

LUBRICATION ENGINEERS<sup>®</sup>, INC.  
300 Bailey Avenue FORT WORTH, TX 76107  
MATERIAL SAFETY DATA SHEET  
SECTION I - PRODUCT IDENTIFICATION

SUPPLIER:  
Lubrication Engineers<sup>®</sup>, Inc.  
300 Bailey Avenue  
Fort Worth, TX 76107

EMERGENCY TELEPHONE NUMBERS.:  
Company: (817) 834-6321  
In the event of an emergency spill, fire, or exposure—Call:  
Chemtrec: (Within USA) (800) 424-9300  
(Outside USA—call collect) (703) 527-3887  
TRADE NAME AND SYNONYMS:  
5182 PYROSHIELD<sup>®</sup> Syn Open Gear Grease

CHEMICAL NAME AND SYNONYMS:  
Not applicable  
CHEMICAL FAMILY:  
Hydrocarbon

FORMULA:  
Not applicable

SECTION II - TYPICAL CHEMICAL AND PHYSICAL PROPERTIES

APPEARANCE: Dark purple lubricant  
ODOR: Faint hydrocarbon odor  
RELATIVE DENSITY: (Air=1) <1  
BOILING POINT: °F >600  
VAPOR PRESSURE: (mm Hg @ 60°F) <0.1

VISCOSITY: @ 210°F, SUS Not applicable  
@ 100°C, cSt Not applicable  
VISCOSITY: @ 100°F, SUS Not applicable  
@ 40°C, cSt Not applicable  
SOLUBILITY IN WATER: Negligible  
FLASH POINT: °F (Method) 435 (C.O.C.) Base fluid  
SPECIFIC GRAVITY: (H<sub>2</sub>O=1) 0.91  
PH: 6-8

SECTION III - INGREDIENTS

	WT PCT (APPROX)	TLV	ORAL LD50	DERMAL LD50
HAZARDOUS INGREDIENTS:				
Antimony compounds (non-toxic, liquid organo-metallic compound)	3.0-7.0	0.5 mg/m <sup>3</sup> as Sb	>16400 mg/kg Rat	>16000 mg/kg Rabbit
Ashless dithiocarbamate	0.5-2.0	Unknown	>16000mg/kg Rat	>2000 mg/kg Rabbit
4-Hydroxy 4-methyl-2-pentanone (Diacetone alcohol)	<1.0	50ppm-TWA	4000mg/kg Rat	13500 mg/kg Rabbit
Zinc compounds	3.0-7.0	Unknown	Unknown	Unknown
NON-HAZARDOUS INGREDIENTS:				

ADDITIVES AND/OR OTHER INGREDIENTS: This product is a mixture. The specific chemical identity of hazardous ingredients and non-hazardous ingredients, their C.A.S. numbers and their exact percent of composition are proprietary to Lubrication Engineers<sup>®</sup>, Inc. and are being withheld as Trade Secrets. The above listing of hazardous ingredients discloses the properties, approximate concentration and known toxicological effects of the hazardous ingredients. This material is an automotive/industrial lubricant with a low order of toxicity and irritancy. The product is formulated with ingredients that are not designated as harmful to the ozone.

REGULATORY INFORMATION:

SARA Title III: This product does not contain any chemical substance on the SARA Extremely Hazardous Substances list. If this product contains any chemicals that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372, they will be listed in the above HAZARDOUS INGREDIENTS section.  
TSCA: This material is in compliance with the Toxic Substances Control Act (15 USC 2601-2629) and all components of this product appear on the Toxic Substance Control Act (TSCA) inventory list.  
Clean Air Act: No ozone depleting chemicals listed in Title VI, Stratospheric Ozone Protection, Section 602 of the Clean Air Act are present or used in the manufacturing process of this product.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: °F (Method) 435 °F (C.O.C.) Base fluid  
FLAMMABLE LIMITS: LEL UEL  
Unknown

EXTINGUISHING MEDIA:

Foam, dry chemical, water fog, or carbon dioxide

SPECIAL FIRE FIGHTING PROCEDURES:

Do not direct a solid stream of water into fire. Treat as a petroleum oil fire. Respiratory protection required for fire fighting personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: (If Established)

Not established.

EFFECTS OF OVEREXPOSURE:

Although there are no consistent primary routes of entry, the product may cause mild dermatitis upon prolonged contact and is expected to be an eye and lung irritant. Any existing skin, eye, or lung irritation may be aggravated by direct contact. No components are listed on OSHA, I.A.R.C., or N.T.P. lists for carcinogens.

SECTION VI - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT:

Flush immediately with water until irritation subsides.

SKIN CONTACT:

Wash affected skin area with mild soap and water.

INGESTION:

Do not induce vomiting. Contact a physician.

INHALATION:

Remove to fresh air. If not breathing, give artificial respiration. Contact a physician.

SECTION VII - REACTIVITY DATA

STABILITY: (Thermal, Light, Etc.)

Stable

CONDITIONS TO AVOID:

Contact with nuclear radiation and strong oxidizing materials.

INCOMPATIBILITY: (Materials to avoid)

Strong oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS:

Dense smoke; oxides of C, S, N, Zn and P; Ca compound; hydrogen sulfide.

HAZARDOUS POLYMERIZATION:

Will not occur.

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Remove all sources of ignition. Treat as a petroleum oil spill.

WASTE DISPOSAL METHOD:

Incinerate where permitted under federal, state, and local laws. Used petroleum products may be recycled through re-refining processes.

SECTION IX - SPECIAL PROTECTION INFORMATION

EYE PROTECTION:

Sufficient to avoid direct contact.

SKIN PROTECTION:

Protective neoprene or plastic gloves should be worn.

RESPIRATORY PROTECTION:

Usually not needed in open, unconfined areas.

VENTILATION:

Usually not needed in open, unconfined areas.

OTHER:

Usually not needed.

SECTION X - SPECIAL PRECAUTIONS

Close containers when not in use. Keep away from heat, sparks, open flames, and strong oxidants. Avoid eye contact and prolonged skin contact. Avoid breathing oil mists. Wash thoroughly after handling.

SECTION XI - HAZARD RATINGS

There are several recognized and accepted systems that assign hazard ratings to materials. Although this product has not been evaluated specifically against these systems, the ratings for the National Fire Protection Association (NFPA) and the National Paint and Coatings Association's Hazardous Material Identification System (HMIS) are:

	NFPA	HMIS
Health	2	1
Flammability	1	1
Reactivity	1	1