



## Product Stewardship Summary

### HIGH-PURITY HYDROCARBONS PRODUCT GROUP

This 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**

There are 23 products in the High-Purity Hydrocarbons product group. The High-Purity Hydrocarbons are produced from petroleum or crude oil and consist of either a single or blend of aliphatic or C<sub>8</sub> aromatic hydrocarbons. The aliphatic or alkane hydrocarbons (linear, branched, and/or cyclic) range in carbon number from C<sub>5</sub> to C<sub>16</sub>.

#### **Product Uses**

These products are used for applications ranging from process solvents and phase-change modifiers to charcoal lighter fluids.

#### **Physical/Chemical Properties**

The High-Purity Hydrocarbons, with the exception of two products (Soltrol<sup>®</sup> 170 and Soltrol<sup>®</sup> 220 isoparaffin solvent), are volatile to highly volatile, flammable, and combustible liquids, and vapors may readily form flammable mixtures. The flash points for the volatile alkanes range from -55° C (-67° F) to 112° C (231° F); the flash points for the aromatics range from 27-32° C (81-90° F). These products have the potential to cause fires if they are exposed to an ignitable source. Electrostatic charge can accumulate and create a hazardous condition when handling these materials. Containers may explode under pressurized conditions. Due to their inherent explosive characteristics, there are specific requirements for handling, storage, transportation, labeling and disposal of these products. However, these products are typically stable under normal ambient temperature and pressure and appropriate storage and handling conditions.

#### **Health Information**

The High-Purity Hydrocarbons have low acute toxicity. Exposures to vapors or aerosols may be irritating to the eyes and respiratory tract. At high concentrations, vapors and aerosols may also cause central nervous system depression presenting possible symptoms such as headaches, dizziness and drowsiness. When there is repeated or prolonged skin contact, these products may cause skin irritation. The High-Purity Hydrocarbons are not dermal sensitizers. There is low concern that these products can cause reproductive or developmental effects, and they are not considered to have mutagenic or carcinogenic properties.

If accidentally ingested, a small amount of liquid may be aspirated into the lungs which can occur from either swallowing or vomiting. Aspiration of liquid into the lungs may cause inflammation of the lungs and lung edema (accumulation of fluid in the lungs). This is a medical emergency and requires immediate and proper treatment.

Two of the products, orthoxylene and paraxylene can contain trace amounts of ethylbenzene. Ethylbenzene has been shown to be a carcinogen in laboratory animal studies. The relevance of these findings to humans is uncertain. In addition, repeated exposures to ethylbenzene have been shown to cause ototoxicity in animal studies.

Repeated inhalation exposure to *n*-hexane has been shown to cause peripheral neuropathy in both laboratory animals and in humans. *n*-hexane has also been shown to cause adverse male reproductive effects in laboratory animals, as well.

### **Environmental Information**

The environmental hazard potential for the High-Purity Hydrocarbon products is expected to be varied because their toxicity and fate will depend on the hydrocarbon product, or in the case of mixtures, the individual components in the mixture. If accidentally spilled into the environment, these products have low solubility in water and are expected to rapidly degrade in air through atmospheric processes. These products are also biodegraded to varying degrees and are not expected to persist in the environment. Some products, however, can cause significant harm to aquatic organisms and have a low to moderate potential to bioaccumulate. Due to their potential to cause significant harm to aquatic environments, care should be taken to avoid releases of these products to sewage drainage systems and water bodies. Spillage should be quickly collected and properly disposed of to minimize harm to the environment.

### **Exposure Potential**

The most likely routes of possible exposure to the High-Purity Hydrocarbons are by inhalation and skin contact. The best way to prevent exposure is to work in well-ventilated areas, wear chemical resistant gloves and follow good personal hygiene practices.

#### *Workplace Use:*

The potentially exposed populations include: (1) workers who manufacture and/or blend these product; (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 most likely routes of exposure to the High-Purity Hydrocarbons in a workplace setting are inhalation exposure and skin contact. The probability of exposure to personnel is expected to be low because i) workers in the manufacturing and/or quality lab settings are properly trained to handle these products and wear appropriate personal protective equipment (PPE) and ii) the High-Purity Hydrocarbons are sold to experienced industrial customers that are familiar with their intended applications, safe handling, storage and disposal requirements. Manufacturing, quality assurance and transportation workers should wear appropriate personal protective equipment (PPE), and will also likely have access to engineering controls to prevent exposure. Customers should use appropriate PPE during handling and use. In addition, customer facilities typically have risk mitigation measures in place to address potential physical hazards or accidental releases.

#### *Non-industrial Consumer Use:*

Some of the High-Purity Hydrocarbon solvents may be sold to the general population for consumer use by CPChem's industrial customers. Exposure should be minimized by working in well-ventilated areas, wearing chemical resistant gloves and following good personal hygiene practices. All instructions and warning labels affixed should be predominantly displayed on the product.

#### *Potential Environmental Release:*

There may be some potential for exposure to the environment from accidental releases of the High-Purity Hydrocarbon products during transportation of large quantities of these products via isocontainers, trucks,

and railcars; however, the frequency of distribution incidents involving accidental releases of these products has been low and reported product volumes spilled have been minimal. Chevron Phillips Chemical Company LP is committed to operating in an environmentally responsible manner and has adopted the American Chemistry Council's Responsible Care<sup>®</sup> initiative.

### **Risk Management**

Chevron Phillips Chemical Company LP 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 and a certificate of analysis accompany each shipment from our manufacturing plant.

Before using these products, the user is advised and 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 Company 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 the High-Purity Hydrocarbons. 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 <http://www.cpchem.com> for the following products:

- Cyclopentane
- Isopentane
- Cyclopentane/Isopentane Blend
- Normal Pentane
- Isooctane (2,2, 4-trimethylpentane) (Pure Grade)
- Methylcyclohexane, Pure Grade
- n-Hexane 95%
- n-Heptane 95%
- n-Heptane (Pure Grade)
- Soltrol<sup>®</sup> 10 Isoparaffinic Solvent
- Soltrol<sup>®</sup> 100 Isoparaffinic Solvent
- Soltrol<sup>®</sup> 125 Isoparaffinic Solvent
- Soltrol<sup>®</sup> 130 Isoparaffinic Solvent
- Soltrol<sup>®</sup> 170 Isoparaffinic Solvent
- Soltrol<sup>®</sup> 220 Isoparaffinic Solvent
- Orthoxylene 99%
- Paraxylene
- EcoSolv Dry Cleaning Fluid
- HC-DCF<sup>™</sup> Low Flash Solvent (Class II)
- Charcoal Lighter Distillate

- Charcoal Lighter Distillate – High Flash
- Charcoal Lighter Distillate – Mid Flash
- Alkylate 105

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

- <http://www.echemportal.org>

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

- <http://apps.echa.europa.eu/registered/registered-sub.aspx>

### **Conclusion**

High-Purity Hydrocarbon products contain components that are classified as hazardous chemicals. Efforts should be taken to minimize exposure to these products by adhering to safe-handling procedures, designated applications and uses, appropriate personal-protective equipment practices, and appropriate labeling, storage, and transportation procedures and requirements. 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 these products.

### **Contact Information:**

<http://www.cpchem.com/>

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