

Vanson HaloSource, Inc.
Material Safety Data Sheet

Material Name: **Particle Removal System (PRS) Stage I**
Telephone No: **425-881-6464**

Rev: **5**
Date Prepared: 05-26-06

24-HOUR EMERGENCY PHONE: CHEMTREC 800-424-9300

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's Name: Vanson HaloSource, Inc.
Corporate Address: 14716 NE 87th Street, Redmond, WA 98052
Manufacturer's Telephone: (425) 881-6464 (Monday-Friday, 8AM-5PM PDT)
Emergency Telephone: 800-424-9300 Chemtrec (24 Hours)
Material/Trade/Product Name: PRS Particle Removal System (PRS) Stage I
Synonyms: Test Polymer A
Chemical Name: Chitosan Proprietary Formula
Chemical Formula: Not applicable
CAS No.: 87582-10-3
Product Use: Swimming pool and spa water treatment

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

CAS NO.	HAZARDOUS INGREDIENT (S)	%	OSHA HAZARDOUS ?
Trade Secret	Trade Secret	Trade Secret	Yes

NOTE: See Section 8 for permissible exposure limits.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear to pale yellow viscous liquid with a pungent vinegar odor.

This material presents little or no health hazards, environmental hazards, and no unusual hazard if involved in a fire.

POTENTIAL HEALTH EFFECTS

EYE: May be mildly irritating to eyes.

SKIN: Not hazardous to skin.

INHALATION: Vapors may be mildly irritating to the respiratory tract.

INGESTION: May be mildly harmful if swallowed.

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CHRONIC EXPOSURE/CARCINOGENICITY: This substance is not listed as a potential carcinogen by IARC.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Stinging, burning, coughing if inhaled. May irritate eyes with stinging, watering, inflammation; may cause chemical burns to eyes and surrounding tissue. May irritate skin with stinging, drying, inflammation. May irritate gastrointestinal system if ingested.

AGGRAVATION OF PRE-EXISTING CONDITIONS: None known.

POTENTIAL ENVIRONMENTAL EFFECTS: This material is readily biodegradable.

SECTION 4: FIRST AID MEASURES

FIRST AID PROCEDURES

EYE CONTACT: Remove contact lenses if worn and flush eyes with copious amounts of water or buffered saline eye wash solution. Get immediate medical attention.

SKIN CONTACT: Remove contaminated clothing and wash contact area with mild soap and plenty of water.

INHALATION: Remove person to fresh air and treat symptomatically. Get medical attention if symptoms worsen.

INGESTION: Get immediate medical attention.

NOTE TO PHYSICIANS: Not available.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: Not available

UPPER FLAMMABLE LIMIT: Not available

FLAMMABILITY CLASS (OSHA): Not available

AUTOIGNITION TEMPERATURE: Not available

LOWER FLAMMABLE LIMIT: Not available

FLAME PROPAGATION/BURNING RATE: Not available

UNIQUE FIRE PROPERTIES: Not available

HAZARDOUS COMBUSTION PRODUCTS: Not available

EXTINGUISHING MEDIA: Does not burn. Use water, dry chemicals, carbon dioxide, sand or foam. Use extinguishing media appropriate for surrounding fire.

PROTECTION OF FIREFIGHTERS: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coat, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Water may be used to keep fire-exposed containers cool until fire is out.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: See Section 8 (Personal Protective Equipment).

ENVIRONMENTAL PRECAUTIONS: Material is 100% biodegradable, is nontoxic and can be disposed of in any approved manner. Treatment, storage, transportation and disposal must be in accordance with applicable federal, state, and local regulations.

METHODS FOR CLEANING UP: Dilute with water and hose down.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING RECOMMENDATIONS

VENTILATION: Use with adequate ventilation.

FIRE PREVENTION: Material will not burn.

SPECIAL HANDLING REQUIREMENTS: Wash hands thoroughly after handling.

SAFE STORAGE RECOMMENDATIONS

CONTAINMENT: Keep container closed when not in use.

STORAGE ROOM RECOMMENDATIONS: 10-50°C (will freeze @ ~ 3°C)

INCOMPATIBLE MATERIALS: Strong oxidizing materials and strong bases.

STORAGE CONDITIONS: Shelf life is indefinite, but viscosity will decrease over time. The container should be kept covered to prevent contamination.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient to control airborne levels.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE/FACE PROTECTION: Wear safety glasses with side shields (or goggles) and a face shield.

SKIN PROTECTION: Wear chemical resistant clothing.

HAND PROTECTION: Wear chemical-resistant gloves.

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RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

GOOD HYGEIENE/WORK PRACTICES: Always follow good hygiene/work practices by avoiding vapors or mists and contact with eyes and skin. Thoroughly wash hands after handling and before eating or drinking. Always wear the appropriate PPE when repairing or performing maintenance on contaminated equipment.

EXPOSURE GUIDELINES

PERMISSIBLE EXPOSURE LIMITS						
INGREDIENT CAS NO.	OSHA		WISHA		ACGIH (TLV)	
	TWA	STEL	TWA	STEL	TWA	STEL
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Clear to pale yellow.

PHYSICAL FORM: Viscous liquid

pH: 3.0 – 4.5

VAPOR DENSITY: Not applicable

MELTING POINT: Not available

SOLUBILITY IN WATER: Soluble

SHAPE: Viscous liquid

ODOR: Pungent vinegar

VAPOR PRESSURE: Not applicable

BOILING POINT: 211°F

FREEZING POINT: Not available

SPECIFIC GRAVITY OR DENSITY: 1.0 – 1.1 g/mL

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: Strong oxidizing material and strong bases.

MATERIALS TO AVOID (INCOMPATIBILITY): Strong oxidizing material and strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition will not occur.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ORAL LD₅₀ (rat): Not available.

DERMAL LD₅₀ (rat): Not available.

SKIN IRRITATION (rabbit): Not available.

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SKIN SENSITIZATION (guinea pig): Not available.

EYE IRRITATION (rabbit): Not available.

SECTION 12: ECOLOGICAL INFORMATION

Fish 96-hour LC ₅₀	=	Not available.
Daphnia 48-hour LC ₅₀	=	Not available.
Green algae 96-hour EC ₅₀	=	Not available.
Fish Chronic Value (ChV)	=	Not available.
Daphnia ChV	=	Not available.
Algae ChV	=	Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

NOTE: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT):

Proper Shipping Name:	Not regulated
Hazard Class:	Not regulated
Identification Number (UN Number):	Not regulated
Packing Group (PG):	Not regulated

SECTION 15: REGULATORY INFORMATION

TSCA STATUS: All ingredients are listed

CERCLA REPORTABLE QUANTITY (RQ):

CHEMICAL NAME	RQ
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Not applicable	Not applicable
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SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (EHS):

CHEMICAL NAME	TPQ	RQ
Not applicable	Not applicable	Not applicable

SARA TITLE III SECTION 311/312 HAZARD CATEGORIES: Does this product/material meet the definition of the following hazard classes according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of SARA Title III?

ACUTE HEALTH HAZARD	CHRONIC HEALTH HAZARD	FIRE HAZARD	REACTIVE HAZARD	SUDDEN RELEASE OF PRESSURE
NO	NO	NO	NO	NO

SARA TITLE III SECTION 313 TOXIC CHEMICALS INFORMATION:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

CALIFORNIA PROPOSITION 65: The following chemical(s) is/are known to the state of California to cause cancer or reproductive toxicity:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

SECTION 16: OTHER INFORMATION

REVISION INFORMATION:

MSDS sections(s) changed since last revision of document: SECTION 15 – TSCA status was revised

DISCLAIMER:

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The above information is based upon information Vanson-HaloSource Inc. believes to be reliable and is supplied for informational purposes only. Vanson-HaloSource Inc. disclaims any liability for damage which results from the use of the above information and nothing contained therein shall constitute a guarantee, warranty (including fitness for a particular purpose) or representation with respect to the accuracy or completeness of the data, the product described or their use for any specific purpose even if that purpose is known to Vanson-HaloSource Inc. The final determination of the suitability of the information, the manner of use of the information or product and potential infringement is the sole responsibility of the user.

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MSDS PREPARED BY: Jeremy Heath, EH&S Specialist