1. Identification of the substance and of the company

Product name: Poly(styrene sulfonate) sodium salt

Manufacturer / supplier identification

Company: PSS Polymer Standards Service GmbH
In der Dalheimer Wiese 5
D - 55023 Mainz

Technical Phone: +49 6131 - 96239 - 0
Fax: +49 6131 - 96239 -11
Email: Info@polymer.de
Emergency Phone: +49 6131 - 1924 - 0

2. Composition / information on ingredients

CAS-No.: 9080-79-9
EG/EC No.: none
Molecular formula: -

3. Hazards identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Not hazardous according to Directive 67/548/EEC.

4. First aid measures

AFTER INHALATION
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

AFTER SKIN CONTACT
In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5. Fire fighting measures

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS
Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. Accidental release measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.
METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7. Handling and storage

HANDLING
Directions for Safe Handling: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Conditions of storage: Keep tightly closed.

8. Exposure controls / personal protection

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

HAND PROTECTION
Protective gloves.

EYE PROTECTION
Chemical safety goggles.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Physical State: Solid</td>
</tr>
<tr>
<td></td>
<td>Colour: -</td>
</tr>
<tr>
<td></td>
<td>Form: -</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>BP/BP Range</td>
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</tr>
<tr>
<td>Mp/Mp Range</td>
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<tr>
<td>Flash Point</td>
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<tr>
<td>Flammability</td>
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<tr>
<td>Autoignition Temp.</td>
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<tr>
<td>Oxidizing Properties</td>
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<tr>
<td>Explosive Properties</td>
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</tr>
<tr>
<td>Explosion Limits</td>
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</tr>
<tr>
<td>Vapor Pressure</td>
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</tr>
<tr>
<td>SG/Density</td>
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<tr>
<td>Partition Coefficient</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Vapor Density</td>
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<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
<td>Evaporation Rate</td>
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<tr>
<td>Bulk Density</td>
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</tr>
<tr>
<td>Decompostion Temp.</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Poly(styrene sulfonate) sodium salt

10. Stability and reactivity

STABILITY
Stable: Stable
Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Sulfur oxides, Sodium/sodium oxides.

HAZARDOUS POLYMERIZATION
Will not occur.

11. Toxicological information

ACUTE TOXICITY

LD50
Oral
Rat
> 8000 mg/kg

LC50
Inhalation
Rat
2,600 mg/m³
4H
Remarks: Lungs, Thorax, or Respiration: Respiratory obstruction.

LD50
Intraperitoneal
Rat
>6 GM/KG

LD50
Subcutaneous
Rat
>15 GM/KG

LD50
Oral
Mouse
> 10125 mg/kg

LD50
Intraperitoneal
Mouse
>6750 MG/KG
LD50
Subcutaneous
Mouse
>15 GM/KG

SIGN AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE
Skin contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

12. Ecological information
No data available

13. Disposal considerations

SUBSTANCE DISPOSAL
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14. Transport information

RID/ADR
Non-hazardous for road transport.

IMDG
Non-hazardous for sea transport.

IATA
Non-hazardous for air transport.

15. Regulatory information
Not hazardous according to Directive 67/548/EEC.
Caution: Substance not yet fully tested (EU).
CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES
S-PHRASES: 24/25
Avoid contact with skin and eyes.
COUNTRY SPECIFIC INFORMATION
Germany
WGK: 2
ID-Number: 2921
Classification according to appendix 3.

16. Other information

WARRANTY
The information in this document is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. PSS GmbH shall not be held liable for any damage resulting from handling or from contact with the above product.

DISCLAIMER
For R&D use only. Not for drug, household or other uses.