




Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 2.0

MSDS Revision Date: 06/01/2007

1. PRODUCT IDENTIFICATION

CHEMICAL RESPONSE CARD: 90

1.1	Product Name:	ANTI-SEIZE COMPOUND	RESPONSE TEAM PPE:				
1.2	Chemical Name:	See ingredients listed in section 2	WHMIS:				
1.3	Synonyms:	None reported by the manufacturer	HEALTH:				1
1.4	Trade Names:	P/N LM2012	FLAMMABILITY:				1
1.5	Product Use:	Automotive Lubricant	REACTIVITY:				1
1.6	Manufacturer's Name:	Liqui Moly GmbH	PERSONAL PROTECTION:				B
1.7	Manufacturer's Address:	1820 Clark Avenue, Long Beach, CA 90815 USA	CHEMTREC +1 (800) 424-9300/+1 (703) 527-3887				
1.8	Business Phone:	+1 (800) 223-1634					
1.9	Emergency Phone:						

2. HAZARD IDENTIFICATION

2.1	Hazard Identification:	This product is classified as a hazardous substance but not as dangerous goods according to the classification criteria of NOHSC and ADG Code (Australia). May cause eye and skin irritation. May cause nose, throat and respiratory irritation. May cause gastrointestinal irritation. May cause central nervous system (CNS) depression.					
2.2	Routes of Entry:	Inhalation:	YES	Absorption:	YES	Ingestion:	YES
2.3	Effects of Exposure:	<p>EYES: May cause irritation, redness and tearing.</p> <p>SKIN: may cause irritation, defatting, drying and cracking of skin.</p> <p>INGESTION: May cause, gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into the lungs may cause chemical pneumonitis, which can be fatal. Can be fatal if inhaled or ingested.</p> <p>INHALATION: Vapors may be irritating to nose, throat and respiratory tract. Excessive inhalation of vapors may cause kidney damage, cardiac arrhythmia and Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.</p>					
2.4	Symptoms of Exposure:	<p>EYES: May cause irritation, redness and tearing.</p> <p>SKIN: may cause irritation, defatting, drying and cracking of skin.</p> <p>INGESTION: May cause, gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into the lungs may cause chemical pneumonitis, which can be fatal. Can be fatal if inhaled or ingested.</p> <p>INHALATION: Vapors may be irritating to nose, throat and respiratory tract. Excessive inhalation of vapors may cause kidney damage, cardiac arrhythmia and Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.</p>					
2.5	Acute Health Effects:	<p>EYES: May cause irritation, redness and tearing.</p> <p>SKIN: may cause irritation, defatting, drying and cracking of skin.</p> <p>INGESTION: May cause, gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into the lungs may cause chemical pneumonitis, which can be fatal. Can be fatal if inhaled or ingested.</p> <p>INHALATION: Vapors may be irritating to nose, throat and respiratory tract. Excessive inhalation of vapors may cause kidney damage, cardiac arrhythmia and Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.</p>					
2.6	Chronic Health Effects:	Prolonged or repeated skin contact may cause irritation, dry skin, skin rash and inflammation.					
2.7	Target Organs:	Eyes and upper respiratory tract.					
2.8	Toxicological Properties:	None reported by the manufacturer.					

See Section 16 for Additional Definitions of Terms Used.

NOTE: All WHMIS required information is included - it is located in appropriate sections based on the ANSI Z400.1-2004 format.

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3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)					
					ACGIH - ppm		OSHA - ppm			OTHER
					TLV	STEL	PEL	STEL	IDLH	
SILICA, AMORPHOUS	7631-86-9	VV7310000	231-545-4	NA	(6)	(10)	(6)	(10)	800	
COPPER PASTE	7440-50-8	GL5325000	231-159-6	NA	(1)	NA	(1)	NA	NA	
SYNTHETIC LUBRICANT	NA	NA	NA	NA	NA	NA	NA	NA	NA	

4. FIRST AID MEASURES

4.1	First Aid: EYES: Immediately flush eyes with plenty of running water for at least 15 minutes, lifting upper and lower lids, occasionally. If irritation persists, repeat flushing. Get medical attention. SKIN: Wash thoroughly with soap and water. If irritation persists, seek medical attention. Remove contaminated clothing and wash before reuse. INGESTION: If ingested call physician or poison control center immediately. Do not induce vomiting. Rinse mouth with water. Aspiration of material into lungs due to vomiting may cause chemical pneumonitis which can be fatal. INHALATION: Remove affected person to fresh air. If breathing is difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.															
4.2	Medical Conditions Aggravated by Exposure: None reported by the manufacturer.															
<table border="1"> <tr> <td colspan="2">HEALTH</td> <td>1</td> </tr> <tr> <td colspan="2">FLAMMABILITY</td> <td>1</td> </tr> <tr> <td colspan="2">REACTIVITY</td> <td>1</td> </tr> <tr> <td colspan="2">PROTECTIVE EQUIPMENT</td> <td>B</td> </tr> <tr> <td>EYES</td> <td>SKIN</td> <td></td> </tr> </table>		HEALTH		1	FLAMMABILITY		1	REACTIVITY		1	PROTECTIVE EQUIPMENT		B	EYES	SKIN	
HEALTH		1														
FLAMMABILITY		1														
REACTIVITY		1														
PROTECTIVE EQUIPMENT		B														
EYES	SKIN															

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: > 220 °C, UNK
5.2	Autoignition Temperature: NA
5.3	Flammability Limits: Lower Explosive Limit (LEL): NA Upper Explosive Limit (UEL): NA
5.4	Fire & Explosion Hazards: May ignite when sufficient heat is applied.
5.5	Extinguishing Methods: Dry chemical, foam, and carbon dioxide.
5.6	Firefighting Procedures: Cool containing vessels with water spray in order to prevent pressure build-up, autoignition or explosion. Avoid spreading burning liquid with water used to cool containers. Keep containers cool until well after the fire is out. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters should wear full-face, self-contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and impervious clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1	Spills: Ventilate area and eliminate all sources of ignition. Keep away from heat. Absorb with an inert, dry material and place in an appropriate waste disposal container.
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices: Do not use in the presence of open flame, sparks or ignition sources. Keep away from heat. Avoid breathing vapors or spray mists. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. After handling, always wash hand thoroughly with soap and water.
7.2	Storage & Handling: Store in a cool, dry place. Avoid prolonged skin contact. Keep away from eyes. Do not inhale vapors. Do not use near heat, sparks or open flame. Wash hands and face after handling this compound.
7.3	Special Precautions: NA

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls: Use under well-ventilated conditions.
8.2	Respiratory Protection: Use an approved NIOSH organic vapor respirator below the TLV. If TLV is exceeded or overexposure is likely, use positive pressure or self contained breathing apparatus.
8.3	Eye Protection: Safety glasses with side shields should be used.
8.4	Hand Protection: Chemical resistant gloves should be used.
8.5	Body Protection: Chemical resistant clothing should be used.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	1.4 g/cm ³ @ 20 °C
9.2	Boiling Point:	ND
9.3	Melting Point:	NA
9.4	Evaporation Rate:	< 1.0 (n-Butyl Acetate = 1.0)
9.5	Vapor Pressure:	≤ 0.1 mbar @ 20 °C
9.6	Molecular Weight:	NA
9.7	Appearance & Color:	Copper Red Paste
9.8	Odor Threshold:	Neutral Odor
9.9	Solubility:	Insoluble
9.10	pH	NA
9.11	Viscosity:	NA
9.12	Coefficient Oil/Water Distribution:	NA
9.13	Additional Information:	NA

10. STABILITY & REACTIVITY

10.1	Stability: Stable, when used as intended.
10.2	Hazardous Decomposition Products: Carbon, nitrogen and sulfur oxides, hydrocarbons.
10.3	Hazardous Polymerization: Will not occur.
10.4	Conditions to Avoid: Heat, sparks, open flame and all possible ignition sources.
10.5	Incompatible Substances: Avoid contact with strong oxidizing agents, strong reducing agents, strong acids and strong alkalis.

11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data: NA
11.2	Acute Toxicity: See section 2.5
11.3	Chronic Toxicity: See section 2.6
11.4	Suspected Carcinogen: No
11.5	Reproductive Toxicity:
	Mutagenicity: This product is not expected to cause mutagenic effects in humans.
	Embryotoxicity: This product is not expected to cause embryotoxic effects in humans.
	Teratogenicity: This product is not expected to cause teratogenic effects in humans.
	Reproductive Toxicity: This product is not expected to cause reproductive harm in humans.
11.6	Irritancy of Product: NA
11.7	Biological Exposure Indices: NA
11.8	Physician Recommendations: Treat symptomatically.

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability: The manufacturer has not reported any detailed studies on the environmental fate of the material. However, prudent practice would dictate the material not be allowed to enter the environment.
12.2	Effects on Plants & Animals: The manufacturer has not reported any animal or plant effects
12.3	Effects on Aquatic Life: The manufacturer has not reported any aquatic life effects.

13. DISPOSAL CONSIDERATIONS



13.1	Waste Disposal: Dispose of in accordance with local & state or provincial hazardous waste laws.
13.2	Special Considerations: If the material is unsuitable for recycling or reclamation, enclosed-controlled incineration is recommended unless otherwise prohibited by local ordinance.

14. TRANSPORTATION INFORMATION



The basic description (proper shipping name, hazard class & division, ID Number, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND): NOT REGULATED	
14.2	IATA (AIR): NOT REGULATED	
14.3	IMDG (OCN): NOT REGULATED	
14.4	TDGR (Canadian GND): NOT REGULATED	
14.5	ADR/RID (EU): NOT REGULATED	
14.6	MEXICO (SCT): NOT REGULATED	

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: This product does not contain any substances that are subject to SARA Section 313 reporting requirements.	
15.2	SARA Threshold Planning Quantity: NA	
15.3	TSCA Inventory Status: All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status.	
15.4	CERCLA Reportable Quantity (RQ): NA	
15.5	Other Federal Requirements: NA	
15.6	Other Canadian Regulations All chemical substances of this product are listed on the CEPA DSL/NDL or are exempt from list requirements. This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.	
15.7	State Regulatory Information: None of the components of this product are listed on the following state lists: Massachusetts Right to Know List of Chemicals; New Jersey Right to Know List 8:59 Appendix A; Pennsylvania Hazardous Substances List 34 323 Appendix A, and Florida Toxic Substances List.	
15.8	67/548/EEC (European Union) Requirements: The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC:	

16. OTHER INFORMATION

16.1	Other Information: NA	
16.2	Terms & Definitions: Please see last page of this Material Safety Data Sheet.	
16.3	Disclaimer: This Material Safety Data Sheet complies with U.S. OSHA's Hazard Communication Standard, 29 CFR §1910.1200 & Health Canada's Workplace Hazardous Materials Information System (WHMIS). To the best of ShipMate's or Worldpac's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product. Contact the manufacturer for additional information.	
16.4	Prepared for: WorldPac, Inc. 37137 Hickory Street Newark, CA 94560 510-608-5525 phone 510-742-9262 fax http://www.worldpac.com/	
16.5	Prepared by: Steven Charles Hunt ShipMate, Inc. 18436 Hawthorne Blvd, Suite 201 Torrance, CA 90504 USA Phone: +1 (310) 370-3600 Fax: +1 (310) 370-5700 e-mail: shipmate@shipmate.com	

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
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EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

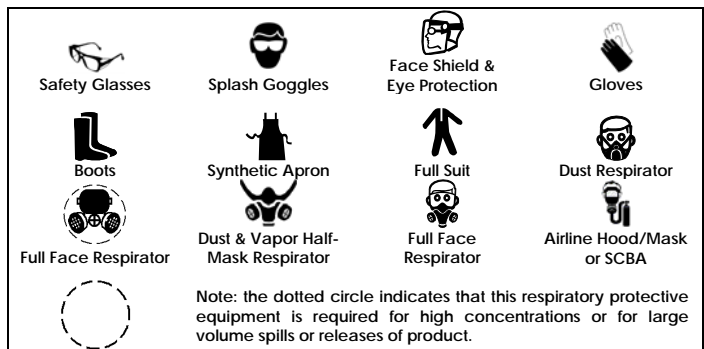
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard



PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or S.O.P. for special handling directions.



OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

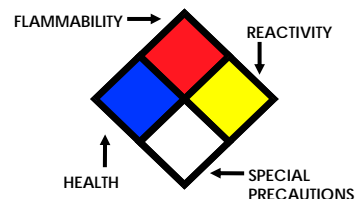
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
-W	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD₁₀	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₁₀, LD₁₀, & LD₀₁ or TC, TC₀₁, LC₁₀, & LC₀₁	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{ow} or log K_{oc}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)

EC INFORMATION:

C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful