



Keystone Lubricants Division
Total Fina Elf Lubricants USA, Inc.
5 N. Stiles Street, Linden NJ 07036

REVISION DATE
04-NOV-02

DATE ISSUED
19-DEC-02

IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME: 423 OPEN GEAR LUBE SAFEGARD	PRODUCT #: 800164
CHEMICAL NAME: N/A - Mixture	CAS #'S: N/A - Mixture
PRODUCT APPEARANCE AND ODOR: Dark liquid, solvent odor	CHEMICAL FAMILY: Petroleum Hydrocarbon
SYNONYMS: Open Gear Lube	EMERGENCY TELEPHONE: 1-908-862-9300

COMPONENTS AND HAZARD INFORMATION

COMPONENTS:	W/W	HAZARD DATA (TLV, LD50, LC50, ETC.):
Aliphatic hydrocarbon solvent CAS No. 64742-47-8		300 ppm TWA (recommended)
Petroleum based lubricating oil CAS Nos. 64742-57-0 64742-62-7		5 mg/m3 ACGIH/OSHA TWA (as an oil mist)
Asphalt CAS No. 8052-42-4		5 mg/m3 ACGIH/OSHA TWA (as an oil mist fumes)
Sulfur-Phosphorus EP additive NJTSRN 800967-5492P 800967-5494P		n/e

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):

Health	Flammability	Reactivity
1	2	0

TRANSPORTATION INFORMATION

TRANSPORTATION INFORMATION:
DOT SHIPPING INFO:
AEROSOLS, Class 2.1 (Flammable Gases)
UN 1950, PG None
Note: see 49 CFR 173.306 for Limited Quantity provisions

EMERGENCY FIRST AID

EYE CONTACT:
If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

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EMERGENCY FIRST AID

SKIN CONTACT:

In case of skin contact, remove contaminated clothing and wash skin thoroughly with soap and water.

INHALATION:

If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

INGESTION:

If ingested, DO NOT induce vomiting; call a physician immediately. Possible aspiration hazard.

FIRE AND EXPLOSION HAZARD INFORMATION

FLASHPOINT (MINIMUM) :

For solvent: Combustible, 142°F TCC

AUTOIGNITION TEMPERATURE:

>392°F

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION:

Health	Flammability	Reactivity
1	2	0

The Aerosol Flammability test (per 49 CFR 173.306(i)) produced a flame extension exceeding 18 inches, thus this product is classified as Flammable per the DOT Regulations.

HANDLING PRECAUTIONS:

Keep product away from heat, sparks, pilot lights, static electricity, and open flame.

FLAMMABLE OR EXPLOSIVE LIMITS (Approximate percent by volume in air):

Estimated values: Lower Flammable Limit N/E Upper Flammable Limit N/E

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES:

Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

Water may be ineffective, but water

should be used to keep fire-exposed containers cool. If a leak or spill has ignited, use water spray to disperse the vapors and to protect men attempting to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

Note: The inclusion of the phrase "water may be ineffective" is to indicate that although water can be used to cool and protect exposed material, water may not extinguish the fire unless used under favorable conditions by experienced fire fighters trained in fighting all types of flammable liquid fires.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS:

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FIRE AND EXPLOSION HAZARD INFORMATION

Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, in the case of incomplete combustion.

"EMPTY" CONTAINER WARNING:

"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove.

All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

HEALTH AND HAZARD INFORMATION

VARIABILITY AMONG INDIVIDUALS:

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

POTENTIAL HEALTH EFFECTS

EYE CONTACT: May cause slight eye irritation.

SKIN CONTACT: Occasional brief contact with the liquid will not result in significant irritation unless evaporation is impeded. May aggravate an existing dermatitis condition. Prolonged or repeated contact tends to remove skin oils possibly leading to irritation and dermatitis.

INHALATION: High vapor/aerosol concentrations (greater than approximately 1000 ppm) are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death. Low order of toxicity.

INGESTION: Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death. Minimal toxicity.

PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes. FOR SOLVENT:

BOILING RANGE:
Approximately 360°F to 419°F

VAPOR PRESSURE:
3 mm Hg @ 100°F, approximate
ASTM D 2897

SPECIFIC GRAVITY 60°F
N/E

VAPOR DENSITY (AIR = 1):
Greater than 1

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PHYSICAL DATA

MOLECULAR WEIGHT: Mixture, wide range	PERCENT VOLATILE BY VOLUME: 67
pH: Essentially neutral	EVAPORATION RATE @ 1 ATM. AND 25°C (77°F): (n-BUTYL ACETATE = 1) Less than 0.1
POUR, CONGEALING OR MELTING POINT: n/e	SOLUBILITY IN WATER @ 1 ATM. AND 25°C (77°F): Negligible; less than 0.1%

REACTIVITY

This product is stable and will NOT react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Fumes, smoke, carbon monoxide, and other decomposition products, in the case of incomplete combustion.

CONDITIONS TO AVOID

Keep product away from ignition sources, such as heat, sparks, pilot lights, static electricity, and open flames.

TOXICITY

ORAL (Acute)	N/E
DERMAL (Acute)	N/E
EYE	N/E
INHALATION (Acute)	N/E
CHRONIC, SUBCHRONIC, ETC.	N/E

Medical Conditions Aggravated by Exposure: Unknown

SARA Section 313 Status: This material is not known to contain any chemicals on the SARA Section 313 list at a concentration greater than 1.0 percent or carcinogenic chemical on that list at a concentration greater than 0.1 percent.

SPILL OR LEAK PROCEDURES

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

Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers,



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SPILL OR LEAK PROCEDURES

watercourses or extensive land areas. Assure conformity with local regulations. Continue to observe precautions for volatile, combustible vapors from absorbed material.

WASTE DISPOSAL METHOD: (Consult federal, state, or local authorities for proper disposal procedures.)

Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste site or facility.

PROTECTION AND PRECAUTIONS

VENTILATION: (Always maintain below permissible exposure limits.)
Use local exhaust to capture vapor, mist or fumes, if necessary.
Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air.

RESPIRATORY PROTECTION: (Use only NIOSH approved equipment.)
Normally not needed at ambient temperatures. Use supplied air respiratory protection in confined or enclosed spaces, if needed. Use filter, dust, fume, or mist respirator type under misting conditions. Use can or cartridge; gas or vapor respirator type under conditions exceeding TWA standard.

PROTECTIVE GLOVES:
Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION:
Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE EQUIPMENT:
Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

WORK PRACTICES/ENGINEERING CONTROLS:
Keep containers closed when not in use. Do not handle near heat, sparks, flame, or strong oxidants. DO NOT PUNCTURE OR INCINERATE CONTAINER!

PERSONAL HYGIENE:
Minimize breathing vapor, mist, or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean before reuse; discard if oil-soaked. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

PREPARED BY: Luke McHale

REGULATORY MANAGER

THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE.
HOWEVER, SINCE DATA, SAFETY STANDARDS, AND GOVERNMENT REGULATIONS ARE



MATERIAL SAFETY DATA SHEET
FOR 423 OPEN GEAR LUBE SAFEGARD

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BEYOND OUR CONTROL, SELLER MAKES NO WARRANTY, EITHER EXPRESS OR
IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE
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THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA
RELEVANT TO HIS PARTICULAR USE.