

Material Safety Data Sheet
According to 93/112/EC

1. Identification of the substance

- **Product name: VersaBond™ liquid, sterile in ampoules**
 - Manufacturer/Supplier: Coripharm GmbH & Co.
Lagerstrasse 11-15
D-64807 Dieburg
Telephone: +49-6071-929-0
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2. Composition/Information on components

- Substance / Preparation: Preparation
- Description: Product based on methacrylate
- Information on hazardous components*:

Chemical name	CAS No.	%	EC-number	Symbol	R-phrases
Methyl methacrylate	80-62-6	>90	201-297-1	Xi, F	R11-36/37/38-43
N,N-dimethyl-p-toluidine	99-97-8	< 5	612-056-00-9	T	23/24/25-33, 36,37

*Occupational Exposure Limit(s), if available, are listed in Section 8.

3. Hazards identification

Hazard designation:

Xi Irritant

F Highly flammable

- Information pertaining to particular dangers for men and environment
 - R 20/21/22 Harmfully by inhalation, in contact with skin and if swallowed
 - R 36/37/38 Irritating to eyes, respiratory system and skin
 - R 11 Highly flammable
 - R 33 Danger of cumulative effects
- Classification system

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.
- NFPA Ratings for USA
 - Health = J
 - Flammability = 3
 - Reactivity = 2

4. First aid measures

- General information: Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.
- After inhalation: Supply fresh air, consult doctor in case of symptoms.
- After skin contact: Instantly wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- After swallowing: Instantly call for doctor.
- Protection of first-aiders: Avoid exposure. Use appropriate protection (See Section 8).

5. Fire-fighting measures

- Suitable extinguishing agents: Extinguishing powder, Carbon dioxide. Fight larger fires with a foam extinguisher.
- For safety reasons, unsuitable extinguishing agents: Water.

- Special hazards caused by the material, its products of combustion or flue gases: Vapour is heavier than air and travels along the ground with the risk of distant ignition. Formation of toxic gases (carbon dioxide, carbon monoxide) is possible during heating or in case of fire.
- Protective equipment: Put on breathing apparatus (self-contained breathing apparatus with full-face shield).

6. Accidental release measures

- Person-related safety precautions: Wear protective equipment. Keep underprotected persons away.
- Measures for environmental protection: Prevent material from reaching sewage systems, holes and cellars.
- Measures for cleaning/collecting: Absorb with liquid-binding material (diatomite, universal binders, sawdust, for small amounts tissues). Collect spilled material in sealable containers. Dispose of contaminated material as waste according to Item 13.

7. Handling and storage

Handling

- Information for safe handling: Keep containers tightly sealed. Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires: Keep ignition sources away. Do not smoke. Protect against electrostatic charges.

Storage

- Requirements to be met by storerooms and containers: Store in cool location.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Store in cool, dry conditions in well-sealed containers. Storage class
- Class according to regulation on inflammable liquids: A I

8. Exposure controls and personal protection

- Additional information about design of technical systems: No further data; see Item 7.
- Components with critical values that require monitoring at the workplace:

CAS No.	Designation of material	%	Value unit
80-62-6	Methyl methacrylate	>90	410 mg/m ³ 100 ml/m ³

- Additional information: The lists that were valid during the compilation were used at basic.
- General protective and hygienic measures: Keep away from food stuffs, beverages, and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.
- Personal protective equipment:
Breathing equipment: Not necessary with efficient local exhaust. If exposition to vapour is possible, use breathing protective mask (filter A).
Protection of hands: If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization. PVA gloves
Eye protection: Use safety goggles.

9. Physical and chemical properties

- Form: Liquid
- Colour: Colourless
- Odour: Ester-like
- Melting point: -48° C
- Boiling point: 100.3° C
- Flash point: 10° C
- Autoignition temperature: 430.0° C
- Self-inflammability: Product is not self-igniting
- Danger of explosion: Product is not explosive; however, formation of explosive air/steam mixtures is possible.
- Lower explosion limit: 2.1 Vol. %

- Upper explosion limit: 12.5 Vol. %
- Vapour pressure: at 20° C 47.0 mbar
- Specific gravity: at 20° C 0.94 g/cm³
- Solubility in water: at 20° C 15.9 g/l
- Viscosity: 0.6 mPa.s
- Solvent content:
 - Organic solvents: 98.0%
 - Water: 0.0%
- Solids contents: 0.0%

10. Stability and reactivity

- Conditions to be avoided: No decomposition if used and stored according to specifications.
- Dangerous reactions: No dangerous reactions known.
- Dangerous products of composition: None.
- Additional information: If stored longer than recommended and/or above recommended temperature, product may polymerize, generating heat.

11. Toxicological information

Mutagenicity: Methyl methacrylate
Ames test not mutagenic

Chemical name: Methyl methacrylate

Acute toxicity - Oral LD₅₀ (rat): 7872 mg/kg

Acute toxicity – Dermal LD₅₀ (rabbit): >5000 mg/kg

Acute toxicity – Inhalation LD₅₀ (rat, 4 hour): 78000 mg/m³

Chemical name: Dimethyl-p-toluidine

Acute toxicity – Oral LD₅₀ (rat): 50 mg/kg

- Primary irritant effect:
 - On the skin: Irritant for skin and mucous membranes.
 - On the eye: Irritant effect.
- Sensitization: Sensitization possible by skin contact.
- Additional toxicological information: The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version: Irritant

12. Ecological information

- General notes: Do not allow large quantities of undiluted product to reach ground water, water bodies, or sewage system.

Ecotoxicity: Methyl methacrylate

LC₅₀ (fish, 96 hour): 130 mg/l

EC₅₀ (Daphania magna, 24 hour): 720 mg/l

13. Disposal considerations

- Product:
 - Recommendation: Do not allow product to reach sewage system. Remove as industrial waste or hazardous waste.
- Contaminated packagings:
 - Recommendation: Keep separate. Remove as industrial waste or hazardous waste.
- Disposal according to the local legislation.

14. Transport informationInternational Transport Regulations

UN-number: 1247
 Proper shipping name: Methyl methacrylate, stabilized

Land – Road Railway

- ADR/RID Class: 3
- ADR/RID item number 3b)

Sea-transport

- IMDG Class 3.2
- IMDG Page no.: 3265
- Packaging group: II
- EMS Number: 3-07
- MFAG: 330

Air-transport

- IATA-DGR Class: 3
- Packaging-Group II

15. Regulatory Information

EU-Regulations: EU Classification (67/548/EEC-88/379/EEC)

Hazard symbols: F Highly flammable
 Xi Irritant

- Designation according to EC guidelines:
 The product has been classified and labeled in accordance with SC Directives / Ordinance on Hazardous Materials (GrStoffV)
- Code letter and hazard designation of product:



Xi Irritant



F Highly inflammable

- Hazard-determining components of labeling:
 Methyl-methacrylate
 N,N-dimethyl-p-toluidine
- Risk phrases:
 36/37/38 Irritating to eyes, respiratory system and skin.
 43 May cause sensitization by skin contact
 11 Highly flammable.
- Safety phrases:
 9 Keep container in a well-ventilated place.
 16 Keep away from sources of ignition – No smoking.
 24 Avoid contact with skin.
 29 Do not empty into drains.
 33 Take precautionary measures against static discharges.
 37 Wear suitable gloves.
 46 If swallowed, seek medical advice immediately and show this container or label.
- National regulations
 No additional national regulations are known to the supplier.

16. Other information

The information based on our present knowledge. It is intended as a guide for the safe use, handling, disposal, storage, and transportation, and is not intended as warranty or as a specification. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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