

SAFETY DATA SHEET
TRU Resin SDS - Column

Revision Date: 01-Feb-18

Section 1: Chemical Product and Company Identification

Product Name TRU Resin
Product Number(s): TR.22-C01-A, TR.22-C50-A, TR10-C01-A, TR10-C20-A, TR5-C01-A, TR5-C20-A, TR-C01-A, TR-C20-A, TR-C50-A
Product Synonym(s): TRU Resin
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 (US/Canada): 1-800-255-3924 **CHEMTEL Contract #:** MIS9554039
24 Hour International Access Number: 1-813-248-0585
Country Specific Emergency Numbers:
Australia: 1-300-954-583 **India:** 000-800-100-4086
Brazil: 0-800-591-6042 **Mexico:** 1-800-99-731

Section 2: Hazard(s) Identification

2.1 Classification of the substance or mixture

GHS Classification of substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

Skin Irritant

Eye Irritant

Respiratory Tract Irritation

2.2 GHS Label elements, including precautionary statements

Pictogram:



Signal Word Warning

Hazard Statement(s):

H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary Statement(s):

Prevention	P261	Avoid breathing dust and vapors.
	P264	Wash hands thoroughly after handling.
	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves and eye protection.
Response	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.
	P312	Call a POISON CONTROL CENTER or doctor if you feel unwell.
	P332+P313	If skin irritation occurs, seek medical attention.
	P337+P313	If eye irritation persists, get medical attention.
	P362+P364	Take off contaminated clothing and wash before reuse.
Storage	P391	Collect Spillage.
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.

2.3 Hazards Not Otherwise Classified (HNOC) or not covered by GHS:

Section 3: Composition / Information on Ingredients

Component	CAS_Number	Percentage Range
De-ionized water	007732-18-5	60-70%
Nonionic Acrylic Ester Polymer	Trade Secret	18-24%
TriButylPhosphate	126-73-8	8-11%
Octyl (phenyl)-N,N-diisobutyl carbamoylmethylphosphine oxide	83242-95-9	4-5%
Nitric Acid, Concentrated	7697-37-2	approximately 0.1%

Section 4: First-aid Measures

Ingestion	IF SWALLOWED: Call a POISON CONTROL CENTER or doctor if you feel unwell.
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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Inhalation	Remove to fresh air. If breathing is labored, administer oxygen. If not breathing, give artificial respiration. Seek medical attention.
Most important symptoms and effects, both acute and delayed	No further relevant information available.
Indication of any immediate medical attention and special treatment needed	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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. Polymer does not support flame.
Protective Equipment	Wear positive pressure self-contained breathing apparatus and full personal protective equipment.
Special Hazards	Possible combustion products include phosphorous oxides, phosphoric acid, carbon dioxide, and carbon monoxide, in addition to unidentified organic compounds.

Section 6: Accidental Release Measures

Personal precautions	Avoid breathing vapors, mist, or gas. See section 8. Surface may be slippery. Use proper personal protect equipment (specified in section 8)
Methods and materials for containment and clean-up	Sweep up material and transfer to a suitable container for disposal.
Reference to other sections	For disposal see section 13.

Section 7: Handling and Storage

Conditions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use mechanical exhaust if dust is formed.
Conditions for safe storage	Normal warehouse storage in cool, dry area is satisfactory. Keep away from strong oxidizers.
Specific End Use(s)	Apart from the uses mentioned in section 1 no other specific uses are stipulated.

Section 8: Exposure Controls / Personal Protection

Control Parameters	Per ACGIH, TLV-TWA for Tributylphosphate is 2 ppm. Per OSHA, PEL TWA is 5 mg/m ³ for Tributylphosphate. Per NIOSH, REL TWA is 0.2 ppm (2.5 mg/m ³) for Tributylphosphate and IDLH is 30 ppm for Tributylphosphate
Exposure Controls	Mechanical exhaust is required.
	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.
Body protection	Wear protective gloves, clothing, and eye protection.
Respiratory protection	Use NIOSH/MSHA approved respirator when handling material outside of mechanical exhaust. An air-purifying respirator with an organic vapor cartridge or canister may be permissible.

Section 9: Physical Properties

Information on basic physical and chemical properties

Appearance:	Powder-Liquid Mixture White bead in colorless liquid	Explosion Limits (Upper/Lower):	Not Established
Odor:	Low to none	Flash Point:	Not established
Odor Threshold:	Not Established	Flammability:	Not Established
pH:	1.3 (dilute acid)	AutoIgnition Temperature:	Not Established
Melting Point:	0 to -5°C (dilute acid); Not determined for powder	Decomposition Temperature	Not Established
Boiling Point:	100 to 120°C (dilute acid); Not determined for powder	VaporPressure:	49 hPa (37 mmHg) at 50°C (122°F) for nitric acid
Relative Density:	1.001 g/mL at 25°C (powder is 0.35 g/mL)	VaporDensity:	Not Established
Solubility:	(in water) Beads are insoluble, acid is miscible with water	Evaporation Rate:	Not Established
Partition Coefficient:	Not Established		
Viscosity:	Not Applicable		

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.
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.

Section 11: Toxicology Information

Acute Toxicity	
Oral Effects	CMPO, oral LD50 >5000 mg/kg. Polymer, Oral LD50 > 5,000 mg/kg (rat) Tributylphosphate, Oral LD50 is 1189 mg/kg (mouse). Tributylphosphate, Oral LD50 is 3000 mg/kg (rat).
Inhalation Effects	TRU Resin Column, estimated oral LD50 is 10,000 mg/kg (mouse). Tributylphosphate, inhalation LC50 is 2529 ppm (rat - 1 hr) [or 28000 mg/m ³] Tributylphosphate, inhalation LC50, mouse: 1300 mg/m ³ . TRU Resin Columns, estimated inhalation LC50 is 23,000 ppm (rat - 1hr) [or 91 mg/l]
Eye Effects	May cause irritation or corneal injury. Tributylphosphate, Draize test, rabbit, eye: 500 mg Severe.
Dermal Effects	CMPO, dermal LD50 >2000 mg/kg. Polymer, Dermal LD50 > 5,000 mg/kg (rabbit) Tributylphosphate, dermal LD50 is >3100 mg/kg (rabbit) TRU Resin Column, estimated oral LD50 is >10,000 mg/kg (mouse).

Skin corrosion/irritation	Tributylphosphate is a mild eye irritant (rabbit). No data available for other components.
Serious eye damage/irritation	Tributylphosphate is a mild skin irritant (rabbit). No data available for other components.
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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
	No specific data available for some components. Minimize direct exposure to material.
	Tributylphosphate, Limited evidence of carcinogenicity in animal studies. (Rat, Oral, Kidney, Ureter, Bladder: tumors; Mouse, Oral, Liver: tumors).
Reproductive Toxicity	No data available regarding reproductive effects of this product.
Specific Target Organ Toxicity	
Single Exposure	No data available regarding specific target organ toxicity single exposure.
Repeated Exposure	No data available regarding specific target organ toxicity repeated exposure.
Aspiration Hazard	No data available regarding aspiration hazards associated with this product.

Section 12: Ecological Information

Aquatic Toxicity	
Acute Toxicity to fish	Tributylphosphate - LC50, Carassius auratus (goldfish) - 8.8 mg/l - 96 hr TRU Resin Column - Estimated LC50, Carassius auratus (goldfish) - 32 mg/l - 96 hr
Acute Toxicity to aquatic invertebrates	Tributylphosphate - EC50, Daphnia magna (water flea) - 3.6 mg/l - 48 hr TRU Resin Column - Estimated EC50, Daphnia magna (water flea) - 72 mg/l - 48 hr
Acute toxicity to aquatic plants	Tributylphosphate - EC50, Desmodesmus subspicatus (green algae) - 176 mg/l - 72 hr TRU Resin Column - Estimated EC50, Desmodesmus subspicatus (green algae) - 22 mg/l - 72 hr
Persistence and degradability	
Biodegradability	Tributylphosphate - aerobic biodegradability - exposure time 28 d, 89% - readily biodegradable.
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	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.

Dispose of liquid according to local regulations for acids.

Bury resin in licensed landfill or burn in approved incinerator equipped with an afterburner and scrubber according to local, state, and federal regulations.

Used: For resin contaminated with hazardous materials, dispose of mixture as hazardous material according to local, state, and federal regulations.

Section 14: Transport Information

Air Transport: Not Hazardous per IATA 2014

Ground Transport: Not D.O.T. Hazardous

Water Transport: Not Hazardous per IMDG 2012.

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, Tributylphosphate [CAS 126-73-8], is listed on the following state right to know lists:
CA, MA, MN, NJ, PA

Section 16: Other Information

Revision Updated to GHS SDS format, including classification

1-Feb-2018: Update Emergency Phone Numbers

SDS Prepared By: Eichrom Technologies LLC

The information set forth herein has been gathered from standard reference materials and is to the best knowledge and belief of Eichrom Technologies LLC, accurate and reliable. Such information is offered solely for your consideration, investigation and verification, and does not suggest or guarantee that the hazard precautions or procedures mentioned are the only ones that exist. Eichrom Technologies LLC makes no warranties, express or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process, and assumes no responsibility therefore.