

MATERIAL SAFETY DATA SHEET

ALUMINUM COMPLEX

(ACG EP - ALL GRADES)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME	ALUMINUM COMPLEX (ACG EP - ALL GRADES)
PRODUCT DESCRIPTION	ACG EP - ALL GRADES
SYNONYMS	ACG EP-0, ACG EP-1, ACG EP-2
PRODUCT USE	Lubricating Grease
SUPPLIER	Varouh Oil, Inc. 970 Griswold Road Elyria, OH 44035 USA Tel: (440)324-5025 Fax: (440) 324-4155
EMERGENCY TELEPHONE	Infotrac U.S. and Canada - (800) 535-5053 Outside the U.S. and Canada - +01-352-323-3500

2. COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT NAME	CASNo.	WEIGHT
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC	64742-52-5	60-80 %
PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS 64742-62-7 & 64742-65-0)	Mixture	10-30 %ALUMINUM
COMPLEX THICKENER	Proprietary	5-10 %
*PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	68649-42-3	0.5-1.5 %
*1-PROPENE-2-METHYL, SULFURIZED	68511-50-2	0.5-1.5 %

* 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

Not regarded as a health hazard under current legislation. Exposure to vapors generated at high temperatures may cause respiratory irritation.

SENSITIZATION

No known information.

CARCINOGENICITY

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

TERATOGENICITY

No known information.

HEALTH WARNINGS

INHALATION. Oil mist can irritate airways and lungs. 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. 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. Contact physician if 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: Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc. Alcohol resistant foam. Water spray, fog or mist.

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. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control.

UNUSUAL FIRE & EXPLOSION HAZARDS

Pressure will increase in over heated, closed containers.

HAZARDOUS COMBUSTION PRODUCTS

Oxides of: Carbon. Phosphorus. Sulfur.

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

FIRE

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Minimize skin contact.

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

Contain spill. Absorb small amounts. Collect and return large amounts to shipping container. Rinse area with water.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS

Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Do not reuse container. Keep lid closed when not in use. Do not store or mix with strong oxidizers. Avoid spilling, skin and eye contact. Eye wash and emergency shower must be available at the work place.

STORAGE PRECAUTIONS

Store separate from strong acids and oxidizers.

STORAGE CRITERIA

Chemical storage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

COMPONENT	STD	TWA	STEL	TWA	STEL
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC	OSHA			5 mg/m3 (oil mist)	
PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS OSHA 64742-62-7 & 64742-65-0)	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)
	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)

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 recommended to prevent 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.
HYGIENE 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	Amber.		
ODOR	Mild (or faint). Petroleum.		
SOLUBILITY DESCRIPTION	Insoluble in water.		
SOLUBILITY VALUE (g/100g H₂O 20°C)	< 0.1		
BOILING POINT (°C, range)	> 177 (350 F)	Pressure	760mmHg
DENSITY	0.89	Temperature (°C)	15.6 (60°F)
VAPOR PRESSURE	< 0.5 mmHg	Temperature (°C)	20 (68°F)
EVAPORATION RATE	< 0.01	Reference	BuAc=1
pH-VALUE, CONC. SOLUTION	N/A		

10. STABILITY AND REACTIVITY

STABILITY	Normally stable.
CONDITIONS TO AVOID	Avoid contact with acids and oxidizing substances.
HAZARDOUS POLYMERIZATION	Will not occur.
POLYMERIZATION DESCRIPTION	Not applicable
HAZARDOUS DECOMPOSITION PRODUCTS	No specific hazardous decomposition products noted.

11. TOXICOLOGICAL INFORMATION

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

COMPONENT	DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC
TOXICOLOGICAL DATA	Carcinogenicity. IP 346 <3%
TOXIC DOSE - LD 50	> 5000 mg/kg (oral rat)

TOXIC DOSE - LD 50 SKIN > 2000 mg/kg (skn rbt)
TOXIC CONC. - LC 50 N/A.
CARCINOGENICITY The petroleum base oil contained in this product has been highly refined to remove aromatics and improve performance characteristics. The base oil is not listed as a carcinogen by NTP, IARC, or OSHA.

COMPONENT **PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS 64742-62-7 & 64742-65-0)**

TOXICOLOGICAL DATA Corrosive effects. Draize Eye. Rabbit. 6-15
TOXIC DOSE - LD 50 > 2000 mg/kg (oral rat)
TOXIC DOSE - LD 50 SKIN > 2000 mg/kg (skn rbt)
TOXIC CONC. - LC 50 > 5 mg/l/4h (inh-rat)
CARCINOGENICITY Base oils in this product contain < 3% DMSO Extractable total polycyclic aromatic compound (PAC) per IP 346.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION There is no ecological data on the product itself.

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
1-PROPENE-2-METHYL, SULFURIZED	No	No	No
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	No	***	N982 - Zn
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC	No	No	No
PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS 64742-62-7 & 64742-65-0)	No	No	No
ALUMINUM COMPLEX THICKENER	No	No	No

REGULATORY STATUS

*** Indicates that no RQ is assigned to this generic or broad class, although the class is a CERCLA hazardous substance. See 50 Federal Register 13456 (April 4, 1985). Values in Section 313 column represent Category Codes for reporting under Section 313.

CLEAN AIR ACT

SARA HAZARD CATEGORIES None

US STATE REGULATIONS

COMPONENT	CA	MA	FL	MN	NJ	PA	RI
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC					Yes	Yes	
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS				Yes	Yes	EH	

STATE REGULATORY STATUS

CALIFORNIA PROPOSITION 65: This product *****DOES NOT***** contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity, and for which warnings are now required.

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

WHMIS NOT CONTROLLED: 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.
Not a controlled product.

GLOBAL INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
PETROLEUM OILS, 150 BRIGHT STOCK (CAS NOS DSL 64742-62-7 & 64742-65-0)		Yes	EINECS	Yes	Yes	Yes	Yes	Yes
ALUMINUM COMPLEX THICKENER	DSL	Yes	EINECS	Yes	9-1678	Yes	Yes	Yes
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL NPROI ESTERS, ZINC SALTS		Yes	EINECS	Yes	Yes	Yes	Yes	Yes
1-PROPENE-2-METHYL, SULFURIZED	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

PREPARED BY James W. Hermann

Replacement MSDS of 2004-05-05

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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