Safety Data Sheet
Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878
KERAREP PARTE A
Date of first edition: 4/18/2021
Safety Data Sheet dated 5/4/2022
version 5

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

1.1. Product identifier

Mixture identification:

Trade name: KERAREP PARTE A

Trade code: 12112020 -2

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

Recommended use: Adhesives, sealants

Uses advised against: Data not available.

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel.+39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Kerakoll Italy - +39-0536-816511

Ireland

Poison information centre: 01 809 2166 (Daily 8am-10pm)

In case of emergency call 999 or 112

Malta

In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Flam. Liq. 3	Flammable liquid and vapour.
Skin Irrit. 2	Causes skin irritation.
Eye Irrit. 2	Causes serious eye irritation.
Skin Sens. 1A	May cause an allergic skin reaction.
Repr. 2	Suspected of damaging fertility or the unborn child.
STOT RE 1	Causes damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Pictograms and Signal Words

Danger

Hazard statements

H226	Flammable liquid and vapour.
H315	Causes skin irritation.

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
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 vapours.
P280	Wear protective gloves and eye protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER.
P405	Store locked up.
P501	Dispose of contents/container in accordance with applicable regulations.

Contains

maleic anhydride

styrene

Fatty acids, C14-18 and C16-18-unsatd., maleated

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: KERAREP PARTE A

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
10-19,9 %	styrene	CAS:100-42-5 EC:202-851-5 Index:601-026-00-0	Flam. Liq. 3, H226; Repr. 2, H361d; Acute Tox. 4, H332; STOT RE 1, H372; Skin Irrit. 2, H315; Eye Irrit. 2, H319	
< 0,5 %	Fatty acids, C14-18 and C16-18-unsatd., maleated	CAS:85711-46-2 EC:288-306-2	Skin Irrit. 2, H315; Skin Sens. 1, H317	01-2119976378-19
< 0,3 %	xylene	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315; Asp. Tox. 1, H304; STOT RE 2, H373; Eye Irrit. 2, H319; STOT SE 3, H335	01-2119488216-32
< 0,3 %	1,1'-(p-tolylimino)dipropan-2-ol	CAS:38668-48-3 EC:254-075-1	Acute Tox. 2, H300; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	01- 2119980937- 17
< 0,1 %	maleic anhydride	CAS:108-31-6 EC:203-571-6 Index:607-096-00-9	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 Specific Concentration Limits: C ≥ 0.001%: Skin Sens. 1A H317	

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediatley and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO_2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhaltion of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Notes
styrene	NATIONAL	AUSTRALIA		213.000	50.000	426.000	100.000	
	NATIONAL	AUSTRALIA		85.000	20.000	340.000	80.000	
	NATIONAL	BELGIUM		108.000	25.000	216.000	50.000	
	NATIONAL	CANADA			35.000		100.000	Ontario
	NATIONAL	CANADA		213.000	50.000	426.000	100.000	Québec
	NATIONAL	DENMARK		105.000	25.000	105.000	25.000	
	NATIONAL	FINLAND		86.000	20.000	430.000	100.000	
	NATIONAL	FRANCE		100.000	23.300	200.000	46.600	
	NATIONAL	GERMANY		86.000	20.000	172.000	40.000	AGS
	NATIONAL	GERMANY		86.000	20.000	172.000	40.000	DFG
	NATIONAL	HUNGARY		50.000		50.000		
	NATIONAL	IRELAND		85.000	20.000	170.000	40.000	
	NATIONAL	ISRAEL		85.000	20.000	170.000	40.000	
	NATIONAL	JAPAN			50.000			MHLW
	NATIONAL	JAPAN		85.000	20.000			JSOH
	NATIONAL	LATVIA		10.000		30.000		
	NATIONAL	NEW ZEALAND		85.000	20.000	170.000	40.000	
	NATIONAL	CHINA		50.000		100.000		
	NATIONAL	POLAND		50.000		200.000		
	NATIONAL	ROMANIA		50.000	15.000	150.000	35.000	
	NATIONAL	SINGAPORE		213.000	50.000	426.000	100.000	
	NATIONAL	KOREA, REPUBLIC OF		85.000	20.000	170.000	40.000	
	NATIONAL	SPAIN		86.000	20.000	172.000	40.000	
	NATIONAL	SWEDEN		43.000	10.000	86.000	20.000	
	NATIONAL	SWITZERLAND		85.000	20.000	170.000	40.000	
	NATIONAL	UNITED STATES OF AMERICA		215.000	50.000	425.000	100.000	NIOSH
	NATIONAL	UNITED STATES OF AMERICA			100.000		200.000	OSHA

	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	430.000	100.000	1080.000	250.000	
	NATIONAL	ITALY	85.000	20.000	170.000	85.000	
	NATIONAL	ARGENTINA		20.000		40.000	
	NATIONAL	BULGARIA	85.000		215.000		
	NATIONAL	CZECHIA	100.000		400.000		
	NATIONAL	CHILE	188.000	44.000	425.000	100.000	
	NATIONAL	CROATIA	430.000	10.000	1080.000	250.000	
	NATIONAL	ESTONIA	90.000	20.000	200.000	50.000	
	NATIONAL	GREECE	425.000	100.000	1050.000	250.000	
	NATIONAL	INDONESIA		20.000		40.000	
	NATIONAL	ICELAND			105.000	25.000	
	NATIONAL	LITHUANIA	90.000	20.000	200.000	50.000	
	NATIONAL	MALAYSIA	85.200	20.000			
	NATIONAL	MEXICO		20.000		40.000	
	NATIONAL	NORWAY	105.000	25.000			
	NATIONAL	NETHERLANDS	107.000	25.000			
	NATIONAL	PORTUGAL		20.000		40.000	
	NATIONAL	RUSSIAN FEDERATION	10.000		30.000		
	NATIONAL	SLOVAKIA	90.000	20.000	200.000	50.000	
	NATIONAL	SLOVENIA	86.000	20.000	172.000	40.000	
	NATIONAL	SOUTH AFRICA	210.000	50.000	420.000	10.000	
	NATIONAL	TAIWAN, PROVINCE OF CHINA	213.000	50.000			
	ACGIH	NNN		20		40	A4, BEI - CNS impair, URT irr, peripheral neuropathy
xylene	ACGIH	NNN		100.000		150.000	A4, BEI - URT and eye irr, CNS impair
	EU	NNN	221.000	50.000	442.000	100.000	Skin
	NATIONAL	AUSTRIA	221.000	50.000	442.000	100.000	
	NATIONAL	BELGIUM	221.000	50.000	442.000	100.000	
	NATIONAL	CANADA		100.000		150.000	Ontario
	NATIONAL	CANADA	434.000	100.000	651.000	150.000	Québec
	NATIONAL	DENMARK	109.000	25.000	442.000	100.000	
	NATIONAL	FINLAND	220.000	50.000	440.000	100.000	
	NATIONAL	FRANCE	221.000	50.000	442.000	100.000	
	NATIONAL	GERMANY	440.000	100.000	880.000	200.000	AGS
	NATIONAL	GERMANY	440.000	100.000	880.000	200.000	DFG
	NATIONAL	HUNGARY	221.000		442.000		
	NATIONAL	IRELAND	221.000	50.000	442.000	100.000	
	NATIONAL	ISRAEL	434.000	100.000	442.000	100.000	
	NATIONAL	ITALY	221.000	50.000	442.000	100.000	
	NATIONAL	JAPAN		100.000			MHLW
	NATIONAL	JAPAN	217.000	50.000			JSOH
	NATIONAL	LATVIA	221.000	50.000	442.000	100.000	

	NATIONAL	NEW ZEALAND	217.000	50.000			
	NATIONAL	CHINA		50.000		100.000	
	NATIONAL	POLAND		100.000			
	NATIONAL	ROMANIA	221.000	50.000	442.000	100.000	
	NATIONAL	SINGAPORE	434.000	100.000	651.000	150.000	
	NATIONAL	KOREA, REPUBLIC OF	435.000	100.000	655.000	150.000	
	NATIONAL	SPAIN	221.000	50.000	442.000	100.000	
	NATIONAL	SWEDEN	221.000	50.000	442.000	100.000	
	NATIONAL	SWITZERLAND	435.000	100.000	870.000	200.000	
	NATIONAL	NETHERLANDS	210.000		442.000		
	NATIONAL	TURKEY	221.000	50.000	442.000	100.000	
	NATIONAL	UNITED STATES OF AMERICA	435.000	100.000	655.000	150.000	NIOSH
	NATIONAL	UNITED STATES OF AMERICA	435.000	100.000			OSHA
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	220.000	50.000	441.000	100.000	
	NATIONAL	ARGENTINA		100.000		150.000	
	NATIONAL	BULGARIA	221.000	50.000	445.000	100.000	
	NATIONAL	CZECHIA	200.000		400.000		
	NATIONAL	CHILE	380.000	87.000	621.000	150.000	
	NATIONAL	CROATIA	221.000	50.000	442.000	100.000	
	NATIONAL	ESTONIA	200.000	50.000	450.000	100.000	
	NATIONAL	GREECE	435.000	100.000	650.000	150.000	
	NATIONAL	INDONESIA	434.000	100.000	651.000	150.000	
	NATIONAL	ICELAND	109.000	25.000	442.000	100.000	
	NATIONAL	LITHUANIA	221.000	50.000	442.000	100.000	
	NATIONAL	MEXICO		100.000		150.000	
	NATIONAL	NORWAY	108.000	25.000			
	NATIONAL	PORTUGAL		100.000		150.000	
	NATIONAL	RUSSIAN FEDERATION	50.000		150.000		
	NATIONAL	SLOVAKIA	221.000	50.000	442.000	100.000	
	NATIONAL	SLOVENIA	221.000	50.000	442.000	100.000	
	NATIONAL	SOUTH AFRICA	218.000	50.000	435.000	100.000	
	NATIONAL	TAIWAN, PROVINCE OF CHINA	434.000	100			
ethanol; ethyl alcohol	ACGIH	NNN				1000	A3 - URT irr
maleic anhydride	NATIONAL	AUSTRALIA	1.000	0.250			
	NATIONAL	AUSTRIA	0.410	0.100	0.800	0.200	
	NATIONAL	BELGIUM	0.002	0.010			Inhalable fraction and vapour
	NATIONAL	CANADA	0.010				Ontario; inhalable fraction and

							vapour
NATIONAL	CANADA		1.000	0.250			Québec
NATIONAL	DENMARK		0.400	0.100	0.800	0.200	
NATIONAL	FINLAND		0.410	0.100			
NATIONAL	FINLAND	C			0.810	0.200	
NATIONAL	FRANCE				1.000		
NATIONAL	GERMANY		0.081	0.020	0.081	0.020	AGS; long term and short term: inhalable fraction and vapour
NATIONAL	GERMANY		0.081	0.020	0.081	0.020	DFG; long term and short term: inhalable fraction and vapour
NATIONAL	GERMANY	C			0.202	0.050	AGS; inhalable fraction and vapour
NATIONAL	GERMANY	C			0.202	0.050	DFG; inhalable fraction and vapour
NATIONAL	HUNGARY		0.400		0.400		
NATIONAL	IRELAND			0.100			
NATIONAL	JAPAN		0.400	0.100			JSOH
NATIONAL	JAPAN	C	0.800	0.200			JSOH
NATIONAL	LATVIA		1.000				
NATIONAL	NEW ZEALAND		1.000	0.250			
NATIONAL	CHINA		1.000		2.000		
NATIONAL	POLAND		0.500		1.000		
NATIONAL	ROMANIA		1.000	0.250	3.000	0.750	
NATIONAL	SINGAPORE		1.000	0.250			
NATIONAL	KOREA, REPUBLIC OF		0.400	0.100			
NATIONAL	SPAIN		0.400	0.100			
NATIONAL	SWEDEN		0.200	0.050	0.400	0.100	
NATIONAL	SWITZERLAND		0.400	0.100	0.400	0.100	
NATIONAL	UNITED STATES OF AMERICA		1.000	0.250			NIOSH
NATIONAL	UNITED STATES OF AMERICA		1.000	0.250			OSHA
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		1.000		3.000		
NATIONAL	ITALY		0.040	0.010			
NATIONAL	ARGENTINA			0.010			
NATIONAL	BULGARIA		1.000				
NATIONAL	CZECHIA		1.000		2.000		
NATIONAL	CROATIA		0.410	0.100	0.800	0.200	
NATIONAL	ESTONIA		1.200	0.300	2.500	0.600	
NATIONAL	GREECE		1.000	0.250			
NATIONAL	INDONESIA		0.010				
NATIONAL	ICELAND		0.400	0.100			
NATIONAL	LITHUANIA		1.200	0.300	2.500	0.600	

NATIONAL	MALAYSIA	1.000	0.250			
NATIONAL	MEXICO	0.010				
NATIONAL	NORWAY	0.800	0.200			
NATIONAL	PORTUGAL	0.100				
NATIONAL	RUSSIAN FEDERATION			1.000		
NATIONAL	SLOVAKIA	0.410	0.100			
NATIONAL	SLOVENIA	0.410	0.100	0.410	0.100	
NATIONAL	SOUTH AFRICA	1.000	0.250			
NATIONAL	TAIWAN, PROVINCE OF CHINA	1.000	0.250			
ACGIH	NNN	0.01				(IFV), DSEN, RSEN, A4 - Resp sens

Biological limit values

CAS-No.	Component	Value	UoM	Medium	Biological Indicator	Sampling Period
100-42-5	styrene	600	mg/g	Urine	Mandelic acid in urine and fenilgliossilico	End of turn

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency
styrene	100-42-5	34.000 µg/l	Freshwater	
		40.000 µg/l	Intermittent releases (freshwater)	
		27.000 µg/l	Marine water	
		5.000 mg/l	Microorganisms in sewage treatments	
		516.000 µg/kg	Freshwater sediments	
		362.500 µg/kg	Marine water sediments	
		173.000 µg/kg	Soil	
xylene	1330-20-7	327.000 µg/l	Freshwater	
		327.000 µg/l	Intermittent releases (freshwater)	
		327.000 µg/l	Marine water	
		6.580 mg/l	Microorganisms in sewage treatments	
		12.460 mg/kg	Freshwater sediments	
		12.460 mg/kg	Marine water sediments	
		2.310 mg/kg	Soil	
maleic anhydride	108-31-6	87.500 µg/l	Freshwater	
		589.500 µg/l	Intermittent releases (freshwater)	
		8.750 µg/l	Marine water	
		24.530 mg/l	Microorganisms in sewage treatments	
		197.000 µg/kg	Freshwater sediments	
		19.700 µg/kg	Marine water sediments	
		25.750 µg/kg	Soil	
		6.670 mg/kg	Secondary poinsoning	

Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency

styrene	100-42-5	85.000 mg/m³	1.000 mg/m³	Human Inhalation	Long Term, systemic effects
		100.000 mg/m³	10.000 mg/m³	Human Inhalation	Short Term, systemic effects
		100.000 mg/m³	1.000 mg/m³	Human Inhalation	Long Term, local effects
		100.000 mg/m³	10.000 mg/m³	Human Inhalation	Short Term, local effects
		406.000 mg/kg	343.000 mg/kg	Human Dermal	Long Term, systemic effects
			7.700 µg/kg	Human Oral	Long Term, systemic effects
xylene	1330-20-7	289.000 mg/m³	174.000 mg/m³	Human Inhalation	Short Term, systemic effects
		289.000 mg/m³	174.000 mg/m³	Human Inhalation	Short Term, local effects
		180.000 mg/kg	108.000 mg/kg	Human Dermal	Long Term, systemic effects
			1.600 mg/kg	Human Oral	Long Term, systemic effects
		77.000 mg/kg	14.800 mg/kg	Human Inhalation	Long Term, systemic effects
maleic anhydride	108-31-6	190.000 µg/m³	50.000 µg/m³	Human Inhalation	Long Term, systemic effects
		800.000 µg/m³		Human Inhalation	Short Term, systemic effects
		320.000 µg/m³	80.000 µg/m³	Human Inhalation	Long Term, local effects
		200.000 µg/kg	100.000 µg/kg	Human Dermal	Long Term, systemic effects
		200.000 µg/kg	100.000 µg/kg	Human Dermal	Short Term, systemic effects
			60.000 µg/kg	Human Oral	Long Term, systemic effects
			100.000 µg/kg	Human Oral	Short Term, systemic effects

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use adequate protective respiratory equipment.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid

Color: Grey

Odour: N.A.
Odour threshold: N.A.
pH: Not Relevant
Kinematic viscosity: > 20,5 mm2/sec (40 °C)
Melting point / freezing point: -31 °C (-24 °F)
Initial boiling point and boiling range: 145 °C (293 °F)
Flash point: 32 °C (90 °F)
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: 1.67 g/cm3
Solubility in water: N.A.
Solubility in oil: N.A.
Partition coefficient (n-octanol/water): N.A.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Flammability: The product is classified Flam. Liq. 3 H226
Volatile Organic compounds - VOCs = 17.71 % ; 295.72 g/l
Particle characteristics:
Particle size: N.A.

9.2. Other information

Miscibility: N.A.
Conductivity: N.A.
Evaporation rate: N.A. No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	The product is classified: Skin Irrit. 2(H315)
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1A(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	The product is classified: Repr. 2(H361)
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	The product is classified: STOT RE 1(H372)
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

styrene	a) acute toxicity	LD50 Oral Rat = 5000.00 mg/kg	
		LC50 Inhalation Vapour Rat = 11.80 mg/l 4h	
		LD50 Skin Rat > 2000.00 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative	Mouse inhalation route
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 0.64	mg/L
xylene	a) acute toxicity	LD50 Oral Rat = 3523.00 ml/Kg	
		LC50 Inhalation Vapour Rabbit = 26.00 mg/l 4h	
		LD50 Skin Rat = 4350.00 mg/kg	
maleic anhydride	a) acute toxicity	LD50 Oral Rat = 1090.00 mg/kg	
		LC50 Inhalation Rat > 4.35 mg/l 1h	
		LD50 Skin Rabbit = 2620.00 mg/kg	
	b) skin corrosion/irritation	Skin Corrosive Rabbit Positive 4h	
	c) serious eye damage/irritation	Eye Corrosive Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Positive	Mouse
		Respiratory Sensitization Rat Positive	
	f) carcinogenicity	Genotoxicity Rat Negative 6h	Inhalation route
		Carcinogenicity Negative	
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 55.00 mg/kg	

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
styrene	CAS: 100-42-5 - EINECS: 202-851-5 - INDEX: 601-026-00-0	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 4.02 mg/L 96h
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 4.70 mg/L 48h
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 1.01 mg/L OECD Guideline 211 - 21days
		a) Aquatic acute toxicity : EC50 Algae = 4.90 mg/L 72h
		a) Aquatic acute toxicity : EC50 Sludge activated sludge = 500.00 mg/L
maleic anhydride	CAS: 108-31-6 - EINECS: 203-571-6 - INDEX: 607-096-00-9	a) Aquatic acute toxicity : LC50 Fish rainbow trout = 75.00 mg/L 96h

a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 42.81 mg/L 48h

b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 10.00 mg/L - 21days

a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 74.32 mg/L

a) Aquatic acute toxicity : NOEC Sludge activated sludge = 44.60 mg/L - 18h

12.2. Persistence and degradability

Component	Persitence/Degradability:	Test	Value	Notes
styrene	Readily biodegradable	Biochemical oxigen demand	80.000	28days
maleic anhydride	Readily biodegradable		90.000	28days

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value
xylene	Bioaccumulative	BCF - Bioconcentrantion factor	25.900

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

HP 13: Sensitising; HP 3: Flammable; HP 4: Irritant — skin irritation and eye damage; HP 5: Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

SECTION 14: Transport information

14.1. UN number or ID number

3269

14.2. UN proper shipping name

ADR-Shipping Name: POLYESTER RESIN KIT

IATA-Technical name: POLYESTER RESIN KIT liquid base material

IMDG-Technical name: POLYESTER RESIN KIT, liquid base material

14.3. Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: F-E, S-D

14.6. Special precautions for user

Road and Rail (ADR-RID) :

ADR exempt: No

ADR-Label: 3

ADR - Hazard identification number: -

ADR-Special Provisions: 236 340

ADR-Transport category (Tunnel restriction code): 3 (E)

ADR Limited Quantities: 5 L

ADR Excepted Quantities: E0

Air (IATA) :

IATA-Passenger Aircraft: 370

IATA-Cargo Aircraft: 370

IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisioning: A66 A163

Sea (IMDG) :

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 236 340

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2020/878

Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3, 40

Restrictions related to the substances contained: None

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
Product belongs to category: P5c	5000	50000

Regulation (EU) 649/2012 (PIC regulation):

No Substance Listed

German Water Hazard Class.

Class 2: hazardous for water.

SVHC Substances:

No data available

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
EUH071	Corrosive to the respiratory tract.
H226	Flammable liquid and vapour.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H372	Causes damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/2/Oral	Acute Tox. 2	Acute toxicity (oral), Category 2
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.10/1	Asp. Tox. 1	Aspiration hazard, Category 1
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.1/1	Resp. Sens. 1	Respiratory Sensitisation, Category 1
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.7/2	Repr. 2	Reproductive toxicity, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/1	STOT RE 1	Specific target organ toxicity — repeated exposure, Category 1
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
2.6/3	On basis of test data
3.2/2	Calculation method
3.3/2	Calculation method

3.4.2/1A	Calculation method
3.7/2	Calculation method
3.9/1	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

IRCCS: Scientific Institute for Research, Hospitalization and Health Care

KAFH: Keep Away From Heat

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LDLo: Leathal Dose Low

N.A.: Not Applicable

N/A: Not Applicable

N/D: Not defined/ Not available

NA: Not available

NIOSH: National Institute for Occupational Safety and Health

NOAEL: No Observed Adverse Effect Level

OSHA: Occupational Safety and Health Administration.

PBT: Persistent, Bioaccumulative and Toxic

PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Safety Data Sheet
Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878
KERAREP PARTE B
Date of first edition: 5/19/2021
Safety Data Sheet dated 5/4/2022
version 5

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

1.1. Product identifier

Mixture identification:

Trade name: KERAREP PARTE B

Trade code: 27062018-03

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

Recommended use: hardener

Uses advised against: Data not available.

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.
Via dell'Artigianato, 9
41049 Sassuolo (MODENA) - ITALY
Tel.+39 0536 816511 Fax. +39 0536816581
safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112
Kerakoll Italy - +39-0536-816511
Ireland
Poison information centre: 01 809 2166 (Daily 8am-10pm)
In case of emergency call 999 or 112
Malta
In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Org. Perox. F	Heating may cause a fire.
Eye Irrit. 2	Causes serious eye irritation.
Skin Sens. 1	May cause an allergic skin reaction.
Aquatic Acute 1	Very toxic to aquatic life.
Aquatic Chronic 1	Very toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:
No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Pictograms and Signal Words

Warning

Hazard statements

H242	Heating may cause a fire.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves and eye protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P501	Dispose of contents/container in accordance with applicable regulations.

Contains

Dibenzoyl peroxide

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: KERAREP PARTE B

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
50-75 %	Dibenzoyl peroxide	CAS:94-36-0 EC:202-327-6 Index:617-008-00-0	Self-react. B, H241; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410, M-Chronic:10, M-Acute:10	01-2119511472-50
5-9,9 %	ethanediol; ethylene glycol	CAS:107-21-1 EC:203-473-3 Index:603-027-00-1	Acute Tox. 4, H302	01-2119456816-28

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediatley and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Eye irritation

Eye damages

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhaltion of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Notes
ethanediol; ethylene glycol	NATIONAL	ARGENTINA	C			100.000		
	EU	NNN		52.000	20.000	104.000	40.000	Skin
	NATIONAL	BELGIUM		52.000	20.000	104.000	40.000	
	NATIONAL	ITALY		52.000	20.000	104.000	40.000	
	NATIONAL	ROMANIA		52.000	20.000	104.000	40.000	

NATIONAL	SWEDEN		25.000	10.000	104.000	40.000	
NATIONAL	TURKEY		52.000	20.000	104.000	40.000	
NATIONAL	AUSTRALIA		52.000	20.000	104.000	40.000	
NATIONAL	AUSTRIA		26.000	10.000	52.000	20.000	
NATIONAL	BULGARIA		52.000	20.000	104.000	40.000	
NATIONAL	CANADA		10.000		20.000		
NATIONAL	CANADA	C			100.000	50.000	
NATIONAL	CZECHIA		50.000		100.000		
NATIONAL	CHILE	C			100.000	40.000	
NATIONAL	CHINA		20.000		40.000		
NATIONAL	KOREA, REPUBLIC OF	C			100.000		
NATIONAL	CROATIA		52.000	20.000	104.000	40.000	
NATIONAL	DENMARK		26.000	10.000			
NATIONAL	ESTONIA		52.000	20.000	104.000	40.000	
NATIONAL	FRANCE		52.000	20.000	104.000	40.000	
NATIONAL	GERMANY		26.000	10.000			
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		52.000	20.000	104.000	40.000	
NATIONAL	GREECE		125.000	50.000	125.000	50.000	
NATIONAL	INDONESIA				100.000		
NATIONAL	IRELAND		20.000		104.000	52.000	
NATIONAL	ICELAND		26.000	10.000	104.000	40.000	
NATIONAL	LATVIA		52.000	20.000	104.000	40.000	
NATIONAL	LITHUANIA		25.000	10.000	50.000	20.000	
NATIONAL	MALAYSIA	C			100.000	39.400	
NATIONAL	MEXICO	C			100.000		
NATIONAL	NORWAY		52.000	20.000	104.000	40.000	
NATIONAL	NEW ZEALAND	C			127.000	50.000	
NATIONAL	NETHERLANDS		52.000	20.000	104.000	40.000	
NATIONAL	POLAND		15.000		50.000		
NATIONAL	PORTUGAL	C			100.000		
NATIONAL	RUSSIAN FEDERATION		5.000		10.000		
NATIONAL	SINGAPORE				127.000	50.000	
NATIONAL	SLOVAKIA		52.000	20.000	127.000	40.000	
NATIONAL	SPAIN		52.000	20.000	127.000	40.000	
NATIONAL	SOUTH AFRICA			20.000		40.000	
NATIONAL	SWITZERLAND		26.000	10.000	52.000	20.000	
NATIONAL	TAIWAN, PROVINCE OF CHINA		127.000	50.000			
NATIONAL	HUNGARY		52.000		104.000		
ACGIH	NNN			25		50	(V), A4 - URT irr
ACGIH	NNN				10		(I, H), A4 - URT irr

	EU	NNN	52	20	104	40	Skin

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency
ethanediol; ethylene glycol	107-21-1	10.000 mg/l	Freshwater	
		10.000 mg/l	Intermittent releases (freshwater)	
		1.000 mg/l	Marine water	
		10.000 mg/l	Intermittent releases (marine water)	
		199.500 mg/l	Microorganisms in sewage treatments	
		37.000 mg/kg	Freshwater sediments	
		3.700 mg/kg	Marine water sediments	
		1.530 mg/kg	Soil	

Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency
ethanediol; ethylene glycol	107-21-1		35.000 mg/m³	7.000 mg/m³	Human Inhalation	Long Term, local effects
			106.000 mg/kg	53.000 mg/kg	Human Dermal	Long Term, systemic effects

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

N.A.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Solid
Color: Red
Odour: Pungent
Odour threshold: N.A.
pH: Not Relevant
Kinematic viscosity: N.A.
Melting point / freezing point: N.A.
Initial boiling point and boiling range: N.A.
Flash point: 195 °C (383 °F)
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: 1.10 g/cm3
Solubility in water: N.A.
Solubility in oil: N.A.
Partition coefficient (n-octanol/water): N.A.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.

Flammability: N.A.

Volatile Organic compounds - VOCs = 6.9 % ; 75.9 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

Miscibility: N.A.

Conductivity: N.A.

Explosive properties: SADT 50°C Evaporation rate: N.A. No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

ethanediol; ethylene glycol	a) acute toxicity	LD50 Oral Rat = 7712.00 mg/kg	
		LC50 Inhalation of aerosol Rat > 2.50 mg/l 6h	
		LD50 Skin Mouse > 3500.00 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit No 24h	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Rat Negative	Oral route
		Carcinogenicity Negative	

g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat > 1000.00 mg/kg

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Very toxic to aquatic organisms.

Very toxic to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Acute 1(H400), Aquatic Chronic 1(H410)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
ethanediol; ethylene glycol	CAS: 107-21-1 - EINECS: 203-473-3 - INDEX: 603-027-00-1	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 72860.00 mg/L 96h b) Aquatic chronic toxicity : NOEC Fish = 15380.00 mg/L - 7 days b) Aquatic chronic toxicity : NOEC Ceriodaphnia dubia = 8590.00 mg/L - 7days a) Aquatic acute toxicity : NOEC Algae Pseudokirchnerella subcapitata = 100.00 mg/L 72h OECD guideline 201

12.2. Persistence and degradability

Component	Persitence/Degradability:	Test	Value	Notes
ethanediol; ethylene glycol	Readily biodegradable	Dissolved organic carbon	90.000	10days

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

HP 13: Sensitising; HP 14: Ecotoxic; HP 3: Flammable; HP 4: Irritant — skin irritation and eye damage

SECTION 14: Transport information

14.1. UN number or ID number

3077

14.2. UN proper shipping name

ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dibenzoyl peroxide)

IATA-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dibenzoyl peroxide)

IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dibenzoyl peroxide)

14.3. Transport hazard class(es)

ADR-Class: 9

IATA-Class: 9

IMDG-Class: 9

14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

14.5. Environmental hazards

Toxic Component most present: Dibenzoyl peroxide

Marine pollutant: Yes

Environmental Pollutant: Yes

IMDG-EMS: F-A, S-F

14.6. Special precautions for user

Road and Rail (ADR-RID) :

ADR exempt: No

ADR-Label: 9

ADR - Hazard identification number: 90

ADR-Special Provisions: 274 335 375 601

ADR-Transport category (Tunnel restriction code): 3 (-)

ADR Limited Quantities: 5 kg

ADR Excepted Quantities: E1

Air (IATA) :

IATA-Passenger Aircraft: 956

IATA-Cargo Aircraft: 956

IATA-Label: 9

IATA-Subsidiary hazards: -

IATA-Erg: 9L

IATA-Special Provisioning: A97 A158 A179 A197

Sea (IMDG) :

IMDG-Stowage Code: Category A SW23

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 274 335 966 967 969

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2020/878

Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: None

Restrictions related to the substances contained: 75

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
Product belongs to category: P6b	50	200
Product belongs to category: E1	100	200

Regulation (EU) 649/2012 (PIC regulation):

No Substance Listed

German Water Hazard Class.

Class 3: extremely hazardous.

SVHC Substances:

No data available

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H241	Heating may cause a fire or explosion.
H242	Heating may cause a fire.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.15/F	Org. Perox. F	Organic peroxide, Type F
2.8/B	Self-react. B	Self-reactive substance or mixture, Type B
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
2.15/F	On basis of test data
3.3/2	Calculation method
3.4.2/1	Calculation method
4.1/A1	Calculation method
4.1/C1	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ATE: Acute Toxicity Estimate
ATEmix: Acute toxicity Estimate (Mixtures)
BCF: Biological Concentration Factor
BEI: Biological Exposure Index
BOD: Biochemical Oxygen Demand
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CAV: Poison Center
CE: European Community
CLP: Classification, Labeling, Packaging.
CMR: Carcinogenic, Mutagenic and Reprotoxic
COD: Chemical Oxygen Demand
COV: Volatile Organic Compound
CSA: Chemical Safety Assessment
CSR: Chemical Safety Report
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC50: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: Keep Away From Heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- 2. HAZARDS IDENTIFICATION

- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 5. FIRE-FIGHTING MEASURES
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 13. DISPOSAL CONSIDERATIONS
- 15. REGULATORY INFORMATION

Exposure Scenario
Ethane-1,2-diol

Exposure Scenario, 09/08/2021

Substance identity	
	Ethane-1,2-diol
CAS No.	107-21-1
INDEX No.	603-027-00-1
EINECS No.	203-473-3
Registration number	01-2119456816-28

Table of contents

1. ES 1 Widespread use by professional workers; Various products (PC9a, PC9b)

1.1 TITLE SECTION

Exposure Scenario name	Use in coatings - Use in rigid foams, coatings, adhesives and sealants
Date - Version	09/08/2021 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a) - Fillers, putties, plasters, modelling clay (PC9b)

Environment Contributing Scenario

CS1	ERC8d

Worker Contributing Scenario

CS2 Material transfers	PROC8a
CS3 Rolling, Brushing	PROC10
CS4 Roller, spreader, flow application	PROC11
CS5 Handling and dilution of concentrates	PROC19

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8d)

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8d)

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use (or from service life)

Amounts used:

Daily amount per site = 5479 kg

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Municipal sewage treatment plant is assumed.	Air - minimum efficiency of: = 95 % Water - minimum efficiency of: = 87 %

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Contain and dispose of waste according to local regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10

1.2. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration < 8 h

Frequency:
Use frequency < 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Provide extract ventilation to points where emissions occur. Ensure operatives are trained to minimise exposures. Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	Inhalation - minimum efficiency of: 80 %

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection
Wear suitable respiratory protection.

Other conditions affecting worker exposure

Indoor use
Professional use
Temperature: Assumes use at not more than 20 °C above ambient temperature.
Body parts exposed:
Assumes that potential dermal contact is limited to hands.

1.2. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Process Categories	Roller application or brushing (PROC10)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration < 8 h

Frequency:
Use frequency < 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Provide extract ventilation to points where emissions occur. Ensure operatives are trained to minimise exposures. Supervision in place to check that the risk management measures in place are being used correctly and	Inhalation - minimum efficiency of: 80 %

operation conditions followed.	

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable respiratory protection. Wear chemically resistant gloves (tested to EN374) in combination with ''basic'' employee training.	Dermal - minimum efficiency of: 90 %

Other conditions affecting worker exposure

Indoor use
Professional use
Temperature: Assumes use at not more than 20 °C above ambient temperature.
Body parts exposed:
Assumes that potential dermal contact is limited to hands.

1.2. CS4: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

Process Categories	Non industrial spraying (PROC11)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Amounts used:
Application rate 0.05 L/min

Duration:
Exposure duration < 150 min

Frequency:
Use frequency < 5 days per week

Technical and organisational conditions and measures

Technical and organisational measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Ensure operatives are trained to minimise exposures.
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable respiratory protection. Wear chemically resistant gloves (tested to EN374) in combination with ''basic'' employee training. Wear suitable coveralls to prevent exposure to the skin.	Dermal - minimum efficiency of: 80 % Inhalation - minimum efficiency of: 40 %

Other conditions affecting worker exposure

Indoor use
Professional use
Room size: Covers use in room size of < 1000 m³
Temperature: Assumes use at not more than 20 °C above ambient temperature.
Body parts exposed:
Assumes that potential dermal contact is limited to hands and forearms.

1.2. CS5: Worker Contributing Scenario: Handling and dilution of concentrates (PROC19)

Process Categories	Manual activities involving hand contact (PROC19)

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Duration:

Exposure duration < 15 min

Frequency:

Use frequency < 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Provide extract ventilation to points where emissions occur. Ensure operatives are trained to minimise exposures. Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	Inhalation - minimum efficiency of: 80 %

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection

Wear suitable respiratory protection. Wear chemically resistant gloves (tested to EN374) in combination with ''basic'' employee training.	Dermal - minimum efficiency of: 90 %

Other conditions affecting worker exposure

Indoor use

Professional use

Temperature: Assumes use at not more than 20 °C above ambient temperature.

Body parts exposed:

Assumes that potential dermal contact is limited to hands.

1.3 Exposure estimation and reference to its source

1.3. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 12.94 mg/m³	ECETOC TRA worker v2.0	= 0.37
dermal, systemic, long-term	= 13.71 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.01

1.3. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 12.94 mg/m³	ECETOC TRA worker v2.0	= 0.37
dermal, systemic, long-term	= 2.74 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.03

1.3. CS4: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 14.05 mg/m³	ECETOC TRA worker v2.0	= 0.4
dermal, systemic, long-term	= 53.75 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.51

1.3. CS5: Worker Contributing Scenario: Handling and dilution of concentrates (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 6.47 mg/m³	ECETOC TRA worker v2.0	= 0.18
dermal, systemic, long-term	= 14.14 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.13

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.