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## Product Stewardship Summary WATER-SOLUBLE SYNTHETIC POLYMERS GROUP

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 Water-Soluble Synthetic Polymer Group is comprised of dry granular or powdery solids, and currently includes the following eight products:

- Dristemp® polymer
- Driscal® D polymer
- HE® 100 polymer
- HE® 150 polymer
- HE® 300 polymer
- HE® polymer 400
- Diacel® FL polymer
- S192

### Category Justification:

Products in the Water-Soluble Synthetic Polymers Group are based on a select set of monomers that are polymerized having similar physical and chemical characteristics. In general, these products exhibit similar health and environmental hazards with some differences in potency.

### Product Uses:

These products are commercially available to oil or gas service industry customers, and are generally used as drilling fluid additives including, mud, cement, and completion fluids. They provide friction reduction, viscosity, and fluid loss control in downhole oil field applications.

### Physical/Chemical Properties:

Water-Soluble Synthetic Polymers are solids that are combustible upon heating. Some products in this category are granular solids and care should be taken to avoid dust generation as they may form combustible dust concentrations in air. In the event of a fire, the formation of decomposition byproducts, such as sulfur and carbon oxides is possible. These products should be kept in tightly closed containers, and stored in a cool and well-ventilated environment away from ignition sources.

### Health Information:

Overall, the Water-Soluble Synthetic Polymers exhibit low acute and chronic toxicity effects via the oral, inhalation and dermal routes. These products are not expected to be skin or eye irritants. However, direct contact with dust or powder in the eye may cause irritation by mechanical abrasion. If accidentally ingested, these products are not anticipated to cause an aspiration hazard. Currently there is limited available data on these products regarding carcinogenic, reproductive, teratogenic or developmental toxicity health effects.



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### **Environmental Information:**

The environmental hazard potential of the Water-Soluble Synthetic Polymers is expected to be low (i.e., they are not expected to cause significant harm to aquatic life) except for S192. These products have a low potential to biodegrade if released to the environment but are not expected to bioaccumulate in aquatic life. Care should be taken to avoid direct release to sewage, drainage systems, and water bodies. Spillage should be quickly collected and properly disposed of, further reducing the potential for harm to the environment.

### **Exposure Potential:**

The most likely routes of exposure to the Water-Soluble Synthetic Polymers are skin and eye contact, and inhalation exposures of dusts. 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:

The potentially exposed populations include: (1) workers who manufacture and/or blend these products, or further formulate them with additives to meet technical specifications; (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 these products in an occupational setting are eye and dermal contact, and potentially inhalation exposure. However, the likelihood of exposure to workers is expected to be low because these products are sold to industrial customers that are properly trained to handle them and wear appropriate personal protective equipment (PPE). Additionally, they typically have access to exposure prevention measures (e.g., engineering controls). Manufacturing, quality assurance and transportation workers should adhere to safe handling practices and wear appropriate PPE. Furthermore, customers should use appropriate PPE during handling and to 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 when wet. Sweep up to prevent slipping hazard.

#### Consumer use:

Potential exposure or impact to the general public is not anticipated for these products as they are sold by Chevron Phillips Chemical to sophisticated industry users and not to the general population.

#### Potential Environmental Release:

There may be some potential for significant exposure to the environment from accidental releases during transportation of bags via trailers, railcars, and container ships; however, the frequency of distribution incidents involving accidental releases of these products has been low, and reported volumes spilled have been minimal. Furthermore, pallet containers are stretched-wrapped to minimize the potential for product loss. Small quantities are shipped for laboratory quality and performance testing, typically in quantities of one (1) pound or less. Those performing the tests understand the hazards and adhere to the safe handling practices as explained above and in the SDS. 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® program.



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## 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 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 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 diesel products. 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/> or available upon request at [SDS@CPChem.com](mailto:SDS@CPChem.com)

- Dristemp® polymer
- Driscal® D polymer
- HE® 100 polymer
- HE® 150 polymer
- HE® 300 polymer
- HE® polymer 400
- Diacel® FL polymer
- S192

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

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

National Industrial Chemicals Notification Assessment Scheme 2005. Assessment Report: Driscal D Polymer.

National Industrial Chemicals Notification Assessment Scheme 2007. Full Public Report: Dristemp Polymer.

- [Full Public Report format \(industrialchemicals.gov.au\)](#)

Phillips 66 1984 Toxicity Study Summary: H.E. Polymer. Internal document.



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**Conclusion:**

The Water-Soluble Synthetic Polymers products may form combustible dust concentrations in air. Although these products have a low potential for adverse health and environmental effects, 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 Sheet 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:**

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