

MATERIAL SAFETY DATA SHEET (MSDS)

TROY CHEMICAL CORP. 1 Avenue L Newark, NJ 07105	FOR MSDS INFORMATION: (973) 589-2500 24 HOUR EMERGENCY PHONE NUMBER CHEMTREC 1-800-424-9300	Grotan® Product Code: 530X Effective Date: April 24, 2008 Replaces: June 2, 2005
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1. PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME	Grotan®		
CHEMICAL NAME	Not applicable		
CHEMICAL FAMILY	Not applicable		
FORMULA	Proprietary	MANUFACTURER	Troy Chemical Corporation
SYNONYMS	None		1 Avenue L Newark, N.J. 07105

2. COMPOSITION/INFORMATION ON INGREDIENTS

The listed components are considered to be hazardous based on OSHA's Hazard Communication Standard. For further regulatory information, see Section 15.

CHEMICAL NAME	CAS#	%	AGENCY	EXPOSURE LIMITS
Hexahydro-1,3,5-tris(2-hydroxyethyl)				
-s-triazine	4719-04-4	78.5	Not applicable	None established

OSHA Regulatory Status: This product is classified as hazardous under OSHA regulations.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Grotan® is a water white to pale yellow viscous liquid with a mild characteristic odor. Highly alkaline, pH=10.8. May be harmful if swallowed. May cause severe eye irritation and irreversible corneal damage. Excessive heat greater than 147°C (297°F), will result in decomposition to formaldehyde. Avoid contamination of streams and sewers.

ROUTES OF ENTRY	Ingestion, skin contact, eyes, inhalation
INGESTION	Ingestion may cause gastrointestinal irritation, nausea, and vomiting.
SKIN	May cause mild skin irritation.
EYE CONTACT	May cause moderate to severe eye irritation and irreversible corneal damage if not washed from eyes promptly.
INHALATION	May cause respiratory irritation.
CHRONIC EFFECTS	There are no known or reported chronic effects.
TARGET ORGANS	None
CARCINOGENICITY	This product (or component) is not listed as a carcinogen according to OSHA, NTP, IARC, and ACGIH.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE	There are no known conditions aggravated by exposure to this product.

4. FIRST AID MEASURES

INGESTION	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
SKIN CONTACT	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
EYE CONTACT	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.
INHALATION	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
NOTES TO PHYSICIAN	This product is highly alkaline, pH=10.8. Probable mucosal damage may contraindicate use of gastric lavage.

5. FIRE FIGHTING MEASURES

FLASH POINT	Not applicable
FLAMMABLE LIMITS	Not applicable
AUTOIGNITION TEMPERATURE	Not applicable
FLAMMABILITY CLASS	Non-hazardous
HAZARDOUS PRODUCTS OF COMBUSTION	Carbon monoxide, carbon dioxide, and formaldehyde.
FIRE EXTINGUISHING MEDIA	Extinguish using agent suitable for surrounding fire.
FIRE FIGHTING INSTRUCTIONS	Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Avoid breathing vapors, keep upwind. Positive pressure self-contained breathing apparatus with full facepiece and structural firefighters' protective clothing will provide limited protection.
UNUSUAL FIRE & EXPLOSION HAZARDS	Contact may cause burns to eyes. Runoff from fire control or dilution water may cause pollution. Excessive heat in excess of 147°C (297°F) will result in decomposition to formaldehyde.

6. ACCIDENTAL RELEASE MEASURES

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Wear protective equipment as specified in Section 8. Positive pressure self-contained breathing apparatus and structural firefighters' protective clothing will provide limited protection. Shut off ignition sources; no flares, smoking, or flames in hazard area. Stop leak if you can do it without risk. For small spills, absorb with vermiculite or other noncombustible absorbent material and place into containers for later disposal. For large spills, dike far ahead of liquid spill for later disposal. If water pollution occurs, notify the appropriate authorities.
Observe all Federal, State, and Local regulations regarding notifications of accidental releases.

7. HANDLING & STORAGE

Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container tightly closed. Use only with adequate ventilation. Store away from incompatible substances in a cool, dry, ventilated area. Prolonged contact with brass, copper, or aluminum piping, containers or equipment should be avoided to prevent possible corrosive effects to these metals. Do not contaminate water, food, or feed by storage or disposal.
Observe all Federal, State, and Local regulations when storing or disposing of this substance.

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8. PERSONAL PROTECTION/EXPOSURE CONTROLS

VENTILATION	Provide adequate ventilation or local exhaust to minimize exposure.
EYE/FACE PROTECTION	If potential for contact with liquid exists, use splash-proof safety goggles or other approved eye protection.
SKIN PROTECTION	Direct contact may cause mild skin irritation. Wear impervious gloves and apron to prevent skin contact.
RESPIRATORY PROTECTION	Whenever workplace conditions warrant the use of a respirator, a respiratory protection program meeting OSHA 1910.134 must be followed utilizing a NIOSH/MSHA-approved respirator.
OTHER	Eyewash and safety shower should be available within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Water white to pale yellow viscous liquid	SPECIFIC GRAVITY AT 25°C. (Water=1)	1.145-1.16
ODOR	Mild characteristic odor	WATER SOLUBILITY	Soluble
INITIAL BOILING POINT	100°C (212°F)	pH AT 25°C.	10.3-11.3
VAPOR PRESSURE AT 20°C.	Unknown	EVAPORATION RATE (Butyl acetate=1)	<1
VAPOR DENSITY (Air=1)	>1	% VOLATILES BY WEIGHT	21%
VISCOSITY (Gardner) AT 25°C.	Not determined		

10. STABILITY & REACTIVITY

REACTIVITY	Stable under normal temperatures and pressures.
CONDITIONS TO AVOID	Avoid heat or sources of ignition.
INCOMPATIBILITY	Avoid contact with strong acids, bases, and oxidizers.
HAZARDOUS DECOMPOSITION	Decomposition may release carbon monoxide, carbon dioxide, and formaldehyde.
HAZARDOUS POLYMERIZATION	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL EFFECTS	LD50 (oral, rat) - 535-580 mg/kg
ACUTE SKIN EFFECTS	LD50 (dermal, rabbit) >2000 mg/kg. Mild skin irritation.
ACUTE EYE EFFECTS	Moderate to severe irritation (rabbit). Corneal damage may be irreversible if not washed from eyes promptly.
ACUTE INHALATION EFFECTS	No data available.
SUBCHRONIC EFFECTS AND OTHER STUDIES	Skin sensitization reactions associated with this product have been reported. However, the number of sensitization responses is very low. There is also information that allergic sensitivity, if it occurs, is lost at a fairly rapid rate. In animal inhalation studies, exposure to aerosol mists from cutting fluid solutions containing 0.15% and 1.5% Grotan (plus 3% cutting oil and water) resulted in eye irritation and lung damage. It was not established if the lung damage was related to the exposure to Grotan. Mutagenicity testing - Not mutagenic. For additional information on active ingredients, contact Troy Chemical Corporation.

12. ECOLOGICAL INFORMATION

ECOTOXICITY	This product is harmful to aquatic organisms. Do not apply directly to water or wetlands. Do not contaminate water when disposing of equipment washwaters. LC50 (bluegill sunfish, adult) - 44.8 mg/l LC50 (bluegill sunfish, Fingerlings) - 27 mg/l LC50 (rainbow trout) - 67.3 mg/l
ENVIRONMENTAL FATE	This product may cause adverse environmental impact. Avoid contamination of streams and sewers.

13. DISPOSAL INFORMATION

RCRA HAZARDOUS WASTE	This product is not a RCRA hazardous waste by definition.
WASTE DISPOSAL PROCEDURE	The user of this material has the responsibility to dispose of unused material, residues, and containers in compliance with all Federal, State, and Local Regulations

14. TRANSPORTATION INFORMATION

DOT, IATA, IMDG	This product does not meet the definition of any hazard class and therefore is not subject to DOT, IATA, and IMDG Regulations.
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15. REGULATORY INFORMATION

CERCLA SECTION 103 (40CFR302.4)	This product does not contain any chemicals that are reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
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SARA SECTION 302 (40CFR355.30), SARA SECTION 304 (40CFR355.40)	This product does not contain any chemicals that require emergency planning based on Threshold Planning Quantities (TPQ) or release reporting based on Reportable Quantities (RQ).
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SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21)	<table style="width: 100%; border: none;"> <tr> <td style="border: 1px solid black; padding: 2px;">ACUTE</td> <td style="border: 1px solid black; padding: 2px;">CHRONIC</td> <td style="border: 1px solid black; padding: 2px;">FIRE</td> <td style="border: 1px solid black; padding: 2px;">REACTIVE</td> <td style="border: 1px solid black; padding: 2px;">PRESSURE</td> </tr> <tr> <td style="border: 1px solid black; text-align: center; padding: 2px;">X</td> <td style="border: 1px solid black; padding: 2px;"></td> <td style="border: 1px solid black; text-align: center; padding: 2px;">X</td> <td style="border: 1px solid black; padding: 2px;"></td> <td style="border: 1px solid black; padding: 2px;"></td> </tr> </table>	ACUTE	CHRONIC	FIRE	REACTIVE	PRESSURE	X		X		
ACUTE	CHRONIC	FIRE	REACTIVE	PRESSURE							
X		X									

SARA SECTION 313 (40CFR372.65)	This product does not contain any chemicals subject to the reporting requirements of the Emergency Planning and Community Right-to-Know Act of 1986.
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CHEMICAL INVENTORIES The ingredients of this product are all on the following Chemical Substance Inventories, are exempt from the Inventories, or are otherwise compliant with inventory requirements of the governing agency.						
TSCA <input checked="" type="checkbox"/>	EINECS <input checked="" type="checkbox"/>	DSL/NDSL <input checked="" type="checkbox"/>	AICS <input checked="" type="checkbox"/>	ECL <input checked="" type="checkbox"/>	MITI, ENCS <input checked="" type="checkbox"/>	PICCS <input checked="" type="checkbox"/>
U.S.	Europe	Canada	Australia	Korea	Japan	Philippines
IECSC <input checked="" type="checkbox"/>	NZIoC <input type="checkbox"/>					
China	New Zealand					

CALIFORNIA PROPOSITION 65
 This product does not contain any substances that are currently on the list of Known Carcinogens and Reproductive Toxins, at levels which would require a warning under the statute.

STATE RIGHT-TO-KNOW
 This product is regulated by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is exempt from State Right-to-Know labeling requirements when labeled with an approved EPA label.
 EPA Registration No. 365-76

16. OTHER

REVISIONS Prepared by: Environmental and Regulatory Affairs Dept.
This MSDS has been revised in the following sections: (revisions indicated in left border)
 Product Code, Sect. 1 (Added ®), Sect. 4 (First Aid Measures), Sect. 8 (Ventilation, Eye/Face & Respiratory Protection), Sect. 11 (Subchronic Effects), Sect. 12 (Ecotoxicity).

ABBREVIATIONS
PNOC - Particulates not otherwise classified **PNOR - Particulates not otherwise regulated**
STEL - Short-term exposure limit **TLV - Threshold limit value** **TWA - Time-weighted average**

HMIS RATING				NFPA RATING		
HEALTH	FLAMMABILITY	REACTIVITY	PERSONAL PROTECTION	HEALTH	FLAMMABILITY	REACTIVITY
3	0	1	D	3	0	1

The information contained in this MSDS is believed to be accurate and reliable as of issue date, but no representation, guarantee, or warranty, express or implied is made to the accuracy, reliability, or completeness of the information. It is provided for the purpose of complying with hazard communication regulations. It is not intended as performance information or specifications for the product. It is the user's responsibility to determine the suitability of the product for his own use. Troy does not assume legal responsibility for reliance on information herein.

Grotan® is a trademark of Troy Corporation

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