

Material Safety Data Sheet

According to EG 1907/2006



Date Updated: 31/01/2008

Version: 1.0

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1. Identification of the substance and of the company	
Product name	Hydroxyethyl starch
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.:	9005-27-0
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.	

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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 dust are desired, use type N95 (US) or type P1 (EN143) dust masks.	
HAND PROTECTION Protective gloves.	
EYE PROTECTION Chemical safety goggles.	
9. Physical and chemical properties	
Appearance	Physical State: Solid Colour: - Form: -
Property	Value
pH	N/A
BP/BP Range	N/A
Mp/Mp Range	N/A
Flash Point	N/A
Flammability	N/A
Autoignition Temp.	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A

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Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A
10. Stability and reactivity	
STABILITY	
Stable: stable	
Materials to Avoid: Strong oxidizing agents.	
HAZARDOUS DECOMPOSITION PRODUCTS	
Nature of decomposition products not known.	
HAZARDOUS POLYMERIZATION	
Will not occur.	
11. Toxicological information	
RTECS NUMBER: WI0410000	
ACUTE TOXICITY	
LD50	
Oral	
Rat	
> 50000 mg/kg	
LD50	
Intraperitoneal	
Rat	
>300 mg/kg	
LD50	
Subcutaneous	
Rat	
>18 mg/kg	
LD50	
Intravenous	
Rat	
8280 mg/kg	
LD50	
Oral	
Mouse	
> 12000 mg/kg	
LD50	
Intraperitoneal	
Mouse	
>300 mg/kg	
LD50	
Subcutaneous	
Mouse	
>18 mg/kg	
LD50	
Intravenous	
Mouse	
20300 mg/kg	
Remarks: Behavioral:Change in motor activity (specific assay).	

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LD50

Intravenous

Rabbit

8460 mg/kg

SIGNS 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.

CHRONIC EXPOSURE - TERATOGEN

Species: Mouse

Dose: 675 mg/kg

Route of Application: Intravenous

Exposure Time: (8-16D PREG)

Result: Specific Developmental Abnormalities: Musculoskeletal system. Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).

Species: Rabbit

Dose: 200 mg/kg

Route of Application: Intravenous

Exposure Time: (8-17D PREG)

Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rabbit

Dose: 100 mg/kg

Route of Application: Intravenous

Exposure Time: (8-17D PREG)

Result: Specific Developmental Abnormalities: Musculoskeletal system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat

Dose: 300 mg/kg

Route of Application: Intraperitoneal

Exposure Time: (16-21D PREG)

Result: Effects on Fertility: Abortion.

Species: Mouse

Dose: 420 mg/kg

Route of Application: Intravenous

Exposure Time: (7-13D PREG)

Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain).

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.

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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).

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 2

Self-Classification

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.