

TITLE: METROCRYL X - LINKED DENTURE BASE LIQUID**1. Identification of Substance/preparation and Company/undertaking**

Metrocyl X-Linked Denture Base Liquid

Metrodent Limited, Lowergate Works, Lowergate, Paddock, Huddersfield, HD3 4EP.
Tel: +44 (0) 1484 461616, Emergency Tel: +44 (0) 1484 466718**2. Composition/information on ingredients**

90/92% Methacrylic acid methyl ester or methyl methacrylate cross linked with
Ethylene Glycol Dimethacrylate CAS Number 97-90-5
Methyl Methacrylate INDEX number 607-035-00-6
EINECS number 201-297-1
CAS number 80-62-6

3. Hazards identification

Highly flammable
Irritating to eyes, respiratory system and skin
May cause sensitisation 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 its vapours.

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After inhalation:

Move subject to fresh air and keep the person calm. See a doctor.

After contact with eyes:

Flush eyes thoroughly with a large amount of water and consult a doctor.

After contact with skin:

Wash off with water and soap. If skin irritation occurs consult a physician.

After Ingestion:

Do not induce vomiting. Call a Doctor immediately.

5. Fire-fighting measures

Suitable extinguishing media: foam, dry chemical, carbon dioxide.

Unsuitable extinguishing media: water

Special protective equipment for fire fighting:

Wear self-contained breathing apparatus

6. Accidental release measures

Precautionary measures related to people:

Take care for adequate ventilation. Use personal protective clothing. Keep away sources of ignition. Use breathing apparatus if exposed to vapours/dust/mist/aerosol.

Environmental protective measures:

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

Methods of cleaning/absorption:

Larger quantities: remove mechanically (by pumping). Use explosion-proof equipment! Smaller quantities and/or residues: contain with absorbent material (e.g. sand, diatomaceous acid absorbent, universal absorbent or sawdust). Dispose accordance with regulations.

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of in**7. Handling and Storage**

Handling

Instructions on safe handling:

Keep container 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. Use explosion-proof equipment only.

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 oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability. Protect from light.

as

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:

methyl methacrylate	80-62-6	
OES (long-term) 1996	205 mg/m ³	50ppm
OES (short-term) 1996	410 mg/m ³	100ppm

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
boiling temperature: 100,3°C at 1.013 hPa
Flash point: 10°C (DIN 51755)
Ignition temperature: 430 °C (DIN 51794)
Self-ignition temperature: not determined
Lower explosion unit: 2,1 % (V)
Upper explosion unit: 12,5 % (V)
Vapour pressure: 40 hPa at 20°C
Density: 0,95g/cm³ at 20°C
Relative vapour density: >1 at 20°C (related to air)
Solubility in water: 15,9g/l at 20°C
Solubility (qualitative):
Miscible with most organic solvents
pH-value: not applicable
n-Octanol/water partition coefficient
log Pow 1,38 (measured) Source: Literature
Viscosity (dynamic) 0,6 mPa.s at 20°C (Brookfield)
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 rat, OECD 401. Source: Literature >5.000 mg/kg
Acute inhalational toxicity:	LC50 rat, 4h. Source: Literature 29,8 mg/l
Acute dermal toxicity:	LD50 rabbit. Source: Literature >5.000 mg/kg
Irritant effect on the skin:	rabbit, 24h, Occlusive, FDA Draize not irritating
Irritant effect on the eyes:	rabbit, Draize not irritating
Sensitisation:	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
Toxicity on repeated administration:	rat, inhalational, 2 a, 250-1000 ppm Source: Literature Findings: Damage to mucous membranes in nose, throat and lungs. Degeneration of the olfactory epithelium.
Mutagenicity:	Positive as well as negative results in in-vitro mutagenicity/genotoxicity tests. No experimental information on genotoxicity in-vivo available. In summary, not mutagenic according to internationally accepted criteria. Source: Literature
Carcinogenicity:	Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs. Source: Literature
Reprotoxicity/teratogenicity:	No indications of toxic effects were observed in reproductive studies in animals. Source: Literature
Further information on toxicology:	Avoid contact with skin and eyes and inhalation of the product vapours.

12. Ecological Information

Information on elimination (persistence and degradability)	
Biodegradability:	readily degradable, OECD 301 C, 14d. Source: Literature 94%
Ecotoxicological effect:	
Fish toxicity:	LC50 oncorhynchus mykiss, rainbow trout, OECD 203, GLP, 96h >79 mg/l Source: Literature
Daphnia toxicity:	EC50 daphnia magna, OECD 202, 48h Source: Literature 69 mg/l
Algae toxicity:	EC3 scenedemus quadricauda, DIN 38412 part 9, 8 d. Source: Literature 37 mg/l EC50 selenastrum capricornutum, OECD 201, 96 h. Source: Literature 170 mg/l
Bacteria toxicity:	EC0 pseudomonas putida. Source: Literature 100 mg/l
Further information on ecology:	Do not allow to enter soil, waterways or waste water.

13. Stability and reactivity

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.
Uncleaned packaging:	Contaminated packaging should be emptied optimally and after appropriate professional cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of professionally. Uncontaminated packaging may be taken for recycling.
Code of waste EWC:	07 02 08 Always check the given waste codes according to the actual conditions of manufacturing, formulation or use in your facilities. Waste from the manufacture, formulation, supply and use of (MFSU) of plastics, synthetic rubber and man-made fibres - still bottoms and reaction residues.
other	

14. Transport Information

Overland transport GGVs/ADR, GGVE/RID	
Class 3 item 3b	Hazard No. 339 UN number 1247 Technical dispatch name: 1247 methyl methacrylate, monomer, inhibited
Inland Waterway transport ADNR	
Class 3 item 3b	UN number 1247 Technical dispatch name: 1247 methyl methacrylate, monomer, inhibited.
Shipment by sea IMDG/GGVSee	
Class 3.2	EmS 3-07 MFAG 330 UN number 1247 Marine pollutant packed (+/0): 0 Packaging group II Proper Shipping Name: Methyl methacrylate, monomer, inhibited
Air Transport ICAO/IATA	
Class 3	UN number 1247 Packaging group II Proper Shipping Name: Methyl methacrylate, monomer, inhibited
DOT	Methyl methacrylate, monomer, inhibited UN number 1247

15. Regulatory Information

Labelling in accordance with GefStoffV/EC	requires labelling
Hazardous component(s) for labelling	contains methyl methacrylate
Hazard symbol(s)	F Highly flammable Xi Irritant
R-phrase(s)	11 Highly flammable 36/37/38 Irritating to eyes, respiratory system and skin. 43 May cause sensitisation by skin contact.
S-phrase(s)	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.
Status of Registration	EINECS/ELINCS : listed

16. Other Information

Miscellaneous Information:	The product is normally supplied in a stabilised form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerise with heat evolution.
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The data are based on the current level of expertise that we have achieved; they are intended as a description of the products safety requirements and are not to be seen as a guarantee of certain product properties.