

radica Sealer

Material no.		Version	1.0 / GB
Specification	159872	Release Date	24.05.2007
VA-Nr		Print Date	24.05.2007
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product information**

Trade name	:	radica Sealer
Company	:	DeguDent GmbH Postfach 1364 D-63403 Hanau
Telephone	:	+49 (0)6181/59-5767
Telefax	:	+49 (0)6181/59-5879
Emergency telephone number	:	+49 (0)180 / 23 24-555
Use of the Substance / Preparation	:	For dental use only.

2. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

The preparation contains:
polymer preparation

Information on ingredients / Hazardous components

• methyl methacrylate	40% - 60%	
CAS-No. 80-62-6	EC-No.	201-297-1
F; R11		
Xi; R37/38		
R43		
• Tris (2-hydroxy ethyl) isocyanurate triacrylate	30% - 50%	
CAS-No. 40220-08-4	EC-No.	254-843-6
Xi; R41, R43		
• Dipentaerythritol pentacrylate	1% - 15%	
CAS-No. 60506-81-2	EC-No.	262-270-8

See chapter 16 for text of risk phrases

3. HAZARDS IDENTIFICATION

Highly flammable.
Irritating to respiratory system and skin.
Risk of serious damage to eyes.
May cause sensitization by skin contact.
When heated, formation of explosive vapour/air mixtures.
Danger of bursting of closed systems to vigorous exothermic polymerization. Avoid uncontrolled polymerization.

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4. FIRST AID MEASURES**Inhalation**

Take affected persons out into the fresh air.

With labored breathing: Provide with oxygen. Consult a doctor immediately.

Skin contact

Wash off with plenty of water and soap immediately.

In case of discomfort: Supply with medical care.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

In case of discomfort: Consult an ophthalmologist.

Ingestion

Call a physician immediately.

Do not induce vomiting.

No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

carbon dioxide (CO₂), dry chemical, foam

Extinguishing media which must not be used for safety reasons

high volume water jet

Specific hazards during fire fighting

Forms explosive mixtures with air.

Heavier than air vapour.

danger of polymerisation

Closed container may rupture if strongly heated.

May be released in case of fire: carbon monoxide and carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

full protective suit, if necessary

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Keep out unprotected persons.

Remove all sources of ignition.

Environmental precautions

Do not allow entrance in sewage water, groundwater or drainage systems.

Methods for cleaning up

Absorb with liquid-binding material, e. g.: diatomaceous earth saw dust universal binder.

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Additional advice

Ensure sufficient ventilation.

7. HANDLING AND STORAGE**Handling****Safe handling advice**

Avoid contact with skin, eyes and clothing.
Vapours are heavier than air and may spread along floors.
Do not inhale vapours / aerosols.
Use personal protective equipment.
Ensure good room ventilation at floor level too.

Storage**Requirements for storage areas and containers**

Keep away from sources of ignition - No smoking.
Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Components with workplace control parameters**• **methyl methacrylate**

CAS-No.	80-62-6	EC-No.	201-297-1
Control parameters	50 ppm 208 mg/m ³		Time Weighted Average (TWA):(EH40 WEL)
Control parameters	100 ppm 416 mg/m ³		Short Term Exposure Limit (STEL):(EH40 WEL)

Engineering measures

Ensure that there is suitable air extraction / ventilation in the workplace or at the working machines. If necessary extractor suction on specific objects.

Personal protective equipment**Respiratory protection**

If workplace exposure limit is exceeded apply Respirator with brown A-type filter.

Hand protection

Wear protective gloves made of the following materials: solvent-resistant material.

Glove material	butyl-rubber
Material thickness	0.5 mm
Break through time	60 min
Method	Source: GESTIS substance database (hazardous substance information system of commercial professional associations)

The suitability for a specific workplace should be discussed with the producers of the protective gloves.
The exact break through time can be obtained from the protective glove producer and this has to be observed.

preventive skin protection

Use barrier cream regularly.

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Eye protection

Safety glasses with side-shields

Skin and body protection

Immediately change moistened and saturated work clothes.

Use suitable skin protective agents before handling product. Cleanse and apply cream to skin after work. Preventive skin protection recommended.

Hygiene measures

No eating, drinking, smoking, or snuffing tobacco at work. Wash face and/or hands before break and end of work.

If the limits at the workplace are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

Avoid contact with skin and eyes.

If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.

In case of skin contact

Wash off immediately with soap and plenty of water.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	liquid
Colour	yellow
Odour	characteristic

Safety data

Boiling point/range	ca. 100 °C
Flash point	13 °C
Autoinflammability	ca. 435 °C
Lower explosion limit	2.1 %(V)
Upper explosion limit	12.5 %(V)
Density	1.1 g/cm ³ (20 °C)
Water solubility	slightly soluble

10. STABILITY AND REACTIVITY

Conditions to avoid	Avoid light effect / sun rays. Protect from heat sources of ignition.
Materials to avoid	Product polymerizes on contact with radical generating substances such as peroxides, azo compounds, heavy metal compounds, solutions.
Hazardous reactions	Danger of bursting of closed systems to vigorous exothermic polymerization. Avoid uncontrolled polymerization.

11. TOXICOLOGICAL INFORMATION

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Acute oral toxicity	Irritation and on occasion caustic effects to the skin and mucous membranes (eyes, respiratory channels, in the stomach/intestinal tracts after swallowing) are to be expected from local contact.
Acute inhalation toxicity	May cause irritations of the respiratory tract.
Skin irritation	May be irritating on frequent or long-term contact.
Eye irritation	Risk of serious damage to eyes. May be irritating on frequent or long-term contact.
Further information	Frequent and continual skin contact can cause skin reaction (skin irritation, skin sensitization).

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

Biodegradability	Exposure time: 14 day Result: 94 % Readily biodegradable. Method: OECD 301 C related to substance: methyl methacrylate
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Behaviour in environmental compartments**Ecotoxicity effects**

Toxicity to fish	LC50 <i>Lepomis macrochirus</i> : 191 mg/l / 96 h literature related to substance: methyl methacrylate
	<i>Oncorhynchus mykiss</i> : > 79 mg/l / 96 h Method: OECD 203 literature related to substance: methyl methacrylate
Toxicity to daphnia	EC50 <i>Daphnia magna</i> : 68 mg/l / 48 h Method: OECD 202 (literature value) related to substance: methyl methacrylate
	EC50 <i>Daphnia magna</i> : 49 mg/l / 21 d Method: OECD 202 part 2 (literature value) related to substance: methyl methacrylate
Toxicity to algae	EC50 <i>selenastrum capricornutum</i> : 170 mg/l / 96 h Method: OECD 201 literature related to substance: methyl methacrylate
Toxicity to bacteria	EC0 <i>Pseudomonas putida</i> : 100 mg/l literature related to substance: methyl methacrylate

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Further information on ecology

Further Information Prevent penetration into soil, stretches of water and drainage systems.

13. DISPOSAL CONSIDERATIONS**Product**

Disposal according to local authority regulations.

Uncleaned packaging

Disposal according to local authority regulations.

14. TRANSPORT INFORMATION**Land transport ADR/RID/GGVSE (Germany)**

Class	3
ADR/RID-Labels	3
UN-No	1247
Packaging group	II
orange warning plate	339 / 1247
Description of the goods (Technical name)	
METHYL METHACRYLATE MONOMER, STABILIZED	
(solution)	

Sea transport IMDG-Code/GGVSee

Class	3
UN-No	1247
Packaging group	II
EmS	F-E, S-D
Proper technical name (Proper shipping name)	
METHYL METHACRYLATE MONOMER, STABILIZED	
(solution)	

Air transport ICAO-TI/IATA-DGR

Class	3
UN-No	1247
Packaging group	II
Proper technical name (Proper shipping name)	
Methyl methacrylate monomer, stabilized	
(solution)	

Inland waterway transport ADN/ADNR/GGVBinSch (Germany)

Class	3
ADR/RID-Labels	3
UN-No / Substance number	1247
Packaging group	II
Description of the goods (Technical name)	
METHYL METHACRYLATE MONOMER, STABILIZED	
(solution)	

Loading instructions/Remarks

IATA_C	ERG-Code 3L
IATA_P	ERG-Code 3L
IMDG	Clear of living quarters.

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ADR	Measures as 2.2.3.2.2 ADR/RID/ADNR have been applied.
ADR	Observe listed materials regulation §7, paragraph 1 GGVSE
ADNR	Measures as 2.2.3.2.2 ADR/RID/ADNR have been applied.

15. REGULATORY INFORMATION**Labelling according to EC Directives**

Symbol(s)	F Xi	Highly flammable Irritant
R-phrase(s)	R11 R37/38 R41 R43	Highly flammable. Irritating to respiratory system and skin. Risk of serious damage to eyes. May cause sensitization by skin contact.
S-phrase(s)	S24/25 S26 S37/39 S51	Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection. Use only in well-ventilated areas.

National legislation**16. OTHER INFORMATION****Risk phrase (R phrase) texts**

- **methyl methacrylate**
R11 Highly flammable.
R37/38 Irritating to respiratory system and skin.
R43 May cause sensitization by skin contact.
- **Tris (2-hydroxy ethyl) isocyanurate triacrylate**
R41 Risk of serious damage to eyes.
R43 May cause sensitization by skin contact.

Further information

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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