

MATERIAL SAFETY DATA SHEET

ERA A Waters Company

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: ERA
ADDRESS: 16341 Table Mountain Parkway
Golden, CO, 80403 U.S.A.

BUSINESS PHONE: 303-431-8454
FAX: 303-421-0159 **EMAIL:** info@eraqc.com
CHEMICAL EMERGENCY PHONE: 352-535-5053 (INFOTRAC)



Product Name(s): RadCheM™ NaturalS™
Catalog / Part Number(s): 751, 811, 811AL1-4
MSDS Creation Date: November 22, 2005
Revision Date: July 19, 2012

MSDS Reference Number: 811-751

SECTION 2: HAZARDS IDENTIFICATION

Irritant. Ingestion may cause severe damage to digestive tract. The matrix of the standard is a nitric acid/water mixture which is classified as dangerous by Directive 199/45/EC. Use only as directed and in accordance with good laboratory practices. Use only as directed and in accordance with good laboratory practices.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL INGREDIENT NAME	CAS NUMBER	EC NUMBER	% BY WT.	EXPOSURE LIMITS		EU LABEL
				OSHA	ACGIH	HAZARD LABEL
Radium-226	13982-63-3	NA	<0.000001	NA	NA	NA
Radium-228	7440-61-1	NA	<0.000001	NA	NA	NA
Uranium, natural	7440-61-1	231-170-6	<0.000001	0.25 mg/m ³	0.20 mg/m ³	
Nitric Acid (≤70%)	7697-37-2	231-714-2	≤0.5	2 ppm	2 ppm; 4 ppm (STEL)	

Notes: Standard is manufactured in a nitric acid (≤0.5%) and water (≥99.5%) mixture. These standards contain small (trace) quantities of radioactive material. These materials do not present a significant hazard due to direct toxic effects, but do present a small hazard due to radioactivity, especially if taken into the body. These samples are designed for use only in a radiochemistry facility experienced in the handling of radioactive materials. All appropriate precautions for the handling of radioactive materials should be in place at all times. Decay products for some of the radionuclides listed are also radioactive. These decay products are present in different stages of equilibrium with their parent nuclide and are not accounted for in the component listing.

Although not all of these radioisotopes are classified by official agencies (OSHA, NTP, IARC), all radioactive materials may increase the risk of cancer if improperly handled. Considered Non-Hazardous under OSHA 1910.1200 (HazCom) as product contains no known or potential carcinogens in excess of 0.1% of the composition nor any other hazardous chemical in excess of 1% of the composition.

Material Use: Analytical reagent or certified reference material used in laboratories. Uses also include research and development.

SECTION 4: FIRST-AID MEASURES

Inhalation: Remove to fresh air.

Skin Contact: Flush with water.

Eye Contact: Immediately flush with water for a minimum of 15 minutes.

Ingestion: Get medical attention

After following first aid measures, seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

Flammable Properties: Not flammable.

Extinguishing Media: Dry chemical, carbon dioxide or appropriate foam.

Unique Aspects Contributing To a Fire: None.

Special Fire Fighting Procedures: None.

Note: As in any fire, wear self-contained breathing apparatus, and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Neutralize and flush with water or neutralize and absorb. Follow appropriate radioactive contamination control and cleanup procedures.

SECTION 7: HANDLING AND STORAGE

Handle in accordance with good laboratory practices. Store in a dry well-ventilated place. This product is intended for use only by people trained in the safety and handling of chemicals and laboratory preparations.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Handle in accordance with good laboratory practices. Wash thoroughly after handling.

Respiratory Protection: Not normally needed. If exposure limits are exceeded, use approved respirator.

Eye Protection: Safety glasses with side shields or safety goggles

Skin Protection: Neoprene or other chemical resistant gloves.

Engineering Controls: Not normally needed. If exposure limits are exceeded, work in a fume hood.

MATERIAL SAFETY DATA SHEET

ERA A Waters Company

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

DATA FOR MATRIX:

Appearance:	clear	Specific Gravity:	NA	Melting Point:	NA
Physical State:	liquid	Flash Point:	NA	Vapor Pressure:	NA
Odor:	NA	Explosion Limits:	NA	Vapor Density (air=1):	NA
pH:	NA	Boiling Point:	NA	Solubility in Water:	NA

SECTION 10: STABILITY AND REACTIVITY

Hazardous Polymerization Will Not Occur X May Occur Stability: Stable X Unstable
Hazardous Decomposition/Combustion Products: May generate hydrogen on exposure to metals.
Conditions and Materials to Avoid: Heavy metals.

SECTION 11: TOXICOLOGICAL INFORMATION

Primary Route(s) of Exposure Under Normal Use: Eyes, skin, mucous membranes or lungs.

Target Organ(s): NA

Acute Effects: May burn any tissue and cause blindness, GI tract perforation cough, or pulmonary edema, or methemoglobinemia. The above health hazard is based on the acid content of this product. This standard contains small quantities of radioactive material. These materials do not present a hazard due to direct toxic effects, but do present a small hazard due to radioactivity, especially if taken into the body. This sample is designed for use only in a radiochemistry facility experienced in the handling of radioactive materials. All appropriate precautions for the handling of radioactive materials should be in place at all times.

Chronic Effects: Asthma

Other Information: Chemical Ingredient(s) not classified as carcinogen(s) by OSHA, IARC, NTP, ACGIH, or California.

SECTION 12: ECOLOGICAL INFORMATION

No information available on this preparation or mixture. By complying with sections 6 & 7 there will be no release into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

To determine proper disposal, consult applicable federal, state and local environmental control regulations.

SECTION 14: TRANSPORT INFORMATION

Shipment Name/Type: Nitric acid
UN Number: 2031 Shipping/Hazardous Class: 8 Packing Group: II
Shipping regulations are based on combinations of criteria such as quantity, class and packaging according to DOT, IATA and (49) CFR.

SECTION 15: REGULATORY INFORMATION

Irritant (Xi) concentration is <5%; Uranium is Toxic (T).

EU Risk Phrases: Irritating to eyes and skin [R36/38].Uranium is well below regulated amount. Listed are Phrases for Uranium: Very toxic by inhalation & if swallowed [R 26/28]; Danger of cumulative effects [R 33]; May cause long-term adverse effects in the aquatic environment;

U.S. TSCA: Listed

Canada: This product has been classified according to the hazard criteria of the CPR and this MSDS contains all the information required by the CPR.

SECTION 16: OTHER INFORMATION

United States EPA Regulatory Information:	NFPA Rating:	Health: 3	Flammability: 0	Reactivity: 0
SARA 313: Yes	These ratings are for Nitric Acid			
CERCLA RQ: 1000 lbs	HMIS Rating:	Health: 3	Flammability: 0	Physical Hazard: 0

NOTE: NA = Data not available, not established, determined or not pertinent. DISCLAIMER: The information contained herein has been compiled from data presented in various technical sources believed to be accurate. This information is intended to be used only as a guide and does not purport to be complete. ERA makes no warranties and assumes no liability in connection with the use of this information. It is the user's responsibility to determine the suitability of this information and to assure the adoption of necessary precautions.