly degradable	

12.3. Bioaccumulative potential

DIPROPYLENE GLYCOL MONOMETHYL ETHER	
Partition coefficient: n-octanol/water	0,0043
STYRENE	
Partition coefficient: n-octanol/water	2,96
BCF	74

SECTION 12. Ecological information ... / >>

MALEIC ANHYDRIDE
Partition coefficient: n-octanol/water -2,78

DIISOPROPANOL-PARA-TOLUIDINE
Partition coefficient: n-octanol/water 2,1

N, N-DIMETHYLCYCLOHEYLAMINE
Partition coefficient: n-octanol/water 2,1
BCF 19,84

12.4. Mobility in soil

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 ≥ than 0,1%.

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 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 450 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 SOLUTION
IMDG: RESIN SOLUTION
IATA: RESIN SOLUTION

SECTION 14. Transport information ... / >>

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: -	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo: Passengers: Special provision:	Maximum quantity: 220 L Maximum quantity: 60 L A3	Packaging instructions: 366 Packaging instructions: 355

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
Product
Point 3 - 40
Contained substance
Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

SECTION 15. Regulatory information ... / >>

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
DIISOPROPANOL-PARA-TOLUIDINE

SECTION 16. Other information

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

Flam. Liq. 3	Flammable liquid, category 3
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Asp. Tox. 1	Aspiration hazard, category 1
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
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 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H226	Flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H300	Fatal if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H318	Causes serious 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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration

SECTION 16. Other information ... / >>

- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
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14. Regulation (EU) 2018/669 (XI Atp. CLP)
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16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
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- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 04 / 08 / 09 / 10 / 11 / 12 / 15 / 16.