

SAFETY DATA SHEET

Tritium Column SDS - Column

Revision Date: 22-May-15

Section 1: Chemical Product and Company Identification

Product Name: Tritium Column
Product Number(s): H3-C01-A, H3-C20-A, H3-C50-A
Product Synonym(s): Tritium Column
Identified Uses: Laboratory chemicals, manufacture of substances
Manufacturer: Eichrom Technologies LLC
1955 University Lane
Lisle, Illinois 60532
General Information: (8-5 CST M-F)
800-422-6693 (in USA)
630-963-0320

24 Hour Emergency Number:

CHEMTREC: 800-424-9300

Section 2: Hazard(s) Identification



GHS Signal Word: **Danger**
GHS Classification of substance or mixture: Specific target organ systemic toxicity following single exposure
Acute toxicity (Category 3)
Flammable Liquid, Flash point > 60°C and ≤ 93°C
Skin Irritant
Eye Irritant

Hazard Statement(s):

H370 Causes damage to organs.
H301+H311+H331 Toxic if swallowed, in contact with skin, or if inhaled.
H227 Combustible liquid
H315 Causes skin irritation
H319 Causes serious eye irritation

Prevention:

P210 Keep away from heat, sparks, open flames, and hot surfaces. - No smoking
P260 Do not breathe dust or vapors.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, clothing, and eye protection.

Response:

P301+P330 IF SWALLOWED: Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311 IF exposed: Call a POISON CENTER or doctor.
P361 Immediately remove all contaminated clothing.
P370+P378 In case of fire: Use foam, CO₂, or dry chemical for extinction.

Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

P501 Dispose of contents/container in accordance with federal, state, and local regulations.

Section 3: Composition / Information on Ingredients

Component	CAS_Number	Percentage Range
De-ionized water	007732-18-5	55-64%
Phosphonic acid, ethenylidene bis-, tetrakis (1-methylethyl) ester, polymer with ethenyl benzene, 2-propenenitrile, and diethenylbenzene, dibenzoyl peroxide initiated, sulfonated and hydrolyzed		14-20%
Styrene, divinylbenzene and ethylstyrene copolymer, chloromethyl trimethylamine functionalized in the chloride form	69011-19-4	13-17%
Methanol		5-6%
Nonionic Acrylic Ester Polymer		2-4%

Section 4: First-aid Measures

Ingestion	IF SWALLOWED: IMMEDIATELY call a POISON CONTROL CENTER or doctor.
Skin Contact	Wash immediately with soap and copious amounts of water. Remove and wash contaminated clothing promptly. If irritation develops, seek medical attention.
Eye Contact	If eye irritation persists, get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
Most important symptoms and effects, both acute and delayed	Chronic symptoms: Red skin, dry skin, skin rash/inflammation, headache, disturbed tactile sensibility, visual disturbances, sleeplessness, gastrointestinal complaints, cardiac and blood circulation effects. depression, dizziness, mental confusion, drunkenness, coordination disorders, disturbed motor response, disturbances of consciousness, visual disturbances, blindness, respiratory difficulties, and cramps/uncontrolled muscular contractions. Ingestion/Inhalation/Skin Contact: Nauseau. Vomiting. Symptoms that may appear later (after absorption of high quantities): change in haemogramme/blood composition, headache, feeling of weakness, abdominal pain, muscular pain, central nervous system Eye contact: Redness of eye tissue. Lacrimation.
Indication of any immediate medical attention and special treatment needed	Treat as methanol exposure - quantity less than 10% of liquid volume.

Section 5: Firefighting Measures

Extinguishing Media	Foam, CO2, Dry Chemical
Fire and Explosion Hazards	Highly toxic and irritating fumes may be released and extinguishing water runoff may be toxic.
Protective Equipment	Wear positive pressure self-contained breathing apparatus and full personal protective equipment.
Special Hazards	Possible combustion products include carbon oxides, nitrogen oxides, chlorine Possible combustion products include, but are not limited to: alkylbenzenes, vinylbenzenes, phenol, phosphoric acid, carbon dioxide, sulfur oxides, water, organic sulfonates.

Section 6: Accidental Release Measures

Methods and materials for containment and cleanup	Sweep up material and transfer to a suitable container for disposal. Use proper personal protect equipment (specified in section 8)
Personal precautions	Avoid breathing vapors, mist, or gas. See section 8. Surface may be slippery.
Methods and materials for containment and clean-up	Ventilate area and wash spill site after material pickup is complete.
Containment Cleanup	Use adsorbent material to collect liquid component
Reference to other sections	For disposal see section 13.

Section 7: Handling and Storage

Specific End Use(s)	Apart from the uses mentioned in section 1 no other specific uses are stipulated.
Conditions for safe handling	Do not discharge waste into drain. Do not eat, drink, or smoke when using this product. Avoid repeated freeze-thaw cycles; beads may fracture. If frozen, thaw at room temperature.
Conditions for safe storage	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from strong acids, bases, acid anhydrides, and acid chlorides. Keep away from direct sunlight, heat sources, and sources of ignition Keep away from strong oxidizers. Normal warehouse storage in cool, dry area is satisfactory. Preferred Storage temperature is in the lower half of the range given below. Storage temperature: 0 to 50 °C (32 to 122°F)

Section 8: Exposure Controls / Personal Protection

Control Parameters	Per OSHA, PEL-TWA for Methanol is 260mg/m ³ Per OSHA, PEL-TWA for Methanol is 200 ppm. Per ACGIH, TLV-STEL for Methanol is 250 ppm. Per ACGIH, TLV-TWA for Methanol is 200 ppm.
Exposure Controls	Do not eat, drink or smoke when using this product Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.
Skin Protection	Wear protective gloves, clothing, and eye protection.
Respiratory protection	Do not breathe dust or mist.

Section 9: Physical Properties

Information on basic physical and chemical properties

Appearance:	Powder-Liquid Mixture Layers of off-white/amber/ brown, spherical beads in a colorless liquid	Explosion Limits (Upper/Lower):	Methanol: Upper explosion limit: 36%(v). Lower explosion limit: 6% (v). No data for other components.
Odor:	low to none	Flash Point:	62 °C (methanol-water)
Odor Threshold:	Not Established	Flammability:	Not Established
pH:	Not established	Autolgnition Temperature:	425 °C
Melting Point:	-6 °C (methanol-water); Not established for beads	Decomposition Temperature	Not Established
Boiling Point:	92 °C (approximate for methanol-water); Not established for beads	VaporPressure:	130 hPa at 20°C (methanol only); not established for mixture
Relative Density:	Not established	VaporDensity:	1.11 (for methanol only)
Solubility:	(in water) Beads are insoluble	Evaporation Rate:	Not Established
Partition Coefficient:	-0.77 (log Pow for methanol only)		
Viscosity:	Not Established		

Section 10: Stability and Reactivity

Reactivity	No hazardous reactions if stored and handled as indicated.
Chemical Stability	Stable under normal handling and storage conditions.
Hazardous Reactions	No hazardous reactions are expected in normal laboratory use. Hazardous polymerization will not occur. Toxic fumes may be released if heated above the decomposition point. Reacts with strong oxidizing agents.
Conditions to Avoid	Avoid all sources of ignition; heat, sparks, open flame. Avoid electro-static discharge.
Materials to Avoid	Contact with strong oxidizers will degrade material.
Hazardous decomposition Products	Possible combustion products include phosphorous oxides, phosphoric acid, carbon dioxide, and carbon monoxide; additional unidentified organic compounds may also be produced. Decomposition products depend upon temperature, air supply, and the presence of other materials. Decomposition products can include and are not limited to: Chlorinated hydrocarbons, aromatic compounds, hydrocarbons, hydrogen chloride, and organic amines

Section 11: Toxicology Information

The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

Acute Toxicity**Oral Effects**

Acute toxicity via the oral route of administration due to powders is expected to be low.

Methanol: 143 mg/kg LDLo in humans. Eye/Optic nerve neuropathy. Gastrointestinal nausea or vomiting. Dyspnea of lungs, thorax, or respiration.

Methanol: 7,000 mg/kg LD50 in monkeys. Muscle weakness, ataxia, coma.

Liquid Solution: Estimated Oral LD50 is >55,000 mg/kg(rat). Toxicity classification based upon OSHA rules for >1% mixture component. [Oral LD50 for Methanol is >5000 mg/kg (rat).]

Inhalation Effects

No data available for acute inhalation effects of this product. Toxicity classification based upon >1% Methanol. [LC50 inhalation for Methanol is 85 mg/l/4h (rat) or 64,000 ppm/4h (rat).]

Methanol: 300 ppm LDLo in humans. Headache. Other changes to lungs, thorax, or respiration. Eye visual field changes.

Dermal Effects

Liquid Solution: Estimated Dermal LD50 is >175,000 (rabbit) mg/kg. Toxicity classification based upon >1% Methanol. [Dermal LD50 for Methanol is 15,800 mg/kg (rabbit).]

Dermal LD50 > 5,000 mg/kg (rabbit) - Acrylic Polymer. Dermal LD50 for other powder components has not been determined.

Skin corrosion/irritation

Prolonged exposure to powder not likely to cause significant skin irritation. May cause more severe response if skin is abraded (scratched or cut).

Liquid Solution: Repeated direct skin contact with methanol can cause dermatitis with dryness and cracking.

Serious eye damage/irritation

Powder: May cause slight temporary eye irritation or corneal injury due to mechanical action.

Liquid Solution: Repeated exposure will cause eye irritation.

Respiratory or skin sensitization

No data available regarding respiratory or skin sensitization effects of this product.

Germ Cell Mutagenicity

No data available regarding mutagenic effects of this product.

Carcinogenicity

No data available regarding carcinogenic effects of this product.

Reproductive Toxicity

Liquid Solution: There is concern of adverse developmental effects in fetuses if pregnant women are exposed to methanol at levels that result in blood methanol concentrations greater than 10 mg/l.

Liquid Solution (continued): It is possible that substantially higher blood levels will NOT result in developmental toxicity.

Powder: No data available regarding reproductive effects of this product.

Specific Target Organ Toxicity**Single Exposure**

Liquid Solution: Contains methanol. Methanol causes damage to organs (liver, kidneys, central nervous system, optic nerve).

Repeated Exposure

No data available regarding specific target organ toxicity single exposure for powder.

No data available regarding specific target organ toxicity repeated exposure for powder or liquid.

Aspiration Hazard

No data available regarding aspiration hazards associated with this product.

Other

The amount of methanol that can cause severe methanol poisoning is very small: Assuming that 100% methanol fuel is swallowed, the poisonous dose is less than two tablespoons (28 ml) for a typical adult.

Section 12: Ecological Information

	No data are available on the adverse effects of this material as a whole on the environment.
Aquatic Toxicity	
Acute Toxicity to fish	Methanol: 96-hr LC50 (fathead minnow, 28-29 days old): 29,400 mg/L, 25°C, 7.3 mg/L dissolved water, water hardness 43.5 mg/L (CaCO ₃) alkalinity 46.6 CaCO ₃ , pH 7.66
	Methanol: 96-hr LC50 (rainbow trout fingerling): 13,680 mg/L, 12°C
	Methanol: 96-hr LC0 (rainbow trout fingerling): 10,800 mg/L, 12°C
Persistence and degradability	
	No other data are available for persistence and degradability. Surface photodegradation is expected with exposure to sunlight.
Biodegradability	Methanol: Will biodegrade rapidly in soil, water, and air.
	No other data are available regarding the biodegradability of this material. No appreciable biodegradation is expected.
Bioaccumulative potential	No data are available for bioaccumulative potential.
Mobility in Soil	No data are available for mobility in soil.
PBT/vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Other	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

Section 13: Disposal Considerations

General	Avoid disposal to sewers and local waterways.
	Dispose of contents/container in accordance with federal, state, and local regulations.
Unused:	Bury resin in licensed landfill or burn in approved incinerator equipped with an afterburner and scrubber according to local, state, and federal regulations.
	Burn liquid in a chemical incinerator equipped with an afterburner and scrubber.
Used:	For resin contaminated with hazardous materials, dispose of mixture as hazardous material according to local, state, and federal regulations.

Section 14: Transport Information

Ground Transport:	Not D.O.T. Hazardous
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Section 15: Regulatory Information

US Federal Regulations	
	Toxic Substances Control Act (TSCA): This material is provided to you under the research and development (R&D) exemption.
US State Regulations	
	A component, Methanol [CAS 67-56-1], is listed on the following state right to know lists: CA, MA, NJ
Canada - DSL/NDSL	A component, Methanol [CAS 67-56-1], is listed on the Canadian Domestic Substances List.

Section 16: Other Information

SDS Prepared By:	Eichrom Technologies LLC
Revision	Updated to GHS SDS format, including classification

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