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Product Stewardship Summary Heavy Aromatic Distillate (HAD)

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:

Heavy Aromatic Distillate (HAD) is a colorless liquid with an aromatic odor that is produced from raw pyrolysis gasoline, a co-product of ethylene production. HAD is primarily a C-9⁺ stream (with some xylenes, C-8) produced at the Cedar Bayou Plant in Baytown, Texas.

CAS Number: 64742-47-8CAS

Name: Distillates (petroleum), hydrotreated light

Synonyms: Steam Cracked Distillates (petroleum); Heavy Aromatic Distillate Gas Blend; HAD; Rerun Tower Bottoms; Wash Oil

Product Uses:

HAD is used as a base solvent for a broad range of specialty chemical formulations which are used in many applications including oilfield chemicals, pesticides, fuel additives and fracture/well stimulation fluid. HAD's composition contains low olefin content and high C9 and C10 composition making it an excellent gasoline blendstock.

Physical/Chemical Properties:

HAD is classified as combustible by the Occupational Safety and Health Administration (OSHA) and as flammable by the U.S. Department of Transportation. Neither HAD nor any of its components is a highly reactive material. Some operations, such as filling and sampling of a tank or container, may cause static electricity to accumulate and, under the right conditions, may create the potential for a fire. However, static hazards can be minimized by proper bonding and grounding. Drums of HAD have the potential to rupture with explosive force if pressure is used to empty the drum. Also, empty drums, which may 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:

Short-term exposure to HAD vapors at levels above the exposure limits of the components may cause reversible central nervous system (CNS) effects and respiratory irritation. Breathing of vapors of HAD, at very high concentrations (e.g., saturated vapor levels), could cause irreversible CNS effects, coma or death. Ingestion of HAD could lead to aspiration into the lung, which could result in severe lung damage or even death. Single exposures to HAD may cause mild eye and skin irritation, but not skin sensitization; however, repeated dermal exposure may cause skin irritation due to defatting. Based on data for the components of HAD, repeated oral exposures or breathing of vapors above the exposure limits of the components may produce CNS effects and may cause hearing loss and damage to several organ systems. Prolonged and repeated breathing of HAD at concentrations above the exposure limit of naphthalene may cause lesions in the nose and lungs. Exposure to HAD at concentrations below the exposure limits of the components is not expected to cause reproductive or developmental toxicity. Several other components of HAD have been shown to cause cancer in



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laboratory animals, but the available information is inadequate to determine if these components can cause cancer in humans.

Environmental Information:

Based on available data for the components, HAD is expected to be toxic to aquatic organisms but is not expected to bioaccumulate significantly. Most of HAD is anticipated to partition in the air where it will rapidly degrade, with slight partitioning into water and soil, and minimal partitioning into sediment. Although data for the components do not meet the requirements for “ready biodegradability,” HAD in soil is expected to biodegrade over an extended time period (weeks to months). Some exposure of the environment to HAD occurs as a result of uses in drilling mud, and there is a small potential for environmental exposure from its use in fuel additives; however, based on the fact that HAD is a low production volume chemical and that customers are sophisticated users, overall environmental exposure is believed to be low.

Exposure Potential:

Exposure to HAD in occupational and non-occupational settings is expected to be very limited. HAD is handled in closed systems and protective equipment is used. Worker exposure is kept to a minimum.

- Workplace use: this refers to potential exposure of HAD to persons in a manufacturing facility or through various industrial applications. Manufacturing and transport involving HAD are usually conducted in closed systems and workers use proper personal protective equipment during sampling; therefore, human exposure is expected to be very limited.
- Consumer use: there is a small potential for human exposure to HAD that is blended into gasoline or used as a solvent for diesel fuel additives. However, the volume of HAD going into these markets and the low level of HAD found in gasoline limit the potential for exposure.
- Potential environmental release: HAD is stored and transported in closed systems. Exposure to the environment is expected to be very low. Chevron Phillips Chemical is committed to operating in an environmentally responsible manner and has adopted the American Chemistry Council’s Responsible Care® initiative.

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 this product 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 this product, 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 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.



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Regulatory Information:

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

Sources of Additional Information:

- Safety Data Sheets (SDS) at <https://www.cpchem.com/>
- Organization for Economic Cooperation and Development (OECD) - eChemPortal web-based search tool (use applicable CAS No): <http://www.echemportal.org/>
- European Chemicals Agency (ECHA) – Information on Registered Substances: <http://apps.echa.europa.eu/registered/registered-sub.aspx>
- Chevron Phillips Chemical's olefins product website: <https://www.cpchem.com/what-we-do/solutions/olefins/products>

Conclusion:

HAD is used as an industrial solvent and in gasoline blending. HAD is flammable and exposure at high levels may be harmful. 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, OSHA guidelines, should be consulted prior to the use or handling of HAD.

Contact Information:

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