Safety Data Sheet

SECTION 1  PRODUCT AND COMPANY IDENTIFICATION

Perkins ELI (Extended Life Inhibitor) Corrosion Inhibitor Concentrate

Product Use: Corrosion Inhibitor for cooling systems
Product Number(s): 227777
Company Identification
Chevron Products Company
Global Lubricants
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
email: lubemsds@chevron.com

SECTION 2  HAZARDS IDENTIFICATION

CLASSIFICATION: Reproductive toxicant (developmental): Category 2.

Signal Word: Warning

Health Hazards: Suspected of damaging the unborn child.

PRECAUTIONARY STATEMENTS:
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
Response: IF exposed or concerned: Get medical advice/attention.
Storage: Store locked up.
Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable
SECTION 3  COMPOSITION/ INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS NUMBER</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium 2-ethylhexanoate</td>
<td>3164-85-0</td>
<td>10 - 30 %wt/wt</td>
</tr>
<tr>
<td>Molybdoc acid, disodium salt, dihydrate</td>
<td>10102-40-6</td>
<td>1 - 5 %wt/wt</td>
</tr>
<tr>
<td>1H-Benzotriazole, methyl-</td>
<td>29385-43-1</td>
<td>0.5 - 1.5 %wt/wt</td>
</tr>
<tr>
<td>Sodium nitrite</td>
<td>7632-00-0</td>
<td>0.5 - 1.5 %wt/wt</td>
</tr>
</tbody>
</table>

SECTION 4  FIRST AID MEASURES

Description of first aid measures

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause harm to the unborn child if swallowed based on animal data. Risk depends on duration and level of exposure. See Section 11 for additional information.

Indication of any immediate medical attention and special treatment needed Not Applicable

SECTION 5  FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic
compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Nitrogen, Potassium, Molybdenum, Sodium.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, 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, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
If user operations generate airborne material, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure. Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted.
Suggested materials for protective gloves include: Natural rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride (PVC or Vinyl).

**Respiratory Protection:** Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as:

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Occupational Exposure Limits:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Agency</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium 2-ethylhexanoate</td>
<td>Not Applicable</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Molybdic acid, disodium salt, dihydrate</td>
<td>ACGIH</td>
<td>.5 mg/m3</td>
<td>--</td>
<td>--</td>
<td>A3 A3</td>
</tr>
<tr>
<td>1H-Benzotriazole, methyl-</td>
<td>Not Applicable</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Sodium nitrite</td>
<td>Not Applicable</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Consult local authorities for appropriate values.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Attention: the data below are typical values and do not constitute a specification.

**Color:** Red
**Physical State:** Liquid
**Odor:** Faint or Mild
**Odor Threshold:** No data available
**pH:** 8 - 8.6
**Vapor Pressure:** No data available
**Vapor Density (Air = 1):** No data available
**Initial Boiling Point:** 100°C (212°F) (Estimated)
**Solubility:** Completely Soluble
**Freezing Point:** -5°C (23°F) (Typical)
**Melting Point:** Not Applicable
**Specific Gravity:** 1 @ 15°C (59°F) (Estimated)
**Density:** 1.091 kg/l @ 20°C (68°F) (Typical)
**Viscosity:** No data available
**Coefficient of Therm. Expansion / °F:** No data available
**Evaporation Rate:** Not Applicable
**Decomposition**
**temperature:** No data available
**Octanol/Water Partition Coefficient:** No data available

**FLAMMABLE PROPERTIES:**
**Flammability (solid, gas):** No Data Available

**Flashpoint:** Not Applicable
**Autoignition:** Not Applicable
**Flammability (Explosive) Limits (% by volume in air):** Lower: No data available Upper: No data available

**SECTION 10 STABILITY AND REACTIVITY**

**Reactivity:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates,
peroxides, etc.

**Chemical Stability**: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility With Other Materials**: May form cancer-causing nitrosamines when mixed with secondary amines.

**Hazardous Decomposition Products**: None known (None expected)

**Hazardous Polymerization**: Hazardous polymerization will not occur.

### SECTION 11 TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

**Serious Eye Damage/Irritation**: The eye irritation hazard is based on evaluation of data for product components.

**Skin Corrosion/Irritation**: The skin irritation hazard is based on evaluation of data for product components.

**Skin Sensitization**: The skin sensitization hazard is based on evaluation of data for product components.

**Acute Dermal Toxicity**: The acute dermal toxicity hazard is based on evaluation of data for product components.

**Acute Oral Toxicity**: The acute oral toxicity hazard is based on evaluation of data for product components.

**Acute Inhalation Toxicity**: The acute inhalation toxicity hazard is based on evaluation of data for product components.

**Acute Toxicity Estimate**: Not Determined

**Germ Cell Mutagenicity**: The hazard evaluation is based on data for components or a similar material.

**Carcinogenicity**: The hazard evaluation is based on data for components or a similar material.

**Reproductive Toxicity**: The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Single Exposure**: The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Repeated Exposure**: The hazard evaluation is based on data for components or a similar material.

**ADDITIONAL TOXICOLOGY INFORMATION**

2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenicity (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate via intraperitoneal injection during pregnancy.

Nitrite salts can cause methemoglobin to form in the blood, resulting in a fall in blood pressure, cyanosis, coma and possibly death. Infants are particularly susceptible to nitrite toxicity. Rats chronically exposed to sodium nitrite in drinking water had pathological changes in heart and lung tissue.
SECTION 12  ECOLOGICAL INFORMATION

ECOTOXICITY
This material is not expected to be harmful to aquatic organisms.
The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY
No data available.

PERSISTENCE AND DEGRADABILITY
This material is expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.
The product has not been tested. The statement has been derived from products of a similar structure and composition.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Octanol/Water Partition Coefficient: No data available

SECTION 13  DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations.

SECTION 14  TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: NOT REGULATED AS A HAZARDOUS MATERIAL UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15  REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:
1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: YES
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO
REGULATORY LISTS SEARCHED:
01=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
02=NTP Carcinogen
03=EPCRA 313
04=CA Proposition 65
05=MA RTK
06=NJ RTK
07=PA RTK

The following components of this material are found on the regulatory lists indicated.
Sodium nitrite 03, 05, 06, 07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

<table>
<thead>
<tr>
<th>Component</th>
<th>Component RQ</th>
<th>Component TPQ</th>
<th>Product RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium nitrite</td>
<td>100 lbs</td>
<td>None</td>
<td>9091 lbs</td>
</tr>
</tbody>
</table>

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: DSL (Canada), EINECS (European Union), IECSC (China), PICCS (Philippines).

One or more components does not comply with the following chemical inventory requirements: AICS (Australia), ENCS (Japan), KECl (Korea), TSCA (United States).

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE: Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:
Label Category : ANTIFREEZE/Coolant 16 - AFC16

REVISION STATEMENT: This revision updates the following sections of this Safety Data Sheet: 1-16
Revision Date: MAY 28, 2015

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

<table>
<thead>
<tr>
<th>TLV</th>
<th>Threshold Limit Value</th>
<th>TWA</th>
<th>Time Weighted Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>GHIS</td>
<td>Globally Harmonized System</td>
<td>CAS</td>
<td>Chemical Abstract Service Number</td>
</tr>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
<td>IMO/IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>API</td>
<td>American Petroleum Institute</td>
<td>SDS</td>
<td>Safety Data Sheet</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Materials Information System</td>
<td>NFPA</td>
<td>National Fire Protection Association (USA)</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation (USA)</td>
<td>NTP</td>
<td>National Toxicology Program (USA)</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCEL</td>
<td>New Chemical Exposure Limit</td>
</tr>
<tr>
<td>SCBA</td>
<td>Self-Contained Breathing Apparatus</td>
</tr>
</tbody>
</table>

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.