Material Safety Data Sheet

1. Identification of the substance/preparation and the company

Polyaspartic Acid Sodium Salt

Shandong Yuanlian Chemical Co., Ltd. Jining, Shandong Province, China For emergency or additional info. +86-537-3379963

2. Composition/information on ingredients polyaspartic acid, sodium salt CAS 181828-06-8

3. Hazards identification Hazard warning not required.

4. First-aid measures

GENERAL INFORMATION: Remove contaminated clothing.

FOLLOWING SKIN CONTACT: Wash skin with plenty of water and soap. If skin reactions occur, contact a physician.

FOLLOWING EYE CONTACT: Open the eyelids and rinse for an adequate length of time with water. If necessary consult an eye specialist.

UPON INHALATION: Take the patient into the fresh air; if there is diffi- culty in breathing, medical advice is required.

UPON SWALLOWING: Ensure that the patient drinks water. The mouth should be rinsed out several times. If the patient feels unwell, seek medical advice.

INFORMATION FOR THE PHYSICIAN:

See Chapter 11 for information on toxicology.

Therapeutic measures: Basic aid, decontamination, symptomatic treatment.

5. Fire-fighting measures

Extinguishing media: Adapt fire-fighting measures to surrounding environment.

Firemen have to wear self-contained breathing apparatus. Fire in vicinity poses risk of pressure build-up and rupture. Fight fire in early stages if safe to do so. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area. Do not let enter contaminated extinguishing water into the soil, groundwater or surface waters.

6. Accidental release measures

Dam up with absorbing material, e.g. sand. Take up mechanically, fill into labelled, closable containers. Keep unauthorised persons away.

Use the necessary personal protective equipment when handling.

7. Handling and storage

Store in original container.

7. Handling and storage (Continuation)

Ventilate room well, using suitably positioned air extractors if necessary. Vent waste air only via suitable separators or scrubbers.

No special measures against fire or explosion required.

8. **Exposure controls/Personal protection**

Eye protection: goggles, face protection

Hand protection: e.g. gloves of rubber or PVC

Avoid contact with skin and eyes. Wash hands before breaks and at end of work. Keep working clothes separate.

9. Physical and chemical properties

tested in accordance with Form:	powder
Odour:	weak odour
Colour:	orange/ brown powder
Bulk Density:	not below 0.3 g/ml at 20 °C
pH value(10% solution):	7–11
Flash point:	not below 110 °C

10. Stability and reactivity

Thermal decomposition: No thermal decomposition when stored and handled correctly. Hazardous decomposition products: No hazardous decomposition products when stored and handled correctly. Formation of carbon monoxide, carbon dioxide, ammonia and nitrogen oxides and other toxic gases in the event of fire or during thermal decomposition. Hazardous reactions: No hazardous reaction when used as directed.

11. Toxicological information

Acute toxicity

no data available

Inhalation: no data available

Dermal: no data available

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified

11. Toxicological information (Continuation)

probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity no data available no data available Specific target organ toxicity - single exposure no data available Specific target organ toxicity - repeated exposure no data available Aspiration hazard no data available Additional Information RTECS: Not available To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

*12. Ecological information

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

- 12.3 Bioaccumulative potential
- no data available
- 12.4 Mobility in soil
- no data available
- 12.5 Results of PBT and vPvB assessment
- PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- 12.6 Other adverse effects

no data available

13. Disposal considerations

Examine possibilities for re-utilization. Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations. Where large quantities are concerned, consult the supplier. When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by residues.

For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

*14. Transport information

DOT (US) Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goodsDeclaration for land shipment: --Declaration for sea shipment: -- Declaration for shipment by air: -- Other information: Not dangerous cargo. Irritating to skin and eyes. Slightly smelling. Keep separated from foodstuffs.

15. Regulatory information

No labelling is required in accordance with the EEC directives.

Not subject to the German Regulation on Flammable Liquids (VbF).

16. Other information

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.