



W1 CEMENT STRENGTHENER

MATERIAL SAFETY DATA SHEET

Section 1: Substance/preparation and company identification

Company:

Warrior Pte Ltd

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Section 2: Composition/information on ingredients

Chemical nature: Aqueous dispersion of a polymer based on: styrene, butadiene, acrylonitrile.

Section 3: Hazardous identification

- No particular hazards known.
- If the product adheres to skin, irritation may occur when it dries.

Section 4: First-aid measures

General advice:

- Remove contaminated clothing.

If inhaled:

- Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

- Wash thoroughly with soap and water.

On contact with eyes:

- Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

- Rinse mouth immediately and then drink plenty of water, seek medical attention.

Section 5: Fire-fighting measures

Suitable extinguishing media:

- Water spray, dry extinguishing media, foam and carbon dioxide.

Section 6: Accidental release measures

Methods for cleaning up or taking up:

- For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.



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- For large amounts: Pump off product.
- For residues: Rinse away with water.

Section 7: Handling and storage

Handling

- Handle in accordance with good industrial hygiene and safety practice.
- No special measures necessary provided product is used correctly.

Storage

- Further information on storage conditions: Store protected against freezing.

Section 8: Exposure controls and personal protection

Hand protection:

- Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact.
(Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other.
- Supplementary note: The specifications are based on own tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the determined permeation time.

Eye protection:

- Safety glasses with side-shields (frame goggles) (f.e. EN 166)

General safety and hygiene measures:

- Hands and/or face should be washed before breaks and at the end of the shift. Avoid contact with skin and eyes.

Section 9: Physical and chemical properties

- Form: liquid
- Colour: white
- Odour: faintly aromatic
- pH value: approx. 9.5 (DIN/ISO 976) (23 °C)
- Water solidification temperature: 0 °C
- Water boiling temperature: 100 °C (1,000 hPa)
- Water Vapour pressure: 23 mbar (20 °C)
- Density: approx. 1.02 g/cm³ (ISO 2811-1)(20 °C)
- Miscibility with water: miscible
- Viscosity, dynamic: approx. 35 - 150 mPas (DIN/EN/ISO 3219) (100 1/s)
- Solids content: approx. 50 %



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Section 10: Stability and reactivity

- Thermal decomposition: No decomposition if used correctly.
- Hazardous reactions:
- No hazardous reactions when stored and handled according to instructions.

Section 11: Toxicological information

Acute toxicity

- LD50 rat (oral): > 2,000 - 10,000 mg/kg

Irritation

- If the product adheres to skin, irritation may occur when it dries.
- Primary skin irritation rabbit: non-irritant (OECD Guideline 404)
- Primary irritations of the mucous membrane rabbit: non-irritant (OECD Guideline 405)

Other relevant toxicity information

- Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The statement was derived from products of similar composition.

Section 12: Ecological information

Ecotoxicity

- Toxicity to fish: LC50, 96 h, > 100 mg/l, Brachydanio rerio, OECD Guideline 203, static.
- Aquatic invertebrates: EC50, 48 h, > 100 mg/l, Daphnia magna, OECD Guideline 202, part 1, static.
- Aquatic plants: EC50, 72 h, > 100 mg/l, Scenedesmus subspicatus, OECD Guideline 201. Nominal concentration.
- Microorganisms/Effect on activated sludge: EC20, 0.5 h, > 100 mg/l, activated sludge, domestic (DIN/EN/ISO 8192-OECD 209-88/302/EEC,P.C).
- The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Persistence and degradability

- Assessment biodegradation and elimination (H₂O): **The product can be virtually eliminated from water by abiotic processes e.g. adsorption onto activated sludge.**
- Elimination information: > 70 % DOC reduction (OECD 302B; ISO 9888; 88/302/EEC,part C). Easily eliminated from water.

Bioaccumulation potential

- Based on its structural properties, the polymer is not biologically available. Accumulation in organisms is not to be expected.



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Additional information

- Do not release untreated into natural waters. At the present state of knowledge, no negative ecological effects are expected.
- Ecological data are determined by analogy.

Section 13: Disposal considerations

- Must be dumped or incinerated in accordance with local regulations.

Section 14: Transportation information

- Not classified as hazardous under transport regulations (ADR RID ADNR IMDG/GGVSee ICAO/IATA).

Section 15: Regulatory information

Regulations of the European union (Labelling) / National legislation/Regulations

- Directive 1999/45/EC ('Preparation Directive'): The product does not require a hazard warning label in accordance with EC Directives. Classification and labelling were undertaken on the basis of tests on a preparation of similar composition.

Other regulations

- The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).
- The information fulfills the requirements of Directive 1999/45/EC concerning preparations and the associated requirements for 'safety data sheets'.

Section 16: Other information

- Any other intended applications should be discussed with the manufacturer.
- If you have any queries relating to this MSDS, its contents or any other product safety related questions, please write to the following e-mail address: war99@singnet.com.sg
- The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.