

Guide

The TSCA Handbook

Your Guide to Compliance

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What Is TSCA?

Every industry relies on chemicals for its manufacturing processes, whether they are used in products, industrial processes, or replacement parts and materials for machinery maintenance. Some of these substances pose a significant risk to human health or the environment, which is why governments regulate their use.

In the U.S., the Toxic Substances Control Act of 1976 (TSCA) manages the use of chemicals in domestic commerce for their total lifecycle, from initial substance manufacture or importation to final disposal. It provides the Environmental Protection Agency (EPA) the authority to require reporting, documentation, and testing of chemical substances. The agency may also restrict substances and substance families.[1]

1 United States Environmental Protection Agency. (2020, September 9). *Summary of the Toxic Substances Control Act.* https://www.epa.gov/laws-regulations/summary-toxic-substances-control-act

TSCA Section 6: How We Got Here

Since 1976, the EPA has used TSCA to restrict the use of chemical substances. Well-known examples include lead in paint, metallic mercury in consumer products, and chlorofluorocarbon (CFC) refrigerant gases.

In 2016, Congress updated TSCA as the Frank R. Lautenberg Chemical Safety for the 21st Century Act and gave the EPA a mandate to strengthen and reinforce this regulation.[2] The recast act requires the agency to conduct risk evaluations of "high-risk substances."

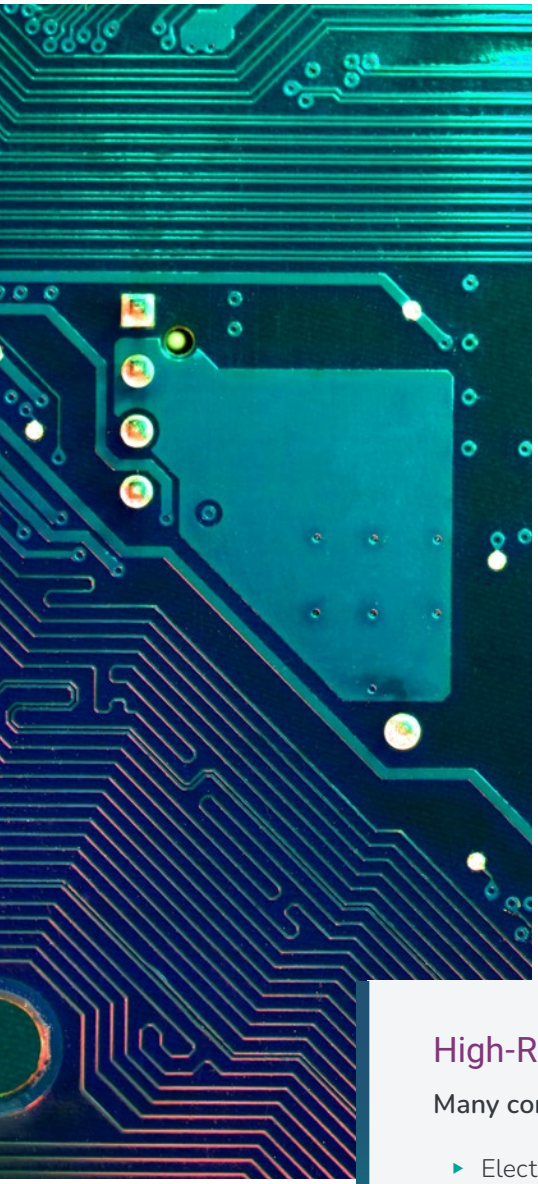
On January 6, 2021, the EPA published the first set of post-Lautenberg final rules[3] under Section 6 of TSCA. The rules restrict five persistent, bioaccumulative, and toxic (PBT) substances in "treated articles" currently used in both consumer and industrial products across many industry verticals, and provide limited time to achieve compliance.

In this guide, we'll explore the TSCA Section 6 restrictions that impact companies doing business in the U.S. You'll learn about deadlines, recent changes, enforcement, and downstream impacts on supply chains, so you can prepare your product or materials compliance program.



2 United States Environmental Protection Agency. (2019, August 14). *The Frank R. Lautenberg Chemical Safety for the 21st Century Act*. https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/frank-r-lautenberg-chemical-safety-21st-century-act

3 United States Environmental Protection Agency. (2021, June 17). *Persistent, Bioaccumulative, and Toxic (PBT) Chemicals under TSCA Section 6(h)*. https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/persistent-bioaccumulative-and-toxic-pbt-chemicals-under



PBT Restrictions

The rules published in January 2021 created new obligations for companies operating, importing, or selling into the U.S. and using any of the following five substances/substance families in U.S. commerce.

- Decabromodiphenyl ether (DecaBDE), CAS 1163-19-5
- 2,4,6-tris(tert-butyl)phenol (2,4,6 TTBP), CAS 732-26-3
- Hexachlorobutadiene (HCBD), CAS 87-68-3
- Pentachlorothiophenol (PCTP), CAS 133-49-3
- Phenol, isopropylated phosphate (3:1) (PIP 3:1), CAS 68937-41-7

(PIP 3:1 has a complicated regulatory history... we'll go into more detail later).

The PBT substances have been used extensively in products across industry verticals, typically as subcomponents such as coatings or plastic sleeves. These substances often enter a supply chain at the early stages. Companies must communicate extensively with suppliers to document the presence and concentration of the restricted chemicals or risk non-compliance.

High-Risk Components

Many common components contain the restricted substances, such as:

- Electronic components and printed circuit boards
- Electrical insulation
- Power supplies and cords
- Cable jackets and wire sheathing
- Gaskets, seals, and o-rings
- Rubberized and plasticized subcomponents
- Thermoplastics and flame-retardant resins

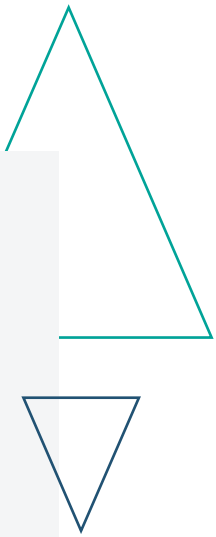
Timelines

From March 8, 2021, and onwards, manufacturers are obligated to:

- Document the use of restricted substances in parts, materials, and products
- Communicate the presence of banned substances used in products to customers
- Maintain documentation (evidence of due diligence) for at least three years

This also pertains to substances used in transportation, maintenance, or other functions necessary to a product's use. Companies should evaluate their supply chain risk for consumables or maintenance parts used in manufacturing or in warehouse operations. These include forklifts, milling machines, hydraulic fluids, and many more.

On January 6, 2022, U.S. distributors of some restricted substances will face similar obligations.



The 4-1-1 on PIP 3:1

The EPA published a revised final rule on PIP 3:1 in November 2024 that granted further compliance extensions for certain uses. These new rules took effect on January 21, 2025. The order allows products containing PIP 3:1 to remain on the market; however, the obligation to communicate the presence of the substance to customers remains. As such, companies must still take action to identify PIP 3:1 in their supply chains and declare its presence. This will also facilitate appropriate action when the order expires.[4]

4 United States Environmental Protection Agency. (2024, November 19). Decabromodiphenyl Ether and Phenol, Isopropylated Phosphate (3:1); Revision to the Regulation of Persistent, Bioaccumulative, and Toxic Chemicals Under the Toxic Substances Control Act (TSCA). *Federal Register, 89 (233).* https://www.govinfo.gov/content/pkg/FR-2024-11-19/pdf/2024-25758.pdf



Enforcement

Criminal penalties for TSCA non-compliance are rare, but steep: $50,000 USD per violation per day and up to a year in prison. The largest fine levied for a willful TSCA violation occurred in 2020, totaling nearly **$21 million USD**.[5] Additional costs are incurred as products are removed from the U.S. domestic market, potentially leading to breach of contract, lost sales, and brand damage.

The Lautenberg Chemical Safety Act also provides the EPA with consistent funding — $25 million USD per year — to execute its expanded responsibilities.[6] In 2020, the EPA opened 247 criminal cases, 77 more than in 2019.[7] Congressional attention, increased funding, and consumer pressure for greater transparency in manufacturing all point to a shift toward stronger TSCA enforcement than in years past.

Supply Chain Disruption

The short timelines for compliance create a substantial risk of supply chain disruption as products containing PBTs are pulled from the market. Companies can prepare by conducting comprehensive supply chain scoping to identify areas of concern to enable alternative products to be found.

Industry groups say this as a severe risk to companies, and the EPA is currently evaluating its timelines. It is unlikely that the EPA will undergo a full-scale rollback of its policy, and companies should start identifying at-risk products immediately regardless of the final deadline date.

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5 United States Environmental Protection Agency. (2021, April 23). Home Depot Settlement Information Sheet. https://www.epa.gov/enforcement/home-depot-settlement-information-sheet

6 United States Environmental Protection Agency. (2020, February 12). *Highlights of Key Provisions in the Frank R. Lautenberg Chemical Safety for the 21st Century Act.* https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/highlights-key-provisions-frank-r-lautenberg-chemical

7 United States Environmental Protection Agency. (2021, January 22). *Enforcement Annual Results for Fiscal Year 2020.* https://www.epa.gov/enforcement/enforcement-annual-results-fiscal-year-2020

Compliance Challenges

While the compliance requirements are consistent regardless of the substance in question, there are several differences in how the EPA enforces the respective restrictions. For example, PCTP and TTBP are allowed in concentrations under one percent weight over weight (w/w) and 0.3 percent w/w respectively, but PIP 3:1, DecaBDE, and HCBD may be prohibited regardless of concentration, depending on the product type.

Some use cases will be exempt from TSCA obligations, such as the use of DecaBDE by aerospace and defense companies. The automotive sector also received specific use case exemptions.

Restrictions: Original vs. Lautenberg TSCA Recast

Before the 2021 PBT rules were announced, TSCA fully or partially restricted nine substances and substance families:

- Asbestos (mineral fibers)
- Lead (in building paint)
- Polychlorinated biphenyls (PCBs)
- Dioxins (e.g. Agent Orange)
- Chlorofluorocarbons (ozone-depleting substances)
- Elemental mercury (in consumer products)
- Formaldehyde (from composite wood)
- Nitrites (in cutting fluids)
- Hexavalent chromium compounds (in water treatment)

Industries have likely adapted to the older restrictions and either phased out the substances where possible, or established procedures to properly manage their use. It is unlikely that companies track the new restrictions, and they will require new processes in order to maintain TSCA compliance. This includes full supply chain scoping for the presence of these substances and communication to upstream customers.





TSCA Recast Restrictions: 2024 Regulatory Activity

In 2024, the TSCA Work Plan for Chemicals Assessments established a list of 83 chemicals for future risk assessments, including the five substances restricted in 2021.[8] Following this plan, the EPA has rolled out additional restrictions beyond the five PBTs.

In 2024, the EPA published final rules for:

- Asbestos[9]
- Carbon tetrachloride (CTC)[10]
- Methylene chloride[11]
- Perchloroethylene (PCE) (aka tetrachloroethylene)[12]
- Trichloroethylene (TCE)[13]

In addition, final rules are in progress for:

- 1,4-Dioxane
- 1-Bromopropane (1-BP)
- Hexabromocyclododecane (HBCD)
- N-Methyl Pyrrolidone (NMP)
- Pigment Violet 29 (PV29)

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8 United States Environmental Protection Agency. (2014, October). *TSCA Work Plan for Chemical Assessments: 2014 Update.* https://www.epa.gov/sites/production/files/2015-01/documents/tsca_work_plan_chemicals_2014_update-final.pdf

9 United States Environmental Protection Agency. (2024, March 28). Asbestos Part 1; Chrysotile Asbestos; Regulation of Certain Conditions of Use Under the Toxic Substances Control Act (TSCA). *Federal Register, 89* (61). https://www.govinfo.gov/content/pkg/FR-2024-03-28/pdf/2024-05972.pdf

10 United States Environmental Protection Agency. (2024, December 18). Carbon Tetrachloride (CTC); Regulation Under the Toxic Substances Control Act (TSCA). *Federal Register, 89* (243). https://www.govinfo.gov/content/pkg/FR-2024-12-18/pdf/2024-29517.pdf

11 United States Environmental Protection Agency. (2024, May 8). Methylene Chloride; Regulation Under the Toxic Substances Control Act (TSCA). *Federal Register, 89* (90). https://www.govinfo.gov/content/pkg/FR-2024-05-08/pdf/2024-09606.pdf

12 United States Environmental Protection Agency. (2024, December 18). Perchloroethylene (PCE); Regulation Under the Toxic Substances Control Act (TSCA). *Federal Register, 89* (243). https://www.govinfo.gov/content/pkg/FR-2024-12-18/pdf/2024-30117.pdf

13 United States Environmental Protection Agency. (2024, December 17). Trichloroethylene (TCE); Regulation Under the Toxic Substances Control Act (TSCA). *Federal Register, 89* (242). https://www.govinfo.gov/content/pkg/FR-2024-12-17/pdf/2024-29274.pdf

New Substances Added to Evaluation List

In December 2024, the EPA announced a final rule under TSCA Section 8(d) requiring manufacturers (including importers) of these chemicals to report data from unpublished health and safety studies, in addition to other information.[14]

These substances include:

- Acetaldehyde
- Acrylonitrile
- Benzenamine
- Vinyl chloride
- Benzene
- Ethylbenzene
- Naphthalene
- Styrene
- 4,4'-methylene bis(2-chloroaniline) (MBOCA)
- 4-tert-Octylphenol(4-(1,1,3,3-Tetramethylbutyl)-phenol)
- Bisphenol A
- Tribromomethane
- Triglycidyl isocyanurate
- Hydrogen fluoride*
- N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine (6PPD)*
- 2-anilino-5-[(4-methylpentan-2-yl) amino]cyclohexa-2,5-diene-1,4-dione (6PPD-quinone)*

*These chemicals were not originally included in the 2014 TSCA Work Plan for Chemical Assessments.

14 United States Environmental Protection Agency. (2024, March 26). Certain Existing Chemicals; Request To Submit Unpublished Health and Safety Data Under the Toxic Substances Control Act (TSCA). *Federal Register, 89 (59)*. https://www.govinfo.gov/content/pkg/FR-2024-03-26/pdf/2024-06303.pdf



How to Meet Requirements

Managing Customer Requests

After the TSCA recast, companies soon started reporting the effects of the changes. In June 2021, a poll of nearly 250 Assent webinar attendees showed that two-thirds had already received customer requests for supply chain data related to the restricted substances.

Manufacturers and suppliers should brace for a wave of data requests now that new 2024 restriction rules have been published. The restricted substances typically enter a supply chain at the early stages, and data may pass through several suppliers before reaching the ultimate requestor.

The Assent Sustainability Platform lets suppliers proactively share TSCA compliance declarations with customers. Suppliers can say goodbye to manually responding to each request individually, and their customers get rapid access to the data they need.

Learn More ›

QUESTION 1

Does your company do business in the U.S.?

- **NO** — Go to Question 2.
- **YES** — You have requirements.

QUESTION 2

Do you have customers that do business in the U.S.?

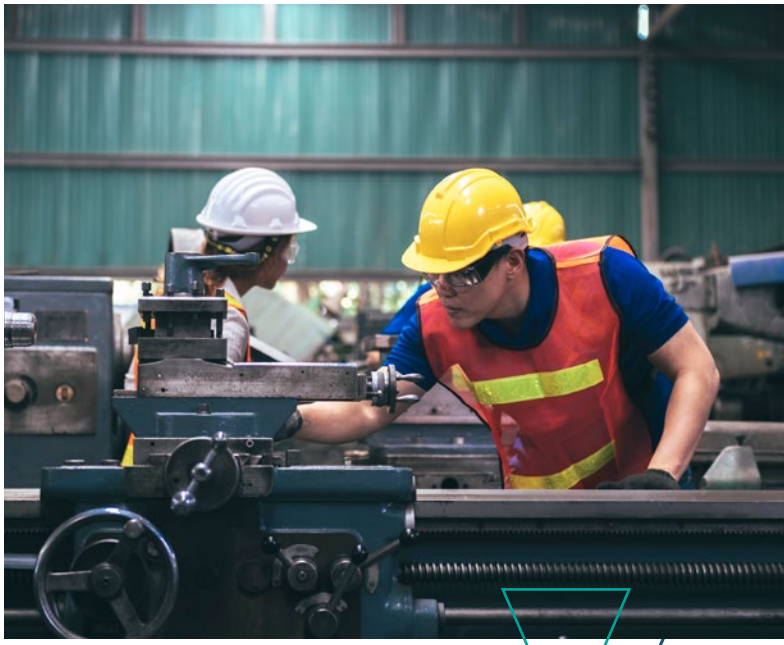
- **NO** — No action required.
- **YES** — You may be required to submit data to your customers.

Substance Scoping

Companies must engage their supply chains for granular substance data — a significant resource investment. This action may be required again as companies change suppliers or product designs and as TSCA evolves.

Expertise

Engaging regulatory experts regarding current and future updates to TSCA can inform compliance programs and help businesses identify supply chain risks and meet requirements faster



Assent's TSCA Solution

Data collection and validation are crucial to meeting TSCA requirements, but the most affected industries — such as electronics and industrial equipment manufacturing — have large and complex supply chains that make wide-scale collection complicated, costly, and a major headache.

With Assent, you can reclaim time back from manually emailing suppliers or wading through clunky spreadsheets. Our solution automates data collection and validation, and makes it easy to see which parts contain restricted substances. And when your suppliers join the Assent Sustainability Platform for free, they can proactively declare TSCA compliance so your data is immediately available — no more waiting for them to respond to surveys.



Here's how we save you money and time in your TSCA program:

- Automated and proactive supplier engagement, saving you hours of manual work
- Create product declarations for TSCA restrictions
- Configurable substance alerts to help you make smarter purchasing decisions
- Supplier training and technical support handled by Assent's experts, so you don't have to
- Proactive exemption expiry notifications sent to your suppliers
- Our team of regulatory experts monitor the EPA and keep the solution up to date with the latest requirements
- Create stronger supplier relationships using the Assent Sustainability Platform

TSCA is a constantly evolving compliance target. You need a program that adapts to changes and keeps you ahead of your supply chain risks. Book a demo of our TSCA solution to see it in action.

Get a Demo ›

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