

MATERIAL SAFETY DATA SHEET

Last Reviewed: November 26, 2002

Emergency Phone #: 1-800-342-6173

PRODUCT IDENTIFICATION

NAME:	ROOTS2® Concentrate		CHEMIC
AL DESCRIPTION:	Liquid dispersion of humic substances, seaweed extracts and vitamins in water.		
HAZARDOUS COMPONENT(S):	<u>CAS #</u>	<u>APPROXIMATE %</u>	
Vitamin B1 (Thiamine)	[532-43-4]	<1	
Vitamin C (Ascorbic Acid)	[50-81-7]	3	
Vitamin E (α-Tocopherol)	[7695-91-2]	<1	
NFPA/HMIS RATING (0-4): (0 = INSIGNIFICANT; 4 = EXTREME)	HEALTH 1	FIRE 0	REACTIVITY 0
	SPECIFIC HAZARD	NONE	

PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT:	213° F
VAPOR PRESSURE:	Same as Water
VAPOR DENSITY:	Same as Water
EVAPORATION RATE:	Same as Water
MELTING POINT:	Not Applicable
SPECIFIC GRAVITY/DENSITY (H2O=1):	1.02 – 1.05
pH:	5.2 – 5.5
SOLUBILITY IN WATER:	100%
APPEARANCE:	Chocolate-brown liquid
ODOR:	Mild, characteristic "earthy"

FIRE AND EXPLOSION INFORMATION

FLASH POINT:	Not Applicable
FLAMMABLE LIMITS:	Not Applicable
EXTINGUISHING MEDIA:	Does Not Burn
SPECIAL FIRE FIGHTING PROCEDURES:	Not applicable
SPECIAL FIRE AND EXPLOSION HAZARDS:	None

REACTIVITY DATA

STABILITY: Product is stable as a liquid.

CONDITIONS TO AVOID: None

INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION: Intense heat could dry product out, causing dried material to smolder or burn, releasing CO_x, NO_x and hydrocarbons.

HAZARDOUS POLYMERIZATION: Will not occur.

HEALTH EFFECTS/FIRST AID INFORMATION

ROUTES OF ENTRY: EYES SKIN INGESTION INHALATION

HEALTH HAZARDS: Eyes: May irritate on contact – wash out quickly
Skin: Brief contact is non-hazardous. Repeated or prolonged contact may dry out skin.
Ingestion: If large quantity swallowed, concern of vitamin overdose.

SIGNS/SYMPTOMS OF EXPOSURE: Dark staining of eyes and skin and/or eye irritation

CARCINOGENICITY: Ingredients not listed as carcinogenic in NTP or IARC listings.
Not OSHA regulated.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Flush immediately with water for 15 minutes, lift lids. See physician if irritation persists.
Skin: Wash gently with mild soap/detergent and flowing water. Apply skin lotion if skin has dried.
Wash contaminated clothing.
Ingestion: For small amounts drink plenty of water. More than a mouthful should be purged by vomiting, but only if victim is conscious. Get medical help.

PRECAUTIONS FOR SAFE HANDLING AND USE

RESPIRATORY PROTECTION: Wear protective respirator if misting conditions expected.

VENTILATION: Exhaust fan recommended if fine sprays or mists expected.

PROTECTIVE GLOVES/CLOTHING: Rubber or plastic recommended if repeated or prolonged contact expected.

EYE PROTECTION: Chemical splash goggles recommended if fine mists or sprays expected, regular safety glasses adequate.

WORK PRACTICES: Use good housekeeping practices. Keep from splashing/spilling.

SPILLS: Stop material flow at source. Recover for recycling/salvage if not contaminated by other material.

WASTE DISPOSAL METHOD: Small quantities may be flushed to drain/sewer with water.
Material not recyclable to be absorbed & placed in legal landfill following all regulations.

PRECAUTIONS IN STORING AND HANDLING: Avoid containers and piping made of aluminum, copper alloys and/or galvanized metal. Avoid storage above 120 F or below 32 F. Keep containers tightly closed.