

E.C.-Safety Data Sheets according to 91/155 EWG

megadental GmbH
Seeweg 20
D-63654 Büdingen

Tradename:

mega-TRIM

Temporary C&B Material, self-curing acrylic (Liquid)

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mega-
TRIM_Liquid_SDB_EN.d
oc

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

Information on the product

Trade name: mega-TRIM (Monomer / Liquid)

Information on the manufacturer megadental GmbH
Seeweg 20
D-63654 Büdingen
Tel: +49(0) 6042-97550
FAX: +49(0)6042-975520

2. Composition/informations on ingredients

Chemical characterization

Methyl methacrylate

Hazardous ingredients

methylmethacrylate Concentration	60	to	100 %
CAS number	80-62-6		
Hazard symbols	Xi F		
R-phrases	11-37/38-43		

3. Hazards identification

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

4. First aid measures

General information

Remove soiled, soaked clothing immediately.

Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours.

After inhalation

Remove the casualty into fresh air and keep him calm. In the event of symptoms refer for medical treatment.

After contact with skin

Flush the affected areas with ethanal polyethylene glycol 300 mixture (1:2) and clean thoroughly with soap and water. Then apply polyethylene glycol 400 (e.g. LUTROL) copiously. If skin, lips or fingernails become discoloured, apply Oxygen. Refrain from alcohol consumption and physical exertion. A doctor must be consulted.

After contact with eyes

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

After ingestion

Summon a doctor immediately.

Advice to doctor

Treatment

At onset of cyanosis (lips, ear lobes, finger nails) give oxygen as quickly as possible.

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5. Fire-fighting measures

Suitable extinguishing media

water spray jet
foam
dry powder
carbon dioxide

Unsuitable extinguishing media for safety reasons

full water jet

Special protective equipment for fire fighting

Use self-contained breathing apparatus. Wear full protective suit.

6. Accidental related measures

Precautionary measures related to people

Take care for adequate ventilation.
Use personal protective clothing.
Keep away sources of ignition.

Environmental proLecti.ve measures

Prevent product from getting into drains/surface water/groundwater.

Methods of cleaning / adsorption

Larger quantities:

Remove mechanically (by pumping). Use explosion-proof equipment!

Smaller quantities and/or residues:

Absorb with absorbent material (e.g. sand, diatomaceous earth, acid absorbent, universal absorbent or sawdust). Dispose of in accordance with regulations.

7. Handling and storage

Handling

Instructions on safe handling

Keep containers tightly closed. Ensure the area is well ventilated.

Information on fire and explosion protection

Keep away from sources of ignition - no smoking.
Take precautionary measures against static discharges
In the event of fire, cool the endangered containers with water.
When heated above the flash point and/or during spraying (atomizing), ignitable mixtures may form in air.

Storage

Requirements for storage areas and containers

Keep only in the original container at a temperature not exceeding 30 °C. Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers, make sure the oxygen (air) supply is sufficient to ensure stability. Keep out of light.

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8. Exposure controls/personal protection

Components or products of decomposition according to point 10, with limit values related to the place of work which require monitoring

TLV (short term)-value for

CAS number	80-62-6
Methyl methacrylate	210 mg/m ³

Personal protective equipment

General protective measures

Do not inhale vapours. Avoid contact with eyes and skin.

Hygiene measures

Store work clothing separately. Remove soiled or soaked clothing immediately.
Follow the usual good standards of occupational hygiene.

Respiratory protection

Breathing apparatus in case of high concentrations. short term: filter appliance, filter A

Hand protection

rubber gloves

Eye protection

tightly fitting goggles

Body protection

when handling larger quantities: face mask, rubber boots and rubber apron

9. Physical and chemical properties

Appearance

Form: liquid
Colour: colourless
odour: ester - like

Data relevant to safety

Changes in physical state

Melting temperature		- 48 °C		
Initial boiling point	approx.	100 °C	at	1013 hPa
Flash Point		10 °C		

Method DIN 51755
(methyl methacrylate)

Ignition temperature

430 °C

Method DIN 51794
(methyl methacrylate)

Lower explosion limit

1,7 % vol

(methyl methacrylate)

Upper explosion limit

12.5 % vol

(methyl methacrylate)

Vapour pressure

<	38,7 hPa
at	20 °C

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9. Physical and chemical properties

Density	0.94 q/cm ³	at	20 °C
Relative vapour density - related to air	> 1	at	20 °C
Solubility in water	approx. 10 q/l	at	20 °C
Solubility/qualitative in e.g. esters, ketones and chlorinated hydrocarbons: readily soluble			
pH-value	not applicable		
viscosity dynamic Method Brookfield	approx. 0,63 mPa*s	at	20 °C

Further information

None

10. Stability and reactivity

Thermal decomposition

No decomposition when used as directed.

Hazardous reactions

Polymerisation with heat evolution may occur in the presence of radical forming substances (e.g. peroxides, reducing substances, and/or heavy metal ions).

Hazardous decomposition products

None when used as directed.

11. Toxicological information

Acute oral toxicity (LD50) > 5.000 mg/kg

Species rat

Method OECD 401

Source Literature

The data mentioned above refer to the component methyl methacrylate.

Acute oral toxicity (LD50) 29,8 mg/kg

Species rat

The data mentioned above refer to the component

N,N-dimethyl-p-toluidine.

Acute inhalational toxicity (LC50) 7093 ppm

Length of exposure 4 h

Species rat

Source Literature

The data mentioned above refer to the component methyl methacrylate.

Acute dermal toxicity (LD50) > 5000 mg/kg

Species rabbit

Source Literature

The data mentioned above refer to the component methyl methacrylate.

Skin irritation 24 h

not irritating

Length of exposure

Species rabbit

Method Occlusive, FDA Draize

The data mentioned above refer to the component methyl methacrylate.

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oc**11. Toxicological information (continued)****Irritant effect on the eyes**

not irritating

species rabbit eye

Method Draize

The data mentioned above refer to the component methyl methacrylate.

Sensitization

In sensitisation tests on guinea pigs with and without adjuvant, both positive and negative results were found. Source Literature

In humans various types of allergic reactions have been observed (symptoms: headache, eye irritations, skin affections).

Source Literature

The data mentioned above refer to the component methyl methacrylate.

Mutagenicity

non-mutagenic

DOs./concentration 10000 up/plate

Metabolic activation

+/-

Species/test system

Salmonella typhimurium

Method Ames-test

Source Literature

mutagenic

Metabolic activation

+/-

Species/test system

mouse lymphoma L 5178 Y TK+/- cells

Method Mouse lymphoma test

Source Literature

Slight increase in SCEs.

Metabolic activation

+/-

Species/test System

CHO cells

Method SCE test

Source Literature

No increase in the SCE rate up to cytotoxic concentrations.

Species/test system

Human lymphocytes

Method SCE test

Source Literature

No increase in the number of micronuclei.

Application method oral

Dos./concentration 4520 mg/kg

Application interval 1 Doses

Species/test system

mouse

Method Micro-nucleus test / OECD 474

Source Literature

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oc**11. Toxicological information (continued)**

No increase in the number at micronuclei.

Application method oral

Dos./concentration 1130 mg/kg

Application interval 4 Doses

Species/test system

mouse

Method Micro-nucleus test / OECD 474

Source Literature

non-mutagenic

Application method inhalational

Application interval 6 h/d

Application period 5 d

Species/test system

CD-1 mouse (male)

Method Dominant lethal test

Source Literature

The data mentioned above refer to the component methyl methacrylate.

Teratogenicity

No indications of toxic effects were observed in reproduction studies in animals.

Application method inhalational

Dosage 2028 ppm

Application period 6 to 15 d qest.

Species rat

Method OECD 414

Source Literature

The data mentioned above refer to the component methyl methacrylate.

Carcinogenicity

Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs.

Source Literature

The data mentioned above refer to the component methyl methacrylate.

Chronic toxicity

Application method inhalational

Dosage 250 to 1000 ppm

Application interval 6 h/d, 5 d/w

Application period 2 a

Species rat

Source Literature

Findings: Damage to the mucous membranes in nose, throat and lungs.

Degeneration of the olfactory epithelium.

The data mentioned above refer to the component methyl methacrylate.

Chronic toxicity

Application method inhalational

Dosage 500 - 1000 ppm

Application interval 6 h/d, 5 d/w

Application period 2 a

Species mouse

Source Literatur

Findings: Damage to the mucous membranes in nose, throat and lungs.

Degeneration at the olfactory epithelium.

The data mentioned above refer to the component methyl methacrylate.

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oc**11. Toxicological information (continued)****Further information on toxicology**

Methaemoglobinaemia possible after skin contact.

Symptoms at poisoning may not occur for many hours.

Liven damage is possible.

The data mentioned above refer to the component

N,N-dimethyl-p-toluidine.

There are no toxicological data available for the product as such.

Carefully avoid contact with skin and eyes as well as inhalation at product vapours.

12. Ecological information

Information on elimination (persistence and degradability)

Biodegradability

Duration of test		30.7 %
Method OECD 301 C	>	28 d
		95 %

Method test according to Zahn/Wellens

Source Literature

The product is not readily biodegradable to OECD criteria but is inherently biodegradable.

Ecotoxicological effect

Fish toxicity (LC50)

	>	79 mg/l
Length at exposure		96 h
Species oncorhynchus mykiss, rainbow trout		
Method OECD 203 / ISO 7346 / EEC 84 / 449 / V, CI		
Source Literature		

Fish toxicity (NOEC)

		40 mg/l
Length at exposure		96 h
Species oncorhynchus mykiss, rainbow trout		
Method OECD 203 / ISO 7346 / EEC 84 / 449 / V, C1		
Source Literature		

Daphnia toxicity (EC50)

		69 mg/L
Length of exposure		48 h
Species daphnia magna		
Method OECD 202 / ISO 6341 / EEC 84 / 449 / V, C2		
Source Literature		

Algae toxicity (EC3)

		37 mg/l
Length of exposure		8 d
Species scenedesmus quadricauda		
Method DIM 38412 part 9		
Source Literature		

Algae toxicity (EC50)

		170 mg/l
Length of exposure		4 d
Species selenastrum capricornutum		
Method OECD 201 / ISO 8692 / EEC 88 / 302 / V, C		
Source Literature		

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12. Ecological information

Bacteria toxicity (EC0)

100 mg/l

Species pseudomonas putida

Further ecological information

Further information on ecology

The data mentioned above refer to the component methyl methacrylate.

Do not allow to enter soil, waterways or waste water

13. Disposal considerations

Product

Waste is hazardous and therefore particularly to be kept under surveillance.

It must be disposed of in accordance with the regulations after consultation of the competent local authorities and the disposal company in a suitable and licensed facility.

14. Transport information

Road transport:

UN No. road / rail

1247

GGVS

Class 3, item 3b

ADR

Class 3, item 3b

GGVE

Class 3, item 3b

RID

Class 3, item 3b

GGVS/ADR-designation

1247 methyl methacrylate, monomer, inhibited, solution

GVE/RID-designation

1247 methyl methacrylate, monomer, inhibited, solution

Hazard no. 339

Substance number 1247

Packaging group (land)

II

Inland waterways transport:

ADNR

Class 3, item 3b

Marking for inland waterway transport

1247 methyl methacrylate, monomer, inhibited, solution

Packaging gr. (inland waterway transp.)

II

Sea Shipment:

UN No. sea

1247

IMDG/GGVSee-code

Class 3.2

EmS

3-07

MFAG

330

Marine pollution

Packed (+/0)

0

Correct technical name:

Methyl methacrylate, monomer, inhibited

Proper shipping name

Methyl methacrylate, monomer, inhibited

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Packaging group (sea)

II

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oc**14. Transport information (continued)****Air transport:**

UN- / ID-No. 1247

ICAO / IATA - classification 3

Correct technical name

Methyl methacrylate, monomer, inhibited

Proper Shipping name

Methyl methacrylate, monomer, inhibited

Packaging group (air) II

Transport / further information

DOT

NA- / UN-NO. 1247

Methyl methacrylate, monomer, inhibited

15. Regulatory information

Labelling in accordance with GefStoffV / EC

requires labelling

Hazardous component(s) for labelling**Hazard symbols**

Xn Harmful

F Highly flammable

R-phrases

11 Highly flammable.

20 / 21 / 22 Harmful by inhalation, in contact with skin and if swallowed.

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

43 May cause sensitization by skin Contact.

S-phrases

9 Keep container in a well-ventilated place.

16 Keep away from sources of ignition --- No smoking.

29 Do not empty into drains.

33 Take precautionary measures against static discharges.

16. Other information

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.

The details are based on the current levels of expertise which we have achieved; they are intended as a description of the products safety requirements and not to be seen as a guarantee of certain product features.