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

1.1 Product identifier

Commercial Product Name **Triflex Cryl Primer 287**

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

Relevant identified uses concrete priming

Recommended restrictions Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company designation

Triflex GmbH & Co. KG
Karlstrasse 59
D-32423 Minden
Telephone: +49 (0) 571 / 3 87 80 - 0
FAX: +49 (0) 571 / 3 87 80 - 738

Importer

Schweiz:
Triflex GmbH
Industriestrasse 18
CH-6252 Dagmersellen
Tel: +41 62 842 98 22
Fax +41 62 842 98 23

Österreich:
Triflex GesmbH
Gewerbepark 1
A-4880 St.Georgen im Attergau
Tel: +43 7667/21505
Fax: +43 7667/21505-10

Nederland:
Triflex BV
Boerendanserdijk 35
NL-8024 AE Zwolle
Tel: +31 38 460 2050
Fax: +31 6 53391526

Belgie:
Triflex BV/SRL
Diamantstraat 6c
B-2200 Herentals
Tel: +32 14 75 2550
Fax: +32 14 75 2614

United Kingdom:
Triflex (UK) Ltd.
Whitebridge Way
GB - STONE, STAFFORDSHIRE ST15 8JS
Fon: +44 1785 819119
Fax: +44 1785 819960

Responsible Department Environmental Department +49 (571) 9339-176

E-mail (competent person) sicherheitsdatenblatt@triflex.de

1.4 Emergency telephone number

Emergency telephone number Outside USA: -001 703 527 3887 (D814)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 Flam. Liq. 2; H225 Skin Irrit. 2; H315 Skin Sens. 1; H317 STOT SE 3; H335

2.2 Label elements

Hazard pictogram

GHS02

GHS07

Signal word: Danger

Hazardous component(s) to be indicated on label: methyl methacrylate , 1.4-Butandioldimethacrylate , ethyl methacrylate

H-statement(s):
H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.

P-statement(s):
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P312: Call a POISON CENTER/doctor if you feel unwell.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical characterization: plastified MMA-resin

Hazardous ingredients

Ingredient	Nummern	Classification (EC) 1272/2008	Concentration
methyl methacrylate	CAS No.: 80-62-6 EC-No.: 201-297-1 Index-No.: 607-035-00-6 REACH No.: 01-2119452498-28-XXXX	Flam. Liq. 2; H225 STOT SE 3; H335 Skin Irrit. 2; H315 Skin Sens. 1; H317	65.0 - 70.0 % by weight
1,1`-(p-Tolylimino)dipropan-2-ol	CAS No.: 38668-48-3 EC-No.: 254-075-1 REACH No.: 01-2119980937-17-XXXX	Acute Tox. 2; H300 Eye Irrit. 2; H319 Aquatic Chronic 3; H412	1.0 - 5.0 % by weight
1.4-Butandioldimethacrylate	CAS No.: 2082-81-7 EC-No.: 218-218-1 REACH No.: 01-2119967415-30-XXXX	Skin Sens. 1; H317	1.0 - 5.0 % by weight

Ingredient	Nummern	Classification (EC) 1272/2008	Concentration
ethyl methacrylate	CAS No.: 97-63-2 EC-No.: 202-597-5 Index-No.: 607-071-00-2 REACH No.: 01-2119490215-40-XXXY	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Skin Sens. 1; H317	0.1 - 1.0 % by weight

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	Move out of dangerous area. Take off all contaminated clothing immediately. Do not leave the victim unattended. Show this safety data sheet to the doctor in attendance.
If inhaled	Move to fresh air. If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
In case of skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation occurs, get medical advice/attention.
In case of eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If swallowed	Rinse mouth.Do NOT induce vomiting.Call a physician immediately.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Carbon dioxide (CO2), Foam, Water spray, Dry powder
Extinguishing media which must not be used for safety reasons	High volume water jet

5.2 Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases	Violent polymerization may be caused by: Extremes of temperature and direct sunlight. Fire will produce dense black smoke containing hazardous combustion products (see heading 10). Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighting	In the event of fire, wear self-contained breathing apparatus.

Additional information on fire-fighting	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Vapours are heavier than air and may spread along floors. Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated surface thoroughly. Treat recovered material as described in the section "Disposal considerations".

6.4 Reference to other sections

Reference to other sections	Disposal considerations See also section 13

6.5 Additional information

Other information	Treat recovered material as described in the section "Disposal considerations".

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	Processing may lead to evolution of flammable volatiles. In case of insufficient ventilation, wear suitable respiratory equipment. Keep product and empty container away from heat and sources of ignition. Handle and open container with care. Avoid contact with skin and eyes.
Precautions	Smoking, eating and drinking should be prohibited in the application area.For personal protection see section 8. Observe label precautions.
Advice on protection against fire and explosion	Take precautionary measures against static discharges. Vapours may form explosive mixture with air. Use water spray to cool unopened containers.

7.2 Conditions for safe storage, including any incompatibilities

Storage space and container requirements	Store in accordance with the particular national regulations. Keep in a cool, well-ventilated place. Keep in properly labelled containers.Containers which are opened must be carefully resealed and kept upright to prevent leakage.
TRGS 510	3
Recommended storage temperature	Keep in a dry, cool place.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

***methyl methacrylate**

Great Britain				
Long-term exposure value/ ppm	**Long-term exposure value/ mg/m3**	**Short-term exposure value / ppm**	**Short-term exposure value / mg/m3**	**Source**
50	208	100	416	EH40/2005 Workplace exposure limits (2011)

Europe			
Long-term exposure value/ ppm	**Short-term exposure value / ppm**	**Issuing date**	**Source**
50	100	2009/161	DIRECTIVE 2009/161/EU

DNEL	Target group	Exposure route	Exposure frequency	Source
210 mg/m³	Workers	Inhalation	Long term effects Local	Company data
210 mg/m³	Workers	Inhalation	Long term effects systemic	Company data
1,5 mg/cm²	Workers	Skin	Long term effects Local	Company data
13,67 mg/kg	Workers	Skin	Long term effects systemic	Company data
105 mg/m³	Consumers	Inhalation	Long term effects Local	Company data
74,3 mg/m³	Consumers	Inhalation	Long term effects, systemic	Company data
1,5 mg/cm²	Consumers	Skin	Long term effects Local	Company data
8,2 mg/kg	Consumers	Skin	Long term effects systemic	Company data
1,5 mg/cm²	Consumers	Skin	Short-term effects Local	Company data

PNEC	Exposure route	Source
0,94 mg/l	freshwater	Company data
0,094 mg/l	marine water	Company data

5,74 mg/kg	sediment	Company data
1,47 mg/kg	Soil	Company data

***1,1`-(p-Tolylimino)dipropan-2-ol**

DNEL	Target group	Exposure route	Exposure frequency	Source
2 mg/m³	Workers	Inhalation	Long term effects	Company data
0,6 mg/kg	Workers	Skin	Long term effects	Company data

PNEC	Exposure route	Source
199,5 mg/l	Waste water treatment	Company data
0,0072 mg/kg	marine water	Company data
0,017 mg/l	freshwater	Company data

***1.4-Butandioldimethacrylate**

DNEL	Target group	Exposure route	Exposure frequency	Source
14,5 mg/m³	Workers	Inhalation	Long term effects systemic	Company data
4,2 mg/kg	Workers	dermal exposure	Long term effects systemic	Company data

8.2 Exposure controls

Respiratory protection: Vapour during processing may be irritating to the respiratory tract and to the eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Remarks: Recommended Filter type: A1, A2 (in case of higher concentration)
Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).

Hand protection: Protective gloves complying with EN 374.Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Unsuitable material: woven fabric, Leather gloves

Suitable material: Nitriles

Material thickness: 0,38 mm

Break through time: <25 min

Eye protection: Tightly fitting safety goggles

Skin and body protection	Wear suitable protective equipment. Long sleeved clothing
General protective and hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Avoid contact with the skin and the eyes.
Engineering measures	Ensure adequate ventilation, especially in confined areas. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Form	Liquid
Colour	colourless
Odour	smell of Methylmethacrylate
pH	Not applicable.
Remarks	(non-aqueous)
Melting point [°C] / Freezing point [°C]	not determined
Boiling point [°C]	> 100 °C
Flash point [°C]	10 °C
Evaporation rate [kg/(s*m²)]	not determined
Explosion limits [Vol-%]	The product itself has not been tested. methyl methacrylate
Lower limit	1,7 vol. %
Upper limit	12,5 vol. %
Vapour pressure [kPa]	> 50 hPa
Vapour density	not determined
Density [g/cm³]	1,00 g/cm³
Temperature	20 °C
Water solubility [g/l]	
Remarks	insoluble
Partition coefficient n-octanol /water (log P O/W)	not determined
Explosive properties	In use, may form flammable/explosive vapour-air mixture.

Oxidising properties	Not relevant

9.2 Other information

Ignition temperature [°C]	not determined
Flow time [s]	17 sec
Temperature	20 °C
Measuring method	DIN cup 4 mm

SECTION 10: Stability and reactivity

10.3 Possibility of hazardous reactions

Hazardous reactions	The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerize with heat evolution. Risk of receptacle bursting.

10.4 Conditions to avoid

Conditions to avoid	Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid	Reacts violently with peroxides. Reducing agents, Strong bases, Amines, Oxidizing agents

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Oral toxicity [mg/kg]

Hazardous ingredients

methyl methacrylate				
Value	**Test criterion**	**Test species**	**Measuring method**	**Source**
>5001 mg/kg	LD50	rat	OECD Test Guideline 401	Company data

1,1`-(p-Tolylimino)dipropan-2-ol				
Value	**Test criterion**	**Test species**	**Measuring method**	**Source**
26 mg/kg	LD50	rat	OECD Test Guideline 423	Company data

1.4-Butandioldimethacrylate				
Value	**Test criterion**	**Test species**	**Measuring method**	**Source**
>5000 mg/kg	LD50	rat	OECD Test Guideline 401	Company data

Dermal toxicity [mg/kg]

Hazardous ingredients

methyl methacrylate			
Value	**Test criterion**	**Test species**	**Source**
>5001 mg/kg	LD50	rabbit	Company data

1,1`-(p-Tolylimino)dipropan-2-ol			
Value	**Test criterion**	**Test species**	**Source**
2001 mg/kg	LD50	rat	Company data

1.4-Butandioldimethacrylate				
Value	**Test criterion**	**Test species**	**Remarks**	**Source**
>3000 mg/kg	LD50	rabbit	* 1)	Company data

* 1): The information is based on our own tests, on data from literature and information from protective glove producers or is based on data obtained from similar substances.

LC50 Inhalation 4h for vapours [mg/l]

Hazardous ingredients

methyl methacrylate			
Value	**Test criterion**	**Test species**	**Source**
29,8 mg/l	LC50	rat	Company data

Irritant effect on skin

Hazardous ingredients

methyl methacrylate		
Value	**Test species**	**Source**
irritating	rabbit	Company data

1,1`-(p-Tolylimino)dipropan-2-ol	
Value	**Source**
No skin irritation	Company data

1.4-Butandioldimethacrylate	
Value	**Source**
No skin irritation	Company data

Irritant effect on eyes

Hazardous ingredients

methyl methacrylate		
Value	**Test species**	**Source**
Irritant	rabbit	Company data

1,1`-(p-Tolylimino)dipropan-2-ol	
Value	**Source**
Irritant	Company data

1.4-Butandioldimethacrylate	
Value	**Source**
No eye irritation	Company data

Sensitization

Hazardous ingredients

methyl methacrylate		
Value	**Test species**	**Source**
Skin sensitization	mouse	Company data

1,1`-(p-Tolylimino)dipropan-2-ol	
Value	**Source**
No sensitization responses were observed.	Company data

1.4-Butandioldimethacrylate		
Value	**Test species**	**Source**
sensitizing	mouse	Company data

Carcinogenic effects

Hazardous ingredients

methyl methacrylate		
Value	**Test species**	**Source**
not a carcinogen	rat, mouse	Company data

1.4-Butandioldimethacrylate	
Value	**Source**
No known effect.	Company data

Mutagenicity

Hazardous ingredients

methyl methacrylate	
Value	**Source**
not mutagenic	Company data

1,1`-(p-Tolylimino)dipropan-2-ol	
Value	**Source**
negative	Company data

1.4-Butandioldimethacrylate	
Value	**Source**
No known effect.	Company data

Reproduction toxicity

Hazardous ingredients

methyl methacrylate

Value	Source
not toxic to reproduction	Company data

1.4-Butandioldimethacrylate	
Value	**Source**
No known effect.	Company data

Specific target organ toxicity (single exposure) [mg/kg]

Hazardous ingredients

methyl methacrylate	
Value	**Source**
Causes respiratory tract irritation.	Company data

1.4-Butandioldimethacrylate	
Value	**Source**
No known effect.	Company data

Specific target organ toxicity (repeated exposure) [mg/kg]

Hazardous ingredients

methyl methacrylate	
Value	**Source**
No known effect.	Company data

1.4-Butandioldimethacrylate	
Value	**Source**
No known effect.	Company data

11.2 Additional information

Experience in practice: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Irritating to eyes, respiratory system and skin. Irritating to mucous membranes

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish [mg/l]

Hazardous ingredients

methyl methacrylate					
Value	**Test criterion**	**Test species**	**Measuring method**	**Exposure duration**	**Source**
191 mg/l	LC50	Oncorhynchus mykiss (rainbow trout)	OECD Test Guideline 203	96 h	Company data

1,1`-(p-Tolylimino)dipropan-2-ol				
Value	**Test criterion**	**Test species**	**Exposure duration**	**Source**
17 mg/l	LC50	Brachydanio rerio (zebra fish)	96 h	Company data

1.4-Butandioldimethacrylate				
Value	**Test criterion**	**Test species**	**Exposure duration**	**Source**
32,5 mg/l	LC50	Leuciscus idus (Golden orfe)	48 h	Company data

Toxicity to daphnia [mg/l]

Hazardous ingredients

methyl methacrylate					
Value	**Test criterion**	**Test species**	**Exposure duration**	**Measuring method**	**Source**
69 mg/l	EC50	Daphnia magna (Water flea)	48 h	OECD Test Guideline 202	Company data

1,1`-(p-Tolylimino)dipropan-2-ol				
Value	**Test criterion**	**Test species**	**Exposure duration**	**Source**
28,8 mg/l	EC50	Daphnia magna (Water flea)	18 h	Company data

1.4-Butandioldimethacrylate				
Value	**Test criterion**	**Test species**	**Exposure duration**	**Source**
7,51 mg/l	EC10	Daphnia magna (Water flea)	21 day(s)	Company data

Toxicity to algae [mg/l]

Hazardous ingredients

methyl methacrylate					
Value	**Test criterion**	**Test species**	**Exposure duration**	**Measuring method**	**Source**
>110 mg/l	EC50	Selenastrum capricornutum (green algae)	72 h	OECD Test Guideline 201	Company data

1,1`-(p-Tolylimino)dipropan-2-ol				
Value	**Test criterion**	**Test species**	**Exposure duration**	**Source**
245 mg/l	EC50	Desmodesmus subspicatus	27 h	Company data

1.4-Butandioldimethacrylate

Value	Test criterion	Test species	Exposure duration	Source
9,79 mg/l	EC50	Desmodesmus subspicatus	72 h	Company data

NOEC (fish) [mg/l]

Hazardous ingredients

methyl methacrylate			
Value	**Test species**	**Measuring method**	**Source**
9,4 mg/l	Brachydanio rerio (zebra fish)	OECD Test Guideline 210	Company data

NOEC (daphnia) [mg/l]

Hazardous ingredients

methyl methacrylate			
Value	**Test species**	**Measuring method**	**Source**
37 mg/l	Daphnia magna (Water flea)	OECD Test Guideline 202	Company data

12.2 Persistence and degradability

Biodegradability

Hazardous ingredients

methyl methacrylate		
Value	**Method of analysis**	**Source**
Readily biodegradable.	OECD 301C/ ISO 9408/ EEC 92/69/V, C.4-F	Company data

1,1`-(p-Tolylimino)dipropan-2-ol	
Value	**Source**
Poorly biodegradable.	Company data

1.4-Butandioldimethacrylate		
Value	**Remarks**	**Source**
Biologisch abbaubar.84 %	Angabe des Herstellers	Company data

12.3 Bioaccumulative potential

Bioaccumulation

Hazardous ingredients

methyl methacrylate	
Value	**Source**
Does not bioaccumulate.	Company data

1,1`-(p-Tolylimino)dipropan-2-ol	
Value	**Source**
no data available	Company data

1.4-Butandioldimethacrylate	
Value	**Source**
Does not bioaccumulate.	Company data

12.4 Mobility in soil

Mobility

Hazardous ingredients

methyl methacrylate	
Mobility	**Source**
Terrestrial Compartment Not relevant	Company data

12.5 Results of PBT and vPvB assessment

Results of PBT characteristics determination	This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6 Other adverse effects

Further information on ecology	We have no quantitative data concerning the ecological effects of this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal considerations	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. The following Waste Codes are only suggestions:
Waste Code	08 01 11* waste paint and varnish containing organic solvents or other dangerous substances
Uncleaned empty packaging	The return of packaging materials is regulated by the Interseroh system.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
14.1 UN-No	1263	1263	1263
14.2 Description of the goods	PAINT	FARBE	Farbe
UN proper shipping name		PAINT	Paint
14.3 Transport hazard class(es)	3	3	3
14.4 Packaging group	II	II	II
Labels	3 	3 	3 - Flammable Liquid 
Risk No.	33		
Category	2		

	Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
Factor	3		
Classification Code	F1		
SP 640	640D		
Tunnel restriction code	D/E		
EmS		F-E;_S-E	
Stowage category		B	

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL and the IBC Code	Not relevant

SECTION 15: Regulatory information

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

Additional regulations	Denmark PR-No.2395318 Additionally, observe any national regulations!
Classification in compliance with the Industrial Safety Regulation	highly flammable
GISCODE	RMA10
MAL-Code	5-5

SECTION 16: Other information

Relevant H-phrases	H225: Highly flammable liquid and vapour. H300: Fatal if swallowed. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H335: May cause respiratory irritation. H412: Harmful to aquatic life with long lasting effects.
Wording of the hazard classes	Flam. Liq.: Flammable liquid STOT SE: Specific target organ toxicity - single exposure Skin Irrit.: Skin irritation Skin Sens.: Skin sensitization Acute Tox.: Acute toxicity Eye Irrit.: Serious eye irritation Aquatic Chronic: Hazardous to the aquatic environment

Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification	Evaluation
Flam. Liq. 2; H225	Calculated
Skin Irrit. 2; H315	Calculated
Skin Sens. 1; H317	Calculated

Classification	Evaluation
STOT SE 3; H335	Calculated

Department issuing safety data sheet	Environmental Department
Recommended restrictions	Reserved for industrial and professional use.

This information is provided in accordance with the current status of our knowledge and experience. The Safety Data Sheet describes products with a view to relevant safety requirements. This information does not constitute a warranty of properties, features or qualities.