



SAFETY DATA SHEET

1. Identification of the Substance and Company

Polystica® Enzymatic Presoak and Cleaner
Polystica® 2X Concentrate Enzymatic Presoak and Cleaner
Product No. 1C33

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2. Hazards Identification: May cause skin irritation. Risk of serious damage to eyes.

3. Composition/Information on Ingredients

Hazardous Component(s)	% By Wt.	CAS No.	EU No.	Symbol	R Phrases	Oral LD ₅₀	LC ₅₀
Ethanolamine	1 – 5	141-43-5	205-483-3	Xi	R36/37/38	1.07 ml/kg (female rat)	ND
Protease (Subtilisins)	0.1 – 1.0	9014-01-1	232-752-2	Xi, Xn	R37, R38, R41, R42	>2g/kg b.w. (rat)	ND
Ethoxylated Alcohol	1 - 5	68439-46-3	NA	Xn	R22, R41, R51	>500 – 2000 mg/kg (rat)	ND
Polyalkylene glycol	1 – 5	9003-11-6	NA	NA	NA	>4000 mg/kg (rat)	ND
Glycerine	1 - 5	56-81-5	200-289-5	ND	ND	12600 mg/kg (rat)	>570 mg/m ³ /1H (rat)

4. First Aid Measures

Eye Contact: Flush eyes immediately with water for at least 15 minutes. Get medical attention.

Skin Contact: Flush skin immediately with water for at least 15 minutes. Get medical attention.

Inhalation: Remove patient to fresh air. If not breathing, give artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting. Get medical attention. Do not give anything by mouth to an unconscious person. If conscious, drink a large quantity of milk or water.

5. Fire-Fighting Measures

Conditions of Flammability/Flash Point/Auto-ignition Temperature: Non Flammable

Upper Flammable Limit: NA **Lower Flammable Limit:** NA

Special Hazards: None known.

Explosibility Data: ND

Extinguishing Media: Use media appropriate for the primary source of fire.

Special Fire Fighting Procedures: Use caution when fighting any fire involving chemicals. A self-contained breathing apparatus is essential.

Hazard Combustion Products: CO and CO₂

6. Accidental Release Measures: Ensure suitable personal protection during removal of spillages. Spills may be picked up with a mop and followed by a water rinse. Small spills may be flushed to a sanitary sewer with copious amounts of water if in accordance with National and local regulations.

7. Handling and Storage

7.1 Handling: Read label before use. Wash hands and exposed skin thoroughly after use.

7.2 Storage: Avoid exposure to high temperature. Keep container closed when not in use. Store in a cool place below 90°F (32°C). Thoroughly rinse empty container and deposit in waste receptacle for removal.

8. Exposure Control/Personal Protection

8.1 Occupational Exposure Limits

Ethanolamine: ACGIH TLV and OSHA PEL = 3 ppm; ACGIH STEL and OSHA STEL = 6 ppm

Subtilisins: ACGIH TLV=0.06 ppb (protease as dust)

Glycerine: ACGIH TWA = 10mg/m³, OSHA – Final PEL TWA = 15 mg/m³ (total dust); 5 mg/m³ (respirable fraction)

8.2 Personal Protection

Respirator Protection: Not required for normal use. If product is applied by means of spraying and ventilation is not sufficient to maintain levels below exposure limits, a NIOSH N95 is the minimum required respirator type.

Eye Protection: Safety glasses.

Protective Gloves: Rubber.

Other Protective Clothing and Equipment: Clothes sufficient to avoid contact.

Engineering Controls/Ventilation: Adequate to maintain levels below established limits.

9. Physical and Chemical Properties

Solubility in Water: Complete **Specific Gravity:** 1.0563

Physical State/Appearance/Odor: Liquid/slightly hazy – yellow to amber/floral odor

pH (neat): Approximately 7.5 – 8.5

pH (1% w/w solution): 7.0 – 9.0

Odor Threshold, Vapor Pressure, Vapor Density, Evaporation Rate, boiling Point and Freezing Point: Not Available **Coefficient of Water/Oil Distribution:** Not Applicable

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur.

Incompatible Materials: Strong oxidizers.

Conditions to Avoid/Conditions of Reactivity: Heat and light.

Hazardous Decomposition or Byproducts: CO and CO₂ in fire situations.

11. Toxicological Information

11.1 Acute (Primary Routes of Exposure)

Eyes (Irritancy): This product is considered to be irritating to the eyes.

Skin (Irritancy or Sensitization): This product is considered to be irritating to the skin. Prolonged or frequent repeated skin contact may cause allergic reaction in some individuals.

Inhalation: Subtilisins in dust form may result in sensitization as respiratory irritation, coughing and/or difficulty in breathing. If product is applied by means of spraying, the potential for similar sensitization cannot be ruled out.

Ingestion: May cause upset to gastrointestinal tract. Oral Toxicity: LD₅₀ >2000 mg/kg (rat)

11.2 Long Term Exposure: None known.

Carcinogenicity: IARC, NTP and OSHA do not list this product or its ingredients as carcinogens.

Reproductive Toxicity/Teratogenicity/Mutagenicity/Toxicologically Synergistic Products: ND

12. Ecological Information: The surfactant(s) contained in this preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

13. Disposal Considerations: Disposal of unwanted product should be done in accordance with local, state or national legislation. Empty containers should be rinsed and discarded in a waste container or offered for recycling if possible. Empty containers should not be used for other purposes.

14. Transport Information

Ground: Non-hazardous

Sea: IMDG Class: Non-hazardous

Air: ICAO/IATA Class: Non-hazardous

15. Regulatory Information

USA State Regulations: All of the components of the product are on the TSCA inventory or are exempt from TSCA inventory requirements

May contain trace amounts of N-Nitrosodimethylamine, propylene oxide, ethylene oxide, and 1,4-dioxane.

WHMIS Classification: D2 – Materials Causing Other Toxic Effects (Irritant)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS

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contains all of the information required by the Controlled Products Regulation.

EEC Classification: Irritant **Hazard Symbol:** Xi **Risk Phrases:** R36/37/38: Irritating to eyes, respiratory system and skin, R41: Risk of serious damage to eyes, R42: May cause sensitization by inhalation. **Safety Phrases:** S1/2: Keep locked up and out of the reach of children, S22: Do not breathe dust, S24: Avoid contact with skin, S25: Avoid contact with eyes. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39: Wear suitable protective clothing, gloves and eye/face protection, S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This preparation is classified as dangerous as defined by the UK Chemicals (Hazard Information and Packaging for Supply) Regulations. These regulations implement a number of EC Directives including the Dangerous Substances Directive (67/548/EEC and amendments), the Dangerous Preparations Directive (1999/45/EEC and amendments) and the Safety Data Sheets Directive (91/155/EEC and amendment).

16. Other Information

The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.

NA - Not Applicable

ND - No Data