



# Prevent the Loss of Critical Chemicals Due to Overregulation

## The Problem

An avalanche of pending and future restrictions is threatening continued operations of existing chemical facilities, deselection of critical chemistries and products, and jobs in these industries across the United States. Many of these chemistries are inextricably tied to key products and sectors, such as semiconductors, automotive, buildings and construction, and energy.

The below table represents a small snapshot of the anticipated regulatory burden/costs facing the chemicals and plastics industry, with more proposed regulations in the queue.

Proposal	Agency	Annual Cost
Climate disclosure reporting	SEC	\$2,400,000,000
Feedstock production of Class II ODS	EPA	\$386,667
Emission guidelines for oil and natural gas sector (methane)	EPA	\$963,462
NAAQS PM	EPA	\$390,000,000
Restrictions of certain uses of HFCs	EPA	\$150,000,000
Asbestos chrysotile TSCA Section 6	EPA	\$78,000,000
CERCLA PFOA/PFOS*	EPA	\$2,528,000,000
Risk Management Plan regulations	EPA	\$76,700,000
Ethylene oxide sterilizers	EPA	\$32,000,000
NESHAP HON rule	EPA	\$70,133,333
MCL PFOA/PFOS	EPA	\$1,204,600,000
Methylene chloride TSCA Section 6**	EPA	\$13,600,000
TSCA new chemical review procedural changes**	EPA	\$TBD
<b>TOTAL</b>		<b>\$6,944,383,462</b>

Note: Unless noted, all rules are economically significant (subject to OMB review) and all cost estimates are from the issuing agency and discounted at 7%.

\* ACC developed this cost estimate to account for the indirect cost of CERCLA cleanup.

\*\* Not designated as an economically significant rule by OMB.

## Critical Products at Risk

### Semiconductors:

- **Ethylene oxide** is used widely in semiconductor manufacturing processes like wafer cutting, chemical mechanical planarization, photoresist, and photoresist residue cleaner.
- **Methylene chloride** is used to make polycarbonate, which is used for multiple applications in medical devices, automotive, electronics and military applications.
- **D4**, a type of silicone, is used in the manufacture of silicon wafers.
- **Trichloroethylene** is a solvent used to improve semiconductor performance.
- **PFA**, a fluorinated chemistry, is used for fittings, fluid management, liquids transport, high-purity manifolds, valves, and many other purposes.

### Automobiles, including electric vehicles:

- **Formaldehyde-based technologies** are used to make interior molded and under-the-hood components that allow for higher fuel efficiency by reducing vehicle weight. It is also used in the production of highly durable exterior primers, clear coat paints, tire-cord adhesives, brake pads and fuel system components.
- **Ethylene oxide** is used to produce ethylene carbonate, which is used in lithium-ion batteries to allow the electricity generated to travel more easily through the battery.
- **PFAS** are essential to lithium-ion batteries (anode and cathode coatings), fuel cells (electrode membranes), power electronics (diaphragms, seals, and case coatings), and textile materials and membranes (gas filter membranes in air-conditioning systems, engine compartment covers).
- **NMP** is an essential processing aid and in most cases, there is no replacement. NMP is necessary for lithium batteries that are key to energy storage and electrification that will help the US move away from fossil fuels.
- **1, 3-butadiene** is used primarily as a chemical intermediate and as a monomer in the manufacture of polymers such as synthetic rubbers, latex, or elastomers. Butadiene is necessary for tires for automobiles.

### Buildings and infrastructure:

- **Butadiene** rubber emulsion provides construction projects with superior tensile strength and durability. Butadiene is also used to create adhesives and sealants, asphalt and polymer modification and compounds. Its water-based formulation also resists moisture weathering, abrasion, and UV radiation damage.
- **Formaldehyde** is used in building and construction materials and formaldehyde-based resins are used to manufacture composite and engineered wood products used in cabinetry, countertops, moldings, furniture, shelving, stair systems, flooring, wall sheathing, support beams and trusses.
- **Asbestos** diaphragms are used to produce chlorine, and EPA has proposed an accelerated ban on this technology that manufacturers may not be able to meet without impacting the supply chain, particularly for water treatment.

## What You Can Do

- **Congressional oversight** of key regulations on the chemical sector. Examine how overly strict pending EPA regulations on certain chemistries will restrict access to products and technologies needed to support American-made energy, vehicles, infrastructure, semiconductors, etc.
- **Consider legislation** to improve the regulatory process, streamline permits, disapprove overly burdensome regulations and/or replace those regulations with more flexible policy approaches.

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