



MATERIAL SAFETY DATA SHEET

CAT ANTI-SEIZE COMPOUND (HIGH TEMP)

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME	CAT ANTI-SEIZE COMPOUND (HIGH TEMP)
PART No.	Caterpillar, 4C-5597 OBS, 4C-5598, 4C-5599, 5P-3931, Chemtool, 380410
PRODUCT USE	Lubricating Grease
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	2006-08-11

2. COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS No.	WEIGHT
DISTILLATES, PETROLEUM, BASE OILS 325 SN (CAS NOS 64742-54-7 AND 64742-65-0)	Mixture	30-50 %
*GRAPHITE	7782-42-5	10-25 %
DISTILLATES, PETROLEUM, REFINED HEAVY NAPHTHENIC (CAS 64741-96-4 OR 64742-52-5)	Variable	10-20 %
*COPPER	7440-50-8	10-20 %
*CALCIUM HYDROXIDE (Ca(OH) ₂)	1305-62-0	5-10 %
*NITROUS ACID, SODIUM SALT (COMMON NAME: SODIUM NITRITE)	7632-00-0	1-2 %
*SILICA, CRYSTALLINE (QUARTZ FROM NATURAL GRAPHITE)	14808-60-7A	0.2-1 %

* This chemical(s) is hazardous according to OSHA/WHIMIS criteria

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.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Irritating to eyes. Limited evidence of a carcinogenic effect. Exposure to vapors generated at high temperatures may cause respiratory irritation.

SENSITIZATION

No known information.

CARCINOGENICITY

See Section 11 for carcinogenicity data of ingredients.

TERATOGENICITY

No known information.

HEALTH WARNINGS

INHALATION. Heating can generate vapors that may cause respiratory irritation, nausea and headaches. Inhalation hazard at room temperature is unlikely due to the low volatility of this product. 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. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.

ROUTE OF ENTRY

Inhalation. Skin and/or eye contact. Ingestion.

4. FIRST AID MEASURES

INHALATION

Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor of hot product, immediately remove from source of exposure. Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. Get medical attention if any discomfort continues.

EYES

Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

SKIN

Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

INGESTION

DO NOT INDUCE VOMITING! Get medical attention immediately!

5. FIRE FIGHTING MEASURES

FLASH POINT (°C)

204 (400°F) Cd OC (Cleveland open cup).

FLAMMABILITY LIMIT - LOWER(%)

N/D

FLAMMABILITY LIMIT - UPPER(%)

N/D

EXTINGUISHING MEDIA

Use: Foam. Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc.

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.

HAZARDOUS COMBUSTION PRODUCTS

Acrid smoke/fumes. Oxides of: Carbon.

PROTECTIVE MEASURES IN CASE OF FIRE Self-contained breathing equipment and chemical resistant clothing recommended.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Minimize skin contact. Remove sources of ignition.
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. Product contains nitrites, DO NOT mix with amines.
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

COMPONENT	STD	TWA	STEL	TWA	STEL
DISTILLATES, PETROLEUM, BASE OILS 325 SN (CAS NOS 64742-54-7 AND 64742-65-0)	OSHA			5 mg/m3 (oil mist)	
	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)
	OSHA			15 mppcf	
GRAPHITE	ACGIH			2 mg/m3 (resp)	except graphite fibers
	NIOSH	2.5 mg/m3 (resp)			
	OSHA			5 mg/m3 (oil mist)	
DISTILLATES, PETROLEUM, REFINED HEAVY NAPHTHENIC (CAS 64741-96-4 OR 64742-52-5)	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)
	OSHA			1 mg/m3	
	ACGIH	0.1 mg/m3 (inhal)	NIC 2005 A4	1 mg/m3	
COPPER	OSHA			5 mg/m3 (resp)	
	ACGIH	15 mg/m3 (total)		5 mg/m3	
	NIOSH	5 mg/m3			
CALCIUM HYDROXIDE (Ca(OH) ₂)	OSHA	0.3 mg/m3 (total)		0.1 mg/m3 (resp)	
	ACGIH				
	NIOSH	5 mg/m3			
SILICA, CRYSTALLINE (QUARTZ FROM NATURAL GRAPHITE)	OSHA	0.3 mg/m3 (total)		0.1 mg/m3 (resp)	
	ACGIH			0.05 mg/m3 (resp)	**A2

NIOSH 0.05 mg/m3 **Ca

INGREDIENT COMMENTS

**ACGIH A2: Suspected Human Carcinogen.

**NIOSH Ca: Potential Occupational Carcinogen.

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

Chemical resistant gloves required for prolonged or repeated contact.

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	Grease.		
COLOR	Red brown.		
ODOR	Mild (or faint). Hydrocarbon.		
SOLUBILITY DESCRIPTION	Insoluble in water.		
DENSITY	1.20	Temperature (°C)	15.6 (60°F)
VAPOR DENSITY (air=1)	> 5		
VAPOR PRESSURE	< 0.1 mmHg	Temperature (°C)	20 (68°F)
EVAPORATION RATE	< 0.01	Reference	BuAc=1

10. STABILITY AND REACTIVITY

STABILITY	Normally stable.
CONDITIONS TO AVOID	Avoid contact with acids and oxidizing substances.
HAZARDOUS POLYMERIZATION	Will not polymerize.

HAZARDOUS DECOMPOSITION PRODUCTS Oxides of: Carbon.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION No experimental toxicological data on the preparation as such is available.

COMPONENT **DISTILLATES, PETROLEUM, BASE OILS 325 SN (CAS NOS 64742-54-7 AND 64742-65-0)**

TOXICOLOGICAL DATA Carcinogenicity. IP 346 0.36%

COMPONENT **GRAPHITE**

TOXIC DOSE - LD 50 N/A.

TOXIC CONC. - LC 50 N/A.

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

COMPONENT **DISTILLATES, PETROLEUM, REFINED HEAVY NAPHTHENIC (CAS 64741-96-4 OR 64742-52-5)**

TOXICOLOGICAL DATA Carcinogenicity. IP 346 <3%

Corrosive effects. Eye. Rabbit. < 15/110

Corrosive effects. Skin. Rabbit. < 0.5/8

TOXIC DOSE - LD 50 > 5000 mg/kg (oral rat)

TOXIC DOSE - LD 50 SKIN > 3000 mg/kg (skn rat)

TOXIC CONC. - LC 50 N/A.

CARCINOGENICITY Base oils in this product contain < 3% DMSO Extractable total polycyclic aromatic compound (PAC) per IP 346.

COMPONENT **COPPER**

TOXIC DOSE - LD 50 N/A.

TOXIC CONC. - LC 50 N/A.

COMPONENT **CALCIUM HYDROXIDE (Ca(OH)₂)**

TOXICOLOGICAL DATA Corrosive effects. Eye irritation test. Eye. Rabbit. severe

Corrosive effects. WHMIS (Canada) E - R35

TOXIC DOSE - LD 50 7340.00 mg/kg (oral rat)

COMPONENT **NITROUS ACID, SODIUM SALT (COMMON NAME: SODIUM NITRITE)**

TOXICOLOGICAL DATA Irritating effects. 24 hours. Eye. Rabbit. mild

Acute toxicity. WHMIS (Canada) D1B KNO₂

TOXIC DOSE - LD 50 85-108 mg/kg (oral rat)

TOXIC DOSE - LD 50 180 mg/kg (oral rat)

TOXIC CONC. - LC 50 N/A.

COMPONENT **SILICA, CRYSTALLINE (QUARTZ FROM NATURAL GRAPHITE)**

TOXICOLOGICAL DATA Carcinogenicity. WHMIS (Canada) D2A - R40 > 0.1%

Chronic toxicity. WHMIS (Canada) D2A - R22 > 1.0%

TOXIC DOSE - LD 50 N/A.

TOXIC CONC. - LC 50 N/A.

CARCINOGENICITY OSHA: Not regulated. IARC-1: The agent is carcinogenic to humans with sufficient

evidence in humans. NTP-K designation: Known to be a carcinogen with sufficient evidence from studies in humans.

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT HAZARD CLASS Not regulated.
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
DISTILLATES, PETROLEUM, BASE OILS 325 SN (CAS NOS 64742-54-7 AND 64742-65-0)	No	No	No
GRAPHITE	No	No	No
DISTILLATES, PETROLEUM, REFINED HEAVY NAPHTHENIC (CAS 64741-96-4 OR 64742-52-5)	No	No	No
COPPER	No	5 000 lbs	Yes
CALCIUM HYDROXIDE (Ca(OH) ₂)	No	No	No
NITROUS ACID, SODIUM SALT (COMMON NAME: SODIUM NITRITE)	No	100 lbs	Yes
SILICA, CRYSTALLINE (QUARTZ FROM NATURAL GRAPHITE)	No	No	No

See Section 2 for Additional Information

CLEAN AIR ACT

SARA HAZARD CATEGORIES Acute Chronic

US STATE REGULATIONS

COMPONENT	CA	MA	FL	MN	NJ	PA	RI
NITROUS ACID, SODIUM SALT (COMMON NAME: SODIUM NITRITE)						EH	
SILICA, CRYSTALLINE (QUARTZ FROM NATURAL GRAPHITE)	C						

STATE REGULATORY STATUS

PROPOSITION 65 REPRODUCTIVE HAZARD: This product may contain the following chemical(s) considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing reproductive toxicity, and for which warnings are now required:

Crystalline silica, cancer hazard, CAS# 14808-60-7

N-Methylpyrrolidone, developmental hazard, CAS# 872-50-4 traces < 35 ppm

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.

Copper compounds regulated under CERCLA and SARA 313, Environmental Hazard Sodium Nitrite, Environmental Hazard, CAS# 7632-00-0

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.

LABEL(S) FOR SUPPLY**CONTROLLED PRODUCT CLASSIFICATION**

D2A - Chronic Very Toxic Material

D2B - Chronic Toxic Material

Risk phrases

R-36 Irritating to eyes.

R-40 Limited evidence of a carcinogenic effect.

GLOBAL INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
SILICA, CRYSTALLINE (QUARTZ FROM NATURAL GRAPHITE)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
DISTILLATES, PETROLEUM, BASE OILS 325 SN (CAS NOS 64742-54-7 AND 64742-65-0)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
GRAPHITE	DSL	Yes	EINECS	Yes		Yes	Yes	Yes
DISTILLATES, PETROLEUM, REFINED HEAVY NAPHTHENIC (CAS 64741-96-4 OR 64742-52-5)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
COPPER	DSL	Yes	EINECS	Yes		Yes	Yes	Yes
CALCIUM HYDROXIDE (Ca(OH) ₂)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
NITROUS ACID, SODIUM SALT (COMMON NAME: SODIUM NITRITE)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes

CANADA CEPA: All components of this product comply with new substance

notification requirements under the Canadian Environmental Protection Act (CEPA).

16. OTHER INFORMATION

NFPA-HMIS HAZARD RATING

HEALTH	Irritation, minor residual injury (1) - HMIS/NFPA
FLAMMABILITY	Burns only if pre-heated (1) - HMIS/NFPA
REACTIVITY	Normally Stable (0) - HMIS/NFPA
PERSONAL PROTECTION INDEX	B - Safety Eyewear and Gloves
REVISION COMMENTS	Section 2: Ingredients Section 2: Percentage Composition Section 11: Toxicological Information Section 15: WHMIS
PREPARED BY	John Dingess James W. Hermann
Replacement of MSDS generated	2003-11-12
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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