



MATERIAL SAFETY DATA SHEET

CAT COOLING SYSTEM CLEANER

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME	CAT COOLING SYSTEM CLEANER
PART No.	Chemtool, 846800, Caterpillar, 4C-4609, 4C-4610, 4C-4611, 4C-4612, 4C-4613
SUPPLIER	Chemtool Incorporated P.O. Box 538 8200 Ridgefield Road Crystal Lake, IL 60039-0538 USA Tel: (815) 459-1250 Fax: (815) 459-1955
EMERGENCY TELEPHONE	Rocky Mountain Poison Center Denver, Colorado In USA and Canada - (800) 458-5924 Outside USA and Canada - +01-303-893-1322
*Date of last issue	2007-02-22

2. COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS No.	WEIGHT
WATER	7732-18-5	60-80 %
ETHANOL, 2,2',2''-NITRILOTRIS-, 2-HYDROXY-1,2,3-PROPANETRICARBOXYLATE (SALT)	29340-81-6	10-20 %
1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-, DIAMMONIUM SALT (COMMON NAME: AMMONIUM CITRATE)	3012-65-5	7-13 %

COMPOSITION COMMENTS	Refer to section eight for exposure limits on ingredients. Chemical ingredients not regulated by OSHA, SARA, state or federal agencies are treated confidentially.
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3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DO NOT ADD NITRITES to this product. Addition of nitrites may lead to the formation of nitrosamines which are known to cause cancer.

Irritating to eyes, respiratory system and skin.

SENSITIZATION

No known information.

CARCINOGENICITY

IARC: Not listed as a Group 1, 2A, or 2B agent. NTP: Not listed. OSHA: Not regulated.

TERATOGENICITY

No known information.

HEALTH WARNINGS

SKIN CONTACT. Slightly irritating. Repeated or prolonged contact can result in drying of the skin. EYE CONTACT. Irritating. INGESTION. Can cause stomach ache and vomiting. INHALATION. Spray mist can irritate airways and lungs.

ROUTE OF ENTRY

Skin and/or eye contact. Ingestion. Inhalation.

4. FIRST AID MEASURES

INHALATION

Remove victim immediately from source of exposure. Get medical attention if any discomfort continues. For breathing difficulties oxygen may be necessary. If breathing stops, provide artificial respiration.

EYES

Important! Immediately rinse with water for at least 15 minutes. Get medical attention if any discomfort continues.

SKIN

Immediately remove contaminated clothing. Wash skin thoroughly with soap and water.

INGESTION

DO NOT INDUCE VOMITING! Drink large amounts of water. Get medical attention immediately!

5. FIRE FIGHTING MEASURES

FLASH POINT (°C)

N/A

FLAMMABILITY LIMIT - LOWER(%)

N/A

FLAMMABILITY LIMIT - UPPER(%)

N/A

EXTINGUISHING MEDIA

Use: Foam. Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc. Product contains water and should not support combustion. Will burn if sufficiently heated to drive off water.

SPECIAL FIRE FIGHTING PROCEDURES

Use water to keep fire exposed containers cool and disperse vapors. Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures. Keep run-off water out of sewers and water sources. Dike for water control. Avoid water in straight hose stream; will scatter and spread fire. Use special protective clothing. Regular protection may not be safe. Prevent inhalation of fumes and gases.

UNUSUAL FIRE & EXPLOSION HAZARDS

Volume and pressure increases strongly when heated. Risk of container explosion in fire.

HAZARDOUS COMBUSTION PRODUCTS

Acrid smoke/fumes. Oxides of: Carbon. Nitrogen.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Minimize skin contact. Avoid breathing vapors. Wear an appropriate respirator if exposure exceeds recommended guidelines.
PRECAUTIONS TO PROTECT THE ENVIRONMENT	Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with applicable government regulations.
SPILL CLEAN-UP PROCEDURES	Carefully collect spilled material in closed containers and leave for disposal according to local regulations. Provide good ventilation. Use appropriate protective clothing. Rinse area with water. Do not let washing down water contaminate ponds or waterways.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS	Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Containers to be kept tightly closed. Eye wash and emergency shower must be available at the work place. Do not add nitrites or other nitrosating agents. Nitrosamines, which may cause cancer, may be formed.
STORAGE PRECAUTIONS	Keep away from heat, sparks and open flame. Store separated from: Acids. Oxidizing materials.
STORAGE CRITERIA	Chemical storage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

PROTECTIVE EQUIPMENT



ENGINEERING CONTROLS	Use engineering controls to reduce air contamination to permissible exposure level.
VENTILATION	No specific ventilation requirements noted, but forced ventilation may still be required if air contamination exceeds acceptable level.
RESPIRATORS	No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
PROTECTIVE GLOVES	For prolonged or repeated skin contact use suitable protective gloves.
EYE PROTECTION	Wear splash-proof eye goggles to prevent any possibility of eye contact.
PROTECTIVE CLOTHING	Wear appropriate clothing to prevent repeated or prolonged skin contact.
HYGIENIC WORK PRACTICES	Wash at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE	Clear. Liquid.		
COLOR	Green.		
ODOR	Mild (or faint).		
SOLUBILITY DESCRIPTION	Soluble in water.		
DENSITY	1.095	Temperature (°C)	15.6 (60°F)
VAPOR DENSITY (air=1)	> 1		
VAPOR PRESSURE	N/D	Temperature (°C)	
EVAPORATION RATE	< 1	Reference	BuAc=1
pH-VALUE, CONC. SOLUTION	6.5		

10. STABILITY AND REACTIVITY

STABILITY	Normally stable.
CONDITIONS TO AVOID	Avoid contact with acids and oxidizing substances. nitrites or other nitrosating agents. Nitrosamines may be formed.
HAZARDOUS POLYMERIZATION	Will not polymerize.
MATERIALS TO AVOID	Strong acids. Strong oxidizing agents. Inorganic nitrites.
*HAZARDOUS DECOMPOSITION PRODUCTS	Oxides of: Carbon. Nitrogen.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION	No experimental toxicological data on the preparation as such is available.
COMPONENT	ETHANOL, 2,2',2''-NITRILOTRIS-, 2-HYDROXY-1,2,3-PROPANETRICARBOXYLATE (SALT)
TOXIC DOSE - LD 50	N/A.
TOXIC CONC. - LC 50	N/A.
COMPONENT	1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-, DIAMMONIUM SALT (COMMON NAME: AMMONIUM CITRATE)
TOXIC DOSE - LD 50	N/A.
TOXIC CONC. - LC 50	N/A.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION	No data on possible environmental effects have been found.
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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS Dispose of in accordance with Local Authority requirements. Confirm disposal procedures with environmental engineer and local regulations.

14. TRANSPORT INFORMATION

DOT HAZARD CLASS Non-Hazardous (No label required).
IDENTIFICATION No. N/A
REPORTABLE QUANTITY (RQ) No
U.S. DOT HAZARD LABEL No DOT label requirement
TDGR CLASS Not Regulated.
SEA TRANSPORT NOTES Not regulated per IMDG.
AIR TRANSPORT NOTES Not regulated per IATA.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

COMPONENT	SARA 302	CERCLA	SARA 313
ETHANOL, 2,2',2''-NITRILOTRIS-, 2-HYDROXY-1,2,3-PROPANETRICARBOXYLATE (SALT)	No	No	No
1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-, DIAMMONIUM SALT (COMMON NAME: AMMONIUM CITRATE)	No	5 000 lbs	No

CLEAN AIR ACT

SARA HAZARD CATEGORIES Acute Chronic

US STATE REGULATIONS

COMPONENT	CA	MA	FL	MN	NJ	PA	RI
1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-, DIAMMONIUM SALT (COMMON NAME: AMMONIUM CITRATE)						EH	

***STATE REGULATORY STATUS** PENNSYLVANIA RIGHT-TO-KNOW: This product contains the following chemicals that the state of Pennsylvania has identified as Special Hazardous Substances (SHS), Environmental Hazards (EH), or both (ESHS). The PA regulations require that the MSDS identify all SHS or EH chemicals by chemical name, common name, and CAS Number if they comprise 0.01% or more.

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

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

CONTROLLED PRODUCT CLASSIFICATION

Not a controlled product.

COMPONENT	GLOBAL INVENTORIES							
	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-, DIAMMONIUM SALT (COMMON NAME: AMMONIUM CITRATE)	DSL	Yes	EINECS	Yes	Salt	Yes	Yes	Yes
ETHANOL, 2,2',2''-NITRILOTRIS-, 2-HYDROXY-1,2,3-PROPANETRICARBOXYLATE (SALT)	DSL	Yes	EINECS	Yes	Salt	No		Yes

CANADA CEPA: All components of this product comply with new substance notification requirements under the Canadian Environmental Protection Act (CEPA).

***USA (TSCA)**

All components in this product are listed on the US Toxic Substances Control Act (TSCA) Inventory or are exempt from TSCA Inventory requirements.

***CANADA (DSL)**

All components in this product are listed on the Canada Domestic Substances List (DSL) or are exempt from DSL requirements.

***EUROPE (EINECS/ELINCS/NLP)**

All components in this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS), the European List of Notified Chemical Substances (ELINCS), or the No Longer Polymers (NLP) list, or are exempt from EU listing requirements.

***AUSTRALIA (AICS)**

All components in this product are listed on the Australian Inventory of Chemical Substances (AICS) or are exempt from AICS requirements.

***KOREA (ECL)**

This product contains one or more components that are NOT LISTED on the Korea Existing Chemicals List (ECL) and are NOT EXEMPT from KECL requirements.

16. OTHER INFORMATION
NFPA-HMIS HAZARD RATING

HEALTH	Irritation, minor residual injury (1) - HMIS/NFPA
FLAMMABILITY	Will not burn (0) - HMIS/NFPA
REACTIVITY	Normally Stable (0) - HMIS/NFPA
PERSONAL PROTECTION INDEX	B - Safety Eyewear and Gloves
REVISION COMMENTS	* Information revised since previous MSDS version.
PREPARED BY	John Dingess James W. Hermann
*Replacement of MSDS generated	2005-07-22
*DATE	2007-02-22
DISCLAIMER	While the information and recommendations set forth herein are believed to be

accurate as of the date thereof, the company makes no warranty with respect thereto and disclaims all liability from reliance therein.

* Information revised since previous MSDS version

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