



HSIA

halogenated
solvents
industry
alliance, inc.

March 15, 2017

U.S. Environmental Protection Agency
Docket Center
WJC West Building, Room 3334
1301 Constitution Avenue, NW
Washington, DC 20004

Re: Docket No. EPA-HQ-OPPT-2016-0732

Dear Sirs:

The Halogenated Solvents Industry Alliance, Inc. (HSIA) represents producers, distributors, and users of perchloroethylene or perc. We offer these comments in response to EPA's Risk Evaluation Scoping Efforts under TSCA and specifically as they relate to the circumstances in which perchloroethylene is intended to be used, known to be used, or foreseen to be manufactured, distributed, or disposed of in commerce.

Overview

Perchloroethylene is a chlorinated solvent that is used extensively in dry cleaning, vapor degreasing, brake cleaning, as a chemical intermediate and processing solvent, in chemical milling maskants and coatings, in the manufacture of refrigerants and other fluorinated compounds, and in coatings and adhesives.

Perchloroethylene is one of the most regulated chemicals in the United States. The Occupational Safety and Health Administration (OSHA) and the American Conference of Governmental Industrial Hygienists (ACGIH) have established or recommended occupational airborne exposure limits for perchloroethylene. The OSHA Permissible Exposure Limit (PEL) is an 8-hour time-weighted average (TWA) of 100 ppm. OSHA also mandates a short-term exposure limit (STEL) of 200 ppm for 15 minutes. The ACGIH TLV is 25 ppm for an 8-hour TWA and 100 ppm for a 15-minute STEL.

Uses of Perchloroethylene

Dry Cleaning - Seventy percent of the U.S. dry cleaning industry uses perchloroethylene for many reasons. First, it is non-flammable, having neither a flash point nor flammability limits. Zoning restrictions and leases for dry cleaning facilities are usually less restrictive when they use non-flammable solvents. Second, it provides a faster, powerful yet gentler cleaning action with a minimum of agitation because it is heavier than water. Third, it dissolves all organic stains such as oils, greases, fats and waxes, and is ideal for natural and synthetic fibers. Fourth, it can

be recycled and reused repeatedly in a dry cleaning machine. Fifth, cleaning and drying times are faster due to its high solvency.

Today, technological advances in the dry cleaning industry allow use of a complete closed loop system for delivery of the solvent into dry cleaning machines. The small volume refillable system provides the latest technology available to meet today's requirements for environmental responsibility, employee safety, and regulatory reporting.

In 2006, EPA decided not to impose an industry-wide perc phase out after a detailed and comprehensive assessment of alternative technologies. These alternatives were found to pose significant concerns including fire safety hazards and longer cycle times associated with hydrocarbons, cyclic siloxanes and glycol ethers, higher capital costs, increased labor, and failure to effectively clean certain fabrics.

Vapor Degreasing – Industries such as aerospace, automotive, and household appliance production use perchloroethylene in vapor degreasing of metal parts. Because perc has a higher boiling point than water, it enables many soils, such as waxes and resins, to be melted in order to be solubilized. Perc cleans longer and removes waxes and resins more quickly. It is particularly effective with lightweight and light gauge parts. Because the perc forms an azeotrope with water, it allows a vapor degreaser to function as a drying device for metal parts and to remove water films from metals without degrading the part.

Fluorocarbon Feedstocks – Perchloroethylene is used in the manufacture of refrigerants and other fluorinated compounds.

Catalyst Regeneration – The petroleum industry uses perchloroethylene as a source of hydrochloric acid which helps in the regeneration of the catalyst in both catalytic reformer and isomerization operations.

Aerosol Brake Cleaning – Perchloroethylene is used to formulate aerosol brake cleaners. The aerosols are used to clean brakes and brake parts on automobiles. These products can be found in retailers and auto repair shops.

Several usage and industrial hygiene studies have been conducted on use of aerosol brake cleaners. See Exhibits 1 and 2. Generally speaking, they demonstrate that these products can be and are used safely within the existing workplace limits.

Chemical Milling Maskants and Coatings – The aerospace (military, commercial, and space programs), medical implant, military (non-aerospace) and industrial sectors have used perchloroethylene for high precision chemical milling, or the removal of metal from parts, for over twenty years. In the aerospace industry, chemical milling is essential in building aircraft because it reduces weight by as much as 70 percent. The coatings required by those who operate in this field are very specialized and require perchloroethylene. The industry has not so far identified acceptable substitutes. See Exhibits 3, 4 and 5.

The coatings are formulated with perc as the primary solvent. Additional perc is then used to thin these coatings, where applicable, and is also used to chemically remove the coatings from finished parts. The perc solvated coatings are applied in a dedicated coatings application room by dipping parts in a coatings tank, or by airless spraying of the coating on larger parts. These coatings are removed in the desired locations to expose the underlying metal. When exposed to the appropriate chemistry, the exposed metal is dissolved to the prescribed depth, resulting in the desired final geometry and part weight. The perc solvated coatings are the only commercially available coatings that can withstand the chemistries required for the chemical milling processes.

As to exposures and engineering controls in this process, the perc solvated coatings are applied in a dedicated, isolated, sealed coating application room that is continually evacuated through a carbon adsorption unit that strips the perc from the air to be reclaimed and reused. Those working in this industry report that greater than 95 percent of their emissions are caught by the carbon adsorption technology. This technology is currently the Best Available Control Technology (BACT) with exhaust concentrations routinely running less than 1 ppm. To further protect workers, additional perchloroethylene monitors are installed. The coatings containing perc are fully removed after the chemical milling process so no solvent remains in the final product.

Product Stewardship and Perchloroethylene

The manufacturers and users of perchloroethylene have a long history of providing information and training to their customers and employees. This includes written emergency procedures, readily available Safety Data Sheets, and training on how to handle hazardous materials. This training focuses on how to recognize the presence of a chemical in the workplace, hazards associated with the chemical, routine and emergency procedures, where to find Safety Data Sheets, and how to safely perform non-routine tasks.

Industrial Hygiene

The manufacturers of perchloroethylene also have a long history of focusing on industrial hygiene, as evidenced by extensive personnel monitoring samples collected since the 1970s. One manufacturer collected 3,165 samples for perchloroethylene, with 99.94% of the sample results below the OSHA PEL. There have been almost no results above the PEL in the last 30 years.

REACH and The Montreal Protocol

HSIA strongly suggests that EPA build on the concepts from two regulatory frameworks, REACH and the Montreal Protocol on Substances That Deplete the Ozone Layer, which both provide exemptions for reporting on feedstock and intermediate uses, and use their flexibility in the scoping process to provide definitions for feedstock and intermediate uses and exclude them from risk evaluation.

Under the EU's REACH law, exemptions are made for feedstock and intermediate uses in two ways. Hazard data requirements are reduced and there is no requirement to document the safety

assessment as there is for regular substances. In order to qualify, the manufacturer needs to have written confirmation from its customer that the substance is used as an intermediate or feedstock under strictly controlled conditions as defined in the regulation. The rationale behind these exemptions is that the strict control of exposure and release and the oversight of the process by trained professionals allows a focus on areas where there is a potential for exposure.

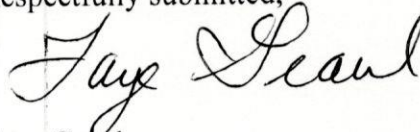
In addition, under the Montreal Protocol substances produced and converted into another substance are not considered in the inventory for produced volume. This is reflected in EPA's summary of its regulations implementing the Montreal Protocol: "Feedstock EPA regulations exempt controlled substances used for feedstock purposes from the requirements. No allowances are needed when producing or importing these substances for feedstock use."

Other Resources

HSIA would like to suggest that EPA consult a very valuable resource with information on the supply, demand, markets and trade of the chlorinated solvents. We learned that EPA does have a subscription to the service – IHS Markit. You may want to contact Director of Specialty Chemical Consulting Ray Will, at ray.will@ihsmarkit.com for assistance in using these data.

We appreciate the opportunity to submit these comments and look forward to working with EPA on the path forward in implementing the Lautenberg Act.

Respectfully submitted,



Faye Graul
Executive Director

Attachments