

Memorandum

Date: October 7, 2024

To: HDPE Task Force; SHERA Committee

From: Jorge Roman, ILMA Regulatory Counsel

Re: Regulation and Use of HDPE Containers in the Lubricant Industry

This memorandum provides a brief update on regulatory activity concerning the use of fluorinated high-density polyethylene (HDPE) containers and a summary of the different applications of these products in the lubricant industry.

The memorandum aims to serve as an educational resource to support data collection through a survey and to drive advocacy efforts before the U.S. Environmental Protection Agency (EPA).

Regulatory Background

On July 10, 2024, the EPA granted a petition to regulate the manufacture of certain per- and polyfluoroalkyl substances (PFAS) as by-products of the fluorination of plastic containers under the Toxic Substances Control Act (TSCA). To inform its regulatory approach, the EPA is now seeking public comment regarding the number and uses of fluorinated HDPE containers in the country.

Based on previous regulatory efforts, ILMA anticipates that the EPA will take aggressive action against the fluorination of these plastic containers, which could lead to supply chain disruptions in the lubricant industry.

For more information on the EPA's regulatory efforts to ban the fluorination of HDPE containers, see the [Compounding's Washington Landscape](#) columns in the [March](#) and [September issues](#).

Use of Fluorinated HDPE Containers in the Lubricant Industry

Lubricant manufacturers and suppliers rely on fluorinated HDPE containers for several key purposes related to packaging, storage, and distribution. These containers are highly favored in the lubricant industry due to their durability, chemical resistance, cost-effectiveness, and environmental sustainability. Indeed, fluorination plays a critical role in maintaining the integrity of the stored product and protecting the environment from leaks and spills.

Below are some of the beneficial uses of fluorinated HDPE containers across the supply chain:

1. Suppliers and Lubricant Manufacturers

Oils & Additives: Base oils and chemical additives are often stored and distributed in fluorinated HDPE containers due to their durability and impermeability. These containers range in size from small jugs to large drums, totes, and intermediate bulk containers (IBCs).

Motor Oils: Fluorinated HDPE containers are widely used for packaging engine oils in various sizes, from small consumer bottles (1 quart/liter) to larger bulk containers (1 gallon/5 liters). These containers are ideal for distributing and storing small quantities of lubricants.

Metalworking Fluids: Metalworking fluids are commonly packaged in fluorinated HDPE containers due to its strength, durability, and resistance to chemicals. These containers are ideal for storing fluids with corrosive or reactive properties.

Industrial Lubricants: Fluorinated HDPE containers are preferred for packaging industrial lubricants like hydraulic fluids, gear oils, and transmission fluids.

Grease Packaging: HDPE containers with a fluorine coat are suitable for storing and transporting greases, which are more viscous and require sturdy containers that resist breakage.

2. Distributors, Retailers, and Industrial Consumers

Bulk Deliveries: Lubricant manufacturers often use large HDPE drums (ranging from 5 to 55 gallons) for storing and transporting bulk quantities of lubricants to distributors, retailers, or directly to industrial consumers. In addition, IBCs (ranging from 275 to 330 gallons) are ideal for transporting large volumes of lubricants to meet bulk deliveries for industrial or other large-scale operations.

Branding and Customization: HDPE containers can easily be customized with printed branding and product information, enhancing marketing efforts. Their recyclability may also appeal to environmentally conscious consumers concerned about minimizing solid waste through a circular economy.

In conclusion, the supply chain of the lubricant industry relies on fluorinated HDPE containers for their chemical resistance, durability, cost efficiency, and environmental benefits. These qualities ensure that lubricants are securely stored and easily distributed to end users across various sectors.