

MATERIAL SAFETY DATA SHEET (MSDS)

TROY CHEMICAL COMPANY LTD 242 Applewood Crescent, Unit 14 Concord, Ontario L4K 4E5 CANADA	FOR MSDS INFORMATION: 1-800-994-7045 24 HOUR EMERGENCY PHONE # - CHEMTREC 1-800-424-9300 EMERGENCY FAX # 905-760-7904	Grotan® BK Effective Date: April 24, 2008 Replaces: June 2, 2005		
1. PRODUCT & COMPANY IDENTIFICATION				
PRODUCT NAME CHEMICAL NAME CHEMICAL FAMILY FORMULA PRODUCT USE	Grotan® BK Not applicable Triazine compound Proprietary Materials Preservative	MANUFACTURER Troy Chemical Company Limited 242 Applewood Crescent, Unit 14 Concord, Ontario L4K 4E5 CANADA		
2. COMPOSITION/INFORMATION ON INGREDIENTS				
The following are considered to be hazardous ingredients under the Hazardous Products Act				
CHEMICAL NAME	CAS#	%	AGENCY	EXPOSURE LIMITS
Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine	4719-04-4	78.5	Not applicable	None established
3. HAZARDS IDENTIFICATION				
EMERGENCY OVERVIEW				
Grotan® BK 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 known			
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. Do not scatter spilled material with high-pressure water streams. 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, an approved respirator must be used.
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
ODOUR	Mild characteristic odor	WATER SOLUBILITY	Soluble
ODOUR THRESHOLD	Not available	VISCOSITY (Gardner) AT 25°C.	Not available
MOLECULAR WEIGHT	Not available	COEFFICIENT OF WATER/OIL DIST.	Not available
INITIAL BOILING POINT	100°C (212°F)	pH	10.3-11.3
FREEZING/MELTING POINT	Not available	EVAPORATION RATE (Butyl acetate=1)	<1
VAPOUR DENSITY (Air=1)	>1	% VOLATILES BY WEIGHT	21%
VAPOUR PRESSURE AT 20°C.	22.9 mm Hg		

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

LD50 (oral, rat) - 535-580 mg/kg., LD50 (dermal, rabbit) >2000 mg/kg; mild skin irritant (dermal, rabbit). Moderate to severe eye irritation (rabbit). Corneal damage may be irreversible if not washed from eyes promptly.
 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.
 Mutagenicity testing - Not mutagenic.

12. ECOLOGICAL INFORMATION

This product is harmful to aquatic organisms and may cause adverse environmental impact.

13. DISPOSAL INFORMATION

Disposal procedures must be in accordance with local regulations.

14. TRANSPORTATION INFORMATION

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

15. REGULATORY INFORMATION

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	EINECS	DSL/NDL	AICS	ECL	MITI, ENCS	PICCS
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
U.S.	Europe	Canada	Australia	Korea	Japan	Philippines
IECSC	NZIoC					
<input checked="" type="checkbox"/>	<input type="checkbox"/>					
China	New Zealand					

WHMIS CLASSIFICATION D2B

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

REGISTRATION NUMBER PCP#11691

16. OTHER

REVISIONS Prepared by: Environmental and Regulatory Affairs Dept.

This MSDS has been revised in the following sections: (revisions indicated in left border)
 Sect. 1 (Added ®), Sect. 4 (First Aid Measures), Sect. 8 (Ventilation, Eye/Face & Respiratory Protection), Sect. 11 (Toxicological Information), Sect. 12 (Ecological Information)

The information contained herein is provided according to the Controlled Products Regulations and relates to the product identified in Section 1 and shall not be valid for the said product used in any combination with other materials or process. Such information is accurate and reliable to the best of our knowledge as of issue date, but no representation, guarantee, or warranty, express or implied is made to the accuracy, reliability, or completeness of the information. The Troy Chemical Company Limited will not be liable for damages, losses, injuries, or consequential damages which may result from the use or reliance on any information contained herein nor does the Troy Chemical Company Limited offer warranty against patent infringement.
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