Printing date 24.01.2008 Revision: 04.10.2007

1 Identification of the substance/preparation and of the company/undertaking

· Product details

· Trade name: visio.link

· Article number: VLPMMA10

· Application of the substance / the preparation primer

· Manufacturer/Supplier: bredent GmbH & Co.KG

Weißenhorner Straße 2

89250 Senden

Tel: +49 (0) 7309/872-0 Fax: +49 (0) 7309/872-24

Further information obtainable from:

R & D

e-mail: R.D@bredent.com

· Information in case of emergency: Tel.: +49 (0) 6132-84436 (24 h)

2 Hazards identification

· Hazard description:





Xi Irritant

F Highly flammable

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 11 Highly flammable.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 43 May cause sensitisation by skin contact.

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

3 Composition/information on ingredients

- · Chemical characterization
- · **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous compone	ents:	
CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate	50-100%
CAS: 3524-68-3 EINECS: 222-540-8	pentaerythritol triacrylate	2.5-10%
CAS: 4986-89-4 EINECS: 225-644-1	pentaerythritol tetraacrylate	2.5-10%
CAS: 75980-60-8	diphenyl(2,4,6,-trimethylbenzoyl)-phosphineoxide Xn; R 62-52/53	1-5%

· Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- General information: Immediately remove any clothing soiled by the product.
- · After inhalation: Take affected persons into fresh air and keep quiet.
- · After skin contact: Immediately rinse with water.

(Contd. on page 2)



Printing date 24.01.2008 Revision: 04.10.2007

Trade name: visio.link

(Contd. of page 1)

- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not induce vomiting; call for medical help immediately.

5 Fire-fighting measures

Suitable extinguishing agents:

Foam

Fire-extinguishing powder

Carbon dioxide

- · For safety reasons unsuitable extinguishing agents: Water
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information Cool endangered receptacles with water spray.

6 Accidental release measures

Person-related safety precautions:

Ensure adequate ventilation

Wear protective clothing.

Keep away from ignition sources.

- · Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.
- · Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Pick up mechanically.

Dispose of the material collected according to regulations.

7 Handling and storage

- · Handling:
- · Information for safe handling: Ensure good ventilation/exhaustion at the workplace.
- Information about fire and explosion protection:

Keep ignition sources away - Do not smoke.

When heatet the product forms flammable fumes.

- Storage:
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- Information about storage in one common storage facility: Store away from oxidizing agents.
- · Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

8 Exposure controls/personal protection

· Ingredients with limit values that require monitoring at the workplace:

80-62-6 methyl methacrylate

WEL () Short-term value: 416 mg/m³, 100 ppm Long-term value: 208 mg/m³, 50 ppm

- · Personal protective equipment:
- General protective and hygienic measures:

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Immediately remove all soiled and contaminated clothing

Use skin protection cream for skin protection.

(Contd. on page 3)

GB



Printing date 24.01.2008 Revision: 04.10.2007

Trade name: visio.link

(Contd. of page 2)

· Respiratory protection:

Short term filter device:

Filter A/P2

· Protection of hands: Solvent resistant gloves

· Eye protection: Safety glasses

9 Physical and chemical properties

· General Information	
Form: Colour: Odour:	Fluid Colourless Pungent
· Change in condition Melting point/Melting range: Boiling point/Boiling range:	
· Flash point:	10°C (DIN 51755)
· Ignition temperature:	430°C (DIN 51794)
· Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits: Lower: Upper:	2.1 Vol % 12.5 Vol %
· Vapour pressure at 20°C:	40 hPa
· Density at 20°C:	1.1 g/cm³
· Solubility in / Miscibility with water at 20°C:	6 g/l

10 Stability and reactivity

· Dangerous reactions

Reacts with reducing agents.

Reacts with heavy metals.

Reacts with peroxides and other radical forming substances.

Exothermic polymerization.

Dangerous decomposition products:

11 Toxicological information

· Acute toxicity:

LD/LC50	values relevant for classification:		
80-62-6 m	ethyl meth	hacrylate	
Oral	LD50	>5000 mg/kg (rat)	
Dermal	LD50	>5000 mg/kg (rabbit)	
Inhalative	LC50/4h	29.4 mg/l (rat)	
	NOEL	400 ppm (rat)	
75980-60-6	8 dipheny	l(2,4,6,-trimethylbenzoyl)-phosphineoxide	
Oral	LD50	>5000 mg/kg (rat)	
		(0 . 1	-

(Contd. on page 4)



Printing date 24.01.2008 Revision: 04.10.2007

Trade name: visio.link

(Contd. of page 3)

- Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: Sensitization possible through skin contact.
- · Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

· Sensitisation May cause sensitisation by skin contact.

12 Ecological information

· Ecotoxical effects:

· Acquatic toxicity:

80-62-6 methyl methacrylate

ECO 100 mg/l (pseudomonas putida)

EC50 (48 h) 69 mg/kg (daphnia)

EC50 (96 h) 170 mg/l (selenastrum capricornutum)

LC50 / 96 h > 79 mg/l (Oncorhynchus mykiss)

General notes: Do not allow product to reach ground water, water course or sewage system.

13 Disposal considerations

- · Product:
- · Recommendation Must be specially treated adhering to official regulations.
- · Uncleaned packaging:
- · Recommendation:

Packaging may be reused or recycled after cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

14 Transport information

· Land transport ADR/RID (cross-border)



· ADR/RID class: 3 Flammable liquids.

Danger code (Kemler): 339
UN-Number: 1247
Packaging group: II
Hazard label: 3

· Description of goods: 1247 METHYL METHACRYLATE MONOMER, STABILIZED, mixture

· Maritime transport IMDG:



· IMDG Class: 3
 · UN Number: 1247
 · Label 3

(Contd. on page 5)

- GB



Printing date 24.01.2008 Revision: 04.10.2007

Trade name: visio.link

(Contd. of page 4)

· Packaging group: II · EMS Number: F-E,S-D · Marine pollutant: No

· Proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED, mixture

· Air transport ICAO-TI and IATA-DGR:



· ICAO/IATA Class: 3
 · UN/ID Number: 1247
 · Label 3
 · Packaging group: II

· Proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED, mixture

15 Regulatory information

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· Code letter and hazard designation of product:

Xi Irritant

F Highly flammable

· Hazard-determining components of labelling:

methyl methacrylate pentaerythritol triacrylate pentaerythritol tetraacrylate

· Risk phrases:

11 Highly flammable.

36/37/38 Irritating to eyes, respiratory system and skin.

43 May cause sensitisation by skin contact.

· Safety phrases:

16 Keep away from sources of ignition - No smoking.

24/25 Avoid contact with skin and eyes.

This material and its container must be disposed of in a safe way. 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

7 Keep container tightly closed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant R-phrases

11 Highly flammable.

36/38 Irritating to eyes and skin.

37/38 Irritating to respiratory system and skin.

43 May cause sensitisation by skin contact.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

62 Possible risk of impaired fertility.

Department issuing MSDS: R & D

· Contact: R & D

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