avista technologies

Vitec 3000™ MATERIAL SAFETY DATA SHEET

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	**VITEC™ 3000 NSF**
CHEMICAL NAME/CLASS:	Not Applicable
SYNONYM:	Not Applicable
PRODUCT USE:	Water Treatment
SUPPLIER/MANUFACTURER'S NAME:	**AVISTA TECHNOLOGIES**
ADDRESS:	133 North Pacific Street San Marcos, CA 92069
24 HOUR EMERGENCY NO.:	1-800-424-9300 (United States)** 1-202-483-7616 (International Collect)
BUSINESS PHONE:	(760) 744-0536
DATE OF PREPARATION:	November 11, 2005, Revised January 30, 2006

This product is sold for commercial use. This MSDS has been developed to address safety concerns of those individuals working with bulk quantities of this material, as well as those of potential users of this product in industrial /occupational settings. All pertinent health, safety and environmental information has been presented based on ANSI Z400.1-2003, the US Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canadian Workplace Hazardous Materials Information System (WHMIS) and Controlled Products Regulations (CPR).

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL DESCRIPTION: This product is a clear, amber colored, solution with a light, disinfectant odor. This product is neither reactive nor flammable.

WARNINGS (per ANSI Z129.1

WARNING! MAY CAUSE SKIN AND EYE IRRITATION OR BURNS. MAY BE IRRITATING IF INHALED. HARMFUL IF SWALLOWED.

PRECAUTIONS (per ANSI Z129.1):

Do not taste or swallow. Do not get on skin or in eyes. Avoid breathing mists or sprays. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves, goggles, and suitable body protection if necessary.

NSF

DRINKING WATER TREATMENT ADDITIVES CLASSIFIED BY NATIONAL SANTATION FOUNDATION.® TO ANSI/NSF 60 IN SEPTEMBER, 2004 AS STANDARD DRINKING WATER TREATMENT CHEMICAL FOR USE IN REVERSE OSMOSIS SYSTEMS AT A MAXIMUM LEVEL OF 7 mg/l

2. HAZARDS IDENTIFICATION (continued)

HAZARD SYMBOLS:

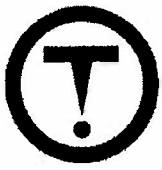
HMIS HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Physical Hazard	0
Protective Equipment	**C**

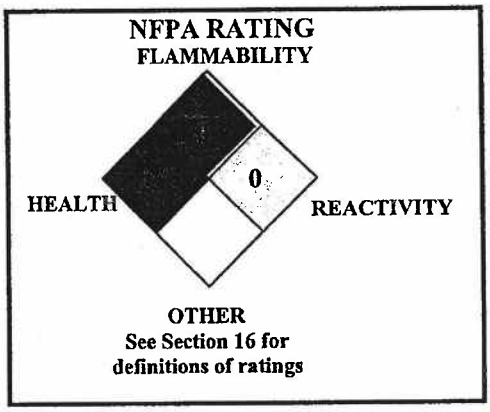
HMIS PERSONAL PROTECTIVE EQUIPMENT RATING: Industrial Use situations C; Safety glasses, gloves and body protection

CANADIAN WHMIS SYMBOLS:

D2B - Poisonous and infectious material - Other effects – Toxic



This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.



OSHA REGULATORY STATUS

This material is classified as not hazardous under OSHA regulations

POTENTIAL HEALTH EFFECTS

The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product are as follows:

CONTACT WITH SKIN or EYES: Contact can cause eye or skin irritation. Prolonged skin contact can result in dermatitis. Prolonged eye exposure may include redness, pain, and tearing

SKIN ABSORPTION: No component of this product is reported to be absorbed through intact skin

INGESTION: If the product is swallowed, irritation of the mouth, throat, and other tissues of the gastro-intestinal system can occur.

INHALATION: Overexposure to vapors, mists, sprays, or dusts of this product can cause irritation to the respiratory tract.

2. HAZARDS IDENTIFICATION (continued)

INJECTION: Accidental injection of this product can cause burning, reddening, and swelling in addition to the wound. Symptoms of such exposure can include those described under "Inhalation", "Contact with Skin or Eyes," and "Ingestion".

CHRONIC EFFECTS: Long-term skin or eye contact can result in dermatitis or eye irritation.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye and skin irritation (redness or swelling). See Section 11: TOXICOLOGICAL INFORMATION.

POTENTIAL ENVIRONMENTAL EFFECTS

This product does not normally present a significant hazard to aquatic or terrestrial life in small quantities. Do not discharge effluent containing this product into streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. See Section 12: ECOLOGICAL INFORMATION.

3. MATERIAL IDENTIFICATION

CHEMICAL NAME	CAS #	% w/w
Deflocculant & Sequestrant	Proprietary	27.4
Phosphonic Acid Derivative Compound	Proprietary	15.6
pH Adjustment	Proprietary	21.8
Water and ingredients present in concentrations of less than 1% (or less than 0.1% if carcinogens)		Balance
The ingredients in the balance of this product do not contribute significant hazards beyond those described in this document.		

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

Victims of chemical exposure must be taken for medical attention if any adverse effects occur. Take a copy of label and MSDS to physician or health professional with victim.

FIRST AID PROCEDURES

SKIN EXPOSURE: If this product contaminates the skin, immediately begin decontamination with running water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention if any adverse exposure symptoms develop.

EYE EXPOSURE: If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek medical attention if any adverse exposure symptoms develop.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove victim to fresh air. Victim must seek immediate medical attention if any adverse exposure symptoms develop. If necessary, use artificial respiration to support vital functions.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING, unless directed by medical personnel. Have victim rinse mouth with water, if conscious. Never induce vomiting or give a diluent (e.g., water) to someone who is unconscious, having convulsions, or unable to swallow. If contaminated individual is convulsing, maintain an open airway and obtain immediate medical attention.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE Preexisting dermatitis, other skin conditions, and respiratory conditions may be aggravated by exposures to this product.

4. FIRST-AID MEASURES (continued)

NOTE TO PHYSICIANS

Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

This product is non-combustible. Not sensitive to mechanical impact under normal conditions. Not sensitive to static discharge under normal conditions.

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA:

Water Spray:	OK	Carbon Dioxide:	OK
Foam:	OK	Dry Chemical:	OK
Halon:	OK	Other	Any "ABC" Class

UNSUITABLE EXTINGUISHING MEDIA:
None.

PROTECTION OF FIREFIGHTERS

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:
When involved in a fire, this product may decompose and produce irritating fumes and toxic gases (e.g., carbon monoxide, carbon dioxide, phosphorous oxides, phosphine and sodium oxide).

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS:
Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Responders should wear the level of protection appropriate to the type of chemical released, the volume of the material spilled, and the location where the incident has occurred.

ENVIRONMENTAL PRECAUTIONS

Minimize use of water to prevent environmental contamination. Prevent spill or rinsate from contamination of storm drains, sewers, soil or groundwater. Place all spill residues in a suitable container and seal. Dispose of in accordance with applicable U.S. Federal, State, or local procedures or appropriate standards of Canada (see Section 13, Disposal Considerations)

METHODS FOR CONTAINMENT

SPILL AND LEAK RESPONSE: Trained personnel using pre-planned procedures should respond to uncontrolled releases. Proper protective equipment should be used. In case of a spill, clear the affected area and protect people.

RESPONSE TO INCIDENTAL RELEASES: Personnel who have received basic chemical safety training can generally handle small-scale releases, such as 1 container of this product. Respond to incidental chemical releases by wearing gloves, goggles, and appropriate body protection.

RESPONSE TO NON-INCIDENTAL RELEASES: Respond to non-incidental chemical releases of this product, such as the simultaneous puncturing of several containers, by clearing the impacted area and contacting appropriate emergency personnel. Clean up should only be done by qualified personnel.

METHODS FOR CLEAN-UP

Prevent spill or rinsate from contaminating storm drains, sewers, soil or groundwater. Absorb spilled liquid with polypads or other suitable absorbent materials. DO NOT use combustible materials, such as sawdust.

6. ACCIDENTAL RELEASE MEASURES (continued)

OTHER INFORMATION

US regulations require reporting spills reach any surface waters. The toll-free phone number for the US Coast Guard National Response Center is 1-800-424-8802.

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

HANDLING

As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after using this product. Do not eat or drink while using this material. Avoid generating dusts, mists or sprays of this product. Remove contaminated clothing immediately. Do not breathe (dust, vapor, mist, gas). Avoid contact with skin, eyes or clothing. In the event of a spill, follow practices indicated in Section 6 (Accidental Release Measures). During maintenance activities make certain that application equipment is locked and tagged-out safely if necessary. Collect any rinsates and dispose of according to applicable U.S. Federal, State, or local procedures or appropriate Canadian standards.

STORAGE

This product is stable under ordinary conditions of handling, use and storage. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials (see Section 10, Stability and Reactivity). Keep container tightly closed when not in use. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE GUIDELINES:

CHEMICAL NAME	CAS #	Guideline	Value
Deflocculant & Sequestrant	Proprietary	NE	NE
Phosphonic Acid Derivative Compound	Proprietary	NE	NE
pH Adjustment	Proprietary	TLV-TWA (ACGIH)	NE
		TLV-STEL (ACGIH)	2 mg/m^3 C
		PEL- TWA (OSHA)	2 mg/m^3
		REL-TWA (NIOSH)	2 mg/m^3 C
		IDLH (NIOSH)	10 mg/m^3

NE = Not Established. See Section 16 for Definitions of Terms Used.

ENGINEERING CONTROLS

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE/FACE PROTECTION

For specific industrial applications, enhanced eye protection can be necessary. Use approved safety goggles or safety glasses, as described in OSHA 29 CFR 1910.133. If necessary, refer to U.S. OSHA 29 CFR 1910.133, or appropriate Canadian standards.

SKIN PROTECTION

For specific industrial applications, wear chemical impervious gloves (e.g., Neoprene or Nitrile). If necessary, refer to U.S. OSHA 29 CFR 1910.138 or the appropriate standards of Canada. For consumer use, no specific body protection is normally needed.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (continued)

BODY PROTECTION
For general industrial applications, chemically protective clothing is not normally needed. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects can pierce the soles of the feet or where employee's feet can be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

RESPIRATORY PROTECTION
None needed under normal conditions of use or handling. Use NIOSH approved respirators if ventilation is inadequate to control dusts, mists, fumes or vapors. Maintain airborne contaminate concentrations below guidelines listed above. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres use of a full-face-piece pressure/demand SCBA or a full face-piece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (29 CFR 1910.134).

General Hygiene Considerations
There are no known hygiene hazards associated with this material when used or handled as recommended.

9. PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1):	>1	EVAPORATION RATE (BuAc =1):	Similar to water
SPECIFIC GRAVITY:	1.2 – 1.3	MELTING/FREEZING POINT:	0°C (32°F)
SOLUBILITY IN WATER:	Soluble	BOILING POINT:	100°C (212°F)
VAPOR PRESSURE, mm Hg @ 20°C:	18	pH:	10.7 – 11.8
COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT)			Not Available

PHYSICAL STATE, APPEARANCE AND COLOR: This product is a clear, amber liquid with a light disinfectant odor.

HOW TO DETECT THIS SUBSTANCE (warning properties): The appearance and odor of this product can act as warning properties in the event of an accidental release

CHEMICAL PROPERTIES

ODOR THRESHOLD:	Not Available		
VOC, less water and exempt:	None		
Weight % VOC:	None		
FLASH POINT:	Not ignitable	AUTOIGNITION TEMPERATURE:	Not ignitable

FLAMMABLE LIMITS (in air by volume, %):

Lower: NA Upper: NA

10. STABILITY and REACTIVITY

CHEMICAL STABILITY
Stable under normal circumstances of use and handling.

CONDITIONS TO AVOID
Avoid contact with incompatible chemicals and exposure to extreme temperatures.

INCOMPATIBLE MATERIALS
This product is not compatible with strong bases, strong acids, and powerful oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS
Thermal decomposition of this product can generate dusts, irritating fumes, and toxic gases (e.g., Carbon monoxide, Carbon dioxide).

POSSIBILITY OF HAZARDOUS REACTIONS
This product is not expected to undergo hazardous polymerization, decomposition, condensation or self-reactivity.