

# Product Stewardship Summary Heavy Lubricants

The product stewardship summary is intended to give general information about the chemical or categories of chemicals addressed. It is not intended to provide an in-depth discussion of all health and safety information. Additional information is available through the applicable Safety Data Sheet (SDS) which should be consulted before use of any chemical. This product stewardship summary does not supplant or replace required regulatory and/or legal communication documents.

## **Chemical Identity:**

The Heavy Lubricants are liquids and currently include the following product:

- E-500A
- E-500B

## **Category Justification:**

Products in the Heavy Lubricants group have similar physical and chemical characteristics. They come from Heavy Pyrolysis Oil which is a by-product of the ethylene production process with the exception that the latter has latex from Aqua-Cleen in it. In general, these products exhibit similar health and environmental hazards, with small differences in the severity of their effects.

## **Product Uses:**

These products are commercially available to oil and gas service industry customers and are used as drilling mud and cementing applications.

## **Physical/Chemical Properties:**

The Heavy Lubricants are dark color liquids under ambient temperature and pressure. During loading, a component, namely, naphthalene, may vaporize and form crystals which could affect the safety valve. Some operations may cause static electricity to accumulate creating the potential for a fire. Static hazards can be minimized by proper bonding and grounding. Totes of these materials may rupture with explosive force if pressure is used to empty the tote. Empty totes, which retain product residue, may explode if pressurized, cut, welded, brazed, soldered, drilled, ground, or exposed to heat, flame, sparks, static electricity, or other sources of ignition. To minimize risks, special handling and storage procedures are required.

## **Health Information:**

The acute toxicity of Heavy Lubricants is low, but ingestion may present an aspiration hazard. Heavy Lubricants may cause skin sensitization. Single exposures to Heavy Lubricants are only minimally irritating to eye and skin and may cause a photosensitization reaction. Prolonged or repeated exposures may cause severe skin irritation and potentially skin cancer. Contact with the heated Heavy Lubricants may cause burns to eye and skin. Based on very limited data for the Heavy Lubricants, and on data for the components, repeated exposure may cause damage to red blood cells (especially in susceptible individuals) if swallowed or inhaled at concentrations above the exposure limits. Oral exposure may cause cataracts. Prolonged or repeated breathing of aerosols of these products at levels above the exposure limits of the components may cause respiratory tract irritation, and damage to several organ systems (including nervous system, liver, kidneys, lung, and nasal tract). Heavy Lubricants are genotoxic. Exposures at concentrations below the exposure limits of the components are not expected to cause reproductive or developmental toxicity. Since inhalation of



a component of Heavy Lubricants has been shown to cause benign tumors in mice, there is some potential to cause cancer in humans; however, the available information is inadequate to determine if inhalation of these products can cause cancer in animals or humans. Both occupational and non-occupational exposures to Heavy Lubricants are expected to be minimal and can be adequately controlled with normal industrial hygiene measures.

## **Environmental Information:**

The Heavy Lubricants are expected to be toxic to aquatic organisms. These products are not expected to bioconcentrate in aquatic organisms to a significant extent. The components of Heavy Lubricants will partition largely between the air, water, and soil compartments, with a negligible amount partitioning to sediment. Volatilization to the air can contribute to the loss of some constituents from aqueous and terrestrial habitats. Although not considered "readily biodegradable," most components will biodegrade in water and soil over periods of weeks to months. Environmental exposures to Heavy Lubricants are expected to be low.

## **Exposure Potential:**

The most likely routes of exposure to the Heavy Lubricant products are skin and eye contact, and inhalation exposures. The best way to prevent exposure is to work in well-ventilated areas, use appropriate personal protective equipment (PPE), and follow good personal hygiene practices.

### Workplace use:

Potentially exposed populations include: (1) workers who manufacture these products, (2) quality assurance workers who sample and analyze the products to ensure that they meet specifications, (3) workers involved in distribution and storage of these products, and (4) commercial consumers, in occupational settings, that use these products in intended applications. The probability of exposure to workers is expected to be low because these products are manufactured in enclosed, controlled environments, and are transported in tightly sealed containers. These products are sold to industrial customers that are familiar with their intended applications, safe handling, storage, and disposal requirements. Manufacturing, quality assurance and transportation workers should adhere to safe handling practices and wear appropriate personal protective equipment (PPE), and have access to exposure prevention measures (e.g., engineering controls). Customers should also use appropriate PPE during handling and have risk mitigation measures in place to address potential physical hazards or accidental releases. Contaminated surfaces will be extremely slippery. Avoid spillage on floor as the product can become very slippery. Clean up to prevent slipping hazard.

### Consumer use:

Potential exposure or health impacts to the general public is not anticipated. These products are sold by Chevron Phillips Chemical to industry users knowledgeable in the safe handling and use of these products. In the event of a fire, inhalation of hazardous combustion byproducts could be a potential concern for nearby residents.

### Potential Environmental Release:

There may be some potential for significant exposure to the environment from accidental releases during transportation of totes, truck trailers, or container ships; however, the frequency of distribution incidents involving accidental release of these products has been low, and reported volumes spilled have been minimal. Furthermore, pallet containers are stretch-wrapped or shrink-wrapped to minimize the potential for product loss. Small quantities are shipped for laboratory quality and performance testing, typically one (1) pound or less. Those performing the tests understand the hazards and adhere to the safe handling practices as explained above. The current and anticipated use of these products in designated off-shore/on-shore rig applications is not expected to result in significant loss to the environment because containers are handled one-at-a time. Chevron Phillips Chemical is committed to operating in an environmentally responsible manner and participates in the American Chemistry Council's Responsible Care<sup>®</sup> program.



### **Risk Management**

Chevron Phillips Chemical is committed to Product Stewardship and doing business responsibly. We endeavor to provide sufficient information for the safe use and handling of all our products. We make product information available to all of our customers, distributors, carriers, and users of these products which contain detail about the properties of each product. To that end, a Safety Data Sheet accompanies each shipment from our manufacturing plant and a COA is provided upon request.

Before using these products, the user is cautioned to make its own determination and assessment of the safety and suitability of the product for the specific use in question. It is the ultimate responsibility of the user to ensure suitability for use and determine if this information is applicable to the user's specific application. Chevron Phillips Chemical does not make, and expressly disclaims, all warranties, including warranties of merchantability or fitness for a particular purpose, regardless of whether oral or written, express or implied, or allegedly arising from any usage of any trade or from any course of dealing in connection with the use of the information contained herein or any product itself. The user expressly assumes all risk and liability, whether based in contract, tort or otherwise, in connection with the use of the information contained herein or any product itself.

### **Regulatory Information:**

Regulations exist that govern the manufacture, sale, transportation, use, and disposal of these products. These regulations may vary by city, state, country or geographic region. Additional relevant information may be found by consulting the applicable SDS.

### **Sources of Additional Information:**

Safety Data Sheets (SDS) at <a href="https://www.cpchem.com">https://www.cpchem.com</a> or available upon request at <a href="https://www.cpchem.com">SDS@CPChem.com</a> or available upon request at <a href="https://www.cpchem.com">https://www.cpchem.com</a> or available upon request at <a href="https://www.cpchem.com">SDS@CPChem.com</a> or available upon request at <a href="https://www.cpchem.com">https://www.cpchem.com</a> or available upon request at <a href="https://www.cpchem.com"/>https://www.cpchem.com</a> or ava

European Chemical Agency (ECHA) Dissemination portal with information on chemical substances registered under REACH

<u>https://echa.europa.eu/information-on-chemicals</u>

Organization for Economic Cooperation and Development (OECD): eChemPortal web-based search tool

<u>https://www.echemportal.org/echemportal/</u>

#### **Conclusion:**

Heavy Lubricants are mainly used for drilling mud and cementing applications. They are combustible liquids and are expected to be toxic to aquatic organisms. The acute toxicity of Heavy Lubricants is low, but ingestion may present an aspiration hazard. Heavy Lubricants may cause skin sensitization and photosensitization. There is a potential to cause adverse health effects. Appropriate personal protective equipment practices and labeling, storage, and transportation procedures shall be followed. Further, the relevant product Safety Data Sheets and applicable regulatory guidelines and requirements, including, but not limited to, Occupational Health and Safety Administration (OSHA) guidelines, should be consulted prior to the use or handling of Heavy Lubricants.

### **Contact Information:**

https://www.cpchem.com/