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TSCA Section 4 Test Orders

Section 4 of the Toxic Substances Control Act (TSCA) allows EPA to require chemical manufacturers (including importers) and processors to develop information on existing chemicals and submit such information to EPA.

On this page:


- Overview of section 4 test orders
- List of chemicals subject to section 4 test orders


Overview of Section 4 Test Orders

Under section 4(a), EPA may issue an order requiring the development of information on a chemical if EPA finds that the chemical may present an unreasonable risk of injury to health or the environment and such information is needed to determine whether the chemical presents such an unreasonable risk.

EPA may also issue an order under section 4(a) requiring the development of information:

- to review a notice submitted under TSCA section 5 or to perform a risk evaluation under TSCA section 6(b);
- to implement a requirement imposed in a rule, order, or consent agreement under TSCA section 5(e) or (f), or in a rule promulgated under section 6(a);
- at the request of a Federal implementing authority under another Federal law, to meet the regulatory testing needs of that authority with regard to toxicity and exposure;
- to determine if a chemical substance or mixture manufactured, processed, or distributed in commerce solely for export presents an unreasonable risk of injury to health or the environment in the U.S., pursuant to TSCA section 12(a)(2); and
- to prioritize a chemical substance under TSCA section 6(b) (subject to certain limitations).

View a presentation providing information for entities subject to orders under EPA's TSCA Section 4(a) authority, including an overview of the issuance of test orders, responding to a test order, building consortia, and applicable TSCA fees.  [Responding to TSCA Section 4 Test Orders \(pdf\) <https://epa.gov/system/files/documents/2022-01/r2-test-order-presentation-final.pdf>](https://epa.gov/system/files/documents/2022-01/r2-test-order-presentation-final.pdf)

View Questions and Answers intended to help clarify the requirements of an Order issued pursuant to Section 4(a) of TSCA (15 U.S.C. 2603(a)).  [Test Orders Under TSCA Section 4: Questions and Answers \(pdf\) <https://epa.gov/system/files/documents/2022-01/section-4-test-order-faqs-final_2.pdf>](https://epa.gov/system/files/documents/2022-01/section-4-test-order-faqs-final_2.pdf)




Find reference guides on Test Order reporting via the CDX web platform <<https://epa.gov/node/261927>>.

List of Chemicals Subject to Section 4 Test Orders

Since the 2016 Lautenberg Act amendments to TSCA, EPA has issued section 4 test orders for the following list of chemicals. Copies of the test orders can be found in the dockets linked below.

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Chemical Name 	CAS Number 	Chemical Uses	Docket Number	Test Order and Effective Date 	Testing Required	Title of Study Received by EPA
1,1,2-Trichloroethane < https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-112-trichloroethane >	79-00-5	1) Intermediate in: Plastic manufacturing; Petrochemical manufacturing; All other chemical product manufacturing 2) Industrial, commercial, and consumer adhesives and sealants 3) Commercial laboratory chemicals	EPA-HQ-OPPT-2018-0421 < https://www.regulations.gov/docket/epa-hq-oppt-2018-0421 >	January 19, 2021 < https://epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-section-4a2-test-order-112-trichloroethane >	Environmental Hazard Testing (OECD 233), and facility- specific Occupational Exposure Testing (NIOSH Method 1003; OECD 428; Dermal Hand Wipe Sampling)	

Chemical Name	CAS Number	Chemical Uses	Docket Number	Test Order and Effective Date	Testing Required	Title of Study Received by EPA
1,1-Dichloroethane < https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-11-dichloroethane >	75-34-3	1) As intermediate in all other basic organic chemical manufacturing 2) As intermediate in all other chemical product and preparation manufacturing 3) Commercial laboratory chemical	EPA-HQ-OPPT-2018-0426 < https://www.regulations.gov/docket/epa-hq-oppt-2018-0426 >	January 19, 2021 < https://epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-section-4a2-test-order-11-dichloroethane >	Environmental Hazard Testing (OECD 233), and facility-specific Occupational Exposure Testing (NIOSH Method 1003; OECD 428; Dermal Hand Wipe Sampling)	
1,2-Dichloroethane < https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-12-dichloroethane >	107-06-2	1) As intermediate in: Petrochemical manufacturing; Plastic material and resin manufacturing; All other basic organic chemical manufacturing 2) Incorporation in fuels and fuel additives: All other petroleum and coal products manufacturing 3) Incorporation in processing aids specific to petroleum production 4) Industrial adhesives and sealants	EPA-HQ-OPPT-2018-0427 < https://www.regulations.gov/docket/epa-hq-oppt-2018-0427 >	January 19, 2021 < https://epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-section-4a2-test-order-12-dichloroethane >	Facility-specific Occupational Exposure Testing (NIOSH Method 1003; OECD 428; Dermal Hand Wipe Sampling)	

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		5) Industrial functional fluids (closed systems) as heat transferring agent 6) Industrial paste lubricants and greases 7) Industrial oxidation inhibitor in controlled oxidative chemical reactions 8) A component of industrial degreasing and cleaning solvents 9) Commercial plastic and rubber products 10) Commercial fuels and related products 11) Commercial laboratory chemical (e.g., reagent) 12) Commercial embalming agent 13) Consumer plastic and rubber products				

Chemical Name	CAS Number	Chemical Uses	Docket Number	Test Order and Effective Date	Testing Required	Title of Study Received by EPA
1,2-Dichloropropane < https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-12-dichloropropane >	78-87-5	1) As intermediate in all other basic organic chemical manufacturing 2) Incorporation in all other chemical product and preparation manufacturing 3) Industrial processing aids, not otherwise listed 4) Commercial laboratory chemicals 5) Commercial cleaning and furnishing care product: all-purpose liquid spray cleaner; all-purpose waxes and polishes; all-purpose liquid cleaner/polish 6) Consumer cleaning and furnishing care product: all-purpose liquid spray cleaner; all-purpose waxes and polishes; all-purpose liquid cleaner/polish	EPA-HQ-OPPT-2018-0428 < https://www.regulations.gov/docket/epa-hq-oppt-2018-0428 >	January 19, 2021 < https://epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-section-4a2-test-order-12-dichloropropane >	Environmental Hazard Testing (OECD 233), and facility-specific Occupational Exposure Testing (NIOSH Method 1003; OECD 428; Dermal Hand Wipe Sampling)	
4,4'-(1-Methylethylidene)bis[2,6-dibromophenol] < https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-44-1-methylethylidenebis26 >	79-94-7	1) Processing as a reactant for flame retardants in plastic material and resin manufacturing 2) Processing as a	EPA-HQ-OPPT-2018-0462 < https://www.regulations.gov/docket/epa-hq-oppt-2018-0462 >	January 19, 2021 < https://epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-section-4a2-test-order-44-1-methylethylidenebis26 >	Environmental Hazard Testing (OCSPP 850.4400; OECD 225; OECD 233),	

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
managing-chemicals-under-tsca/risk-evaluation-44-1-methylethylidenebis2-6>		reactant for intermediates in other chemical product and preparation manufacturing 3) Incorporation into a formulation, mixture or reaction product for flame retardants: electrical equipment, appliance and component manufacturing; plastic material and resin manufacturing; plastics product manufacturing; computer and electronic product manufacturing 4) Incorporation into a formulation, mixture or reaction product for adhesive manufacturing 5) Incorporation as reactive flame retardant in printed circuit boards and semiconductor packages 6) Incorporation as reactive flame retardant in interior material for transportation equipment 7) Incorporation as additive flame retardant			and facility-specific Occupational Exposure Testing (Inhalation Monitoring; Dermal Hand Wipe Sampling; OECD 428)	

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		<p>in plastic electronic enclosures</p> <p>8) Electronic product recycling</p> <p>9) Industrial, commercial, and consumer electrical and electronic products (e.g., reactive flame retardant)</p> <p>10) Industrial/commercial laminate (e.g., reactive flame retardant in prepreg material for automotive and aviation interiors)</p> <p>11) Industrial, commercial, and consumer electrical and electronic products (e.g., additive flame retardant in plastic enclosures)</p> <p>12) Industrial/commercial building/construction materials not covered elsewhere</p> <p>13) Industrial, commercial and consumer use in batteries (e.g., adhesive in lead-acid battery)</p>				

Chemical Name	CAS Number	Chemical Uses	Docket Number	Test Order and Effective Date	Testing Required	Title of Study Received by EPA
		casings) 14) Industrial, commercial, and consumer furnishing, cleaning, and treatment/care products: fabric, textile, and leather products not covered elsewhere 15) Industrial/commercial laboratory chemical				
Anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-1,3,8,10(2H,9H)-tetrone or C.I. Pigment Violet 29 < https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-ci-pigment-violet-29 >	81-33-4	1) As intermediate to make or adjust other perylene pigments 2) Incorporation in paints and coatings primarily in the automobile industry 3) Incorporation in plastic and rubber products primarily in automobiles and industrial carpeting 4) Merchant ink for commercial printing 5) Consumer watercolor and artistic color	EPA-HQ-OPPT-2020-0070 < https://www.regulations.gov/docket/epa-hq-oppt-2020-0070 >	March 4, 2020	solubility testing and occupational exposure monitoring	Water solubility; Octanol solubility; Occupational Inhalation Exposure: Particulates Not Otherwise Regulated, Respirable
o-Dichlorobenzene < https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-ci-pigment-violet-29 >	95-50-1	1) Processing as a reactant in all other chemical product and preparation	EPA-HQ-OPPT-2018-0444 < https://www.regulations.gov/docket/epa-hq-oppt-2018-0444 >	January 19, 2021 < https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-ci-pigment-violet-29 >	Environmental Hazard Testing (OPPTS 850.1735;	

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
tscs/risk-evaluation-o-dichlorobenzene>		manufacturing 2) Processing as an intermediate in all other basic organic chemical manufacturing 3) Incorporation as a solvent (which become part of product formulation or mixture) in plastic material and resin manufacturing; petroleum lubricating oil and grease manufacturing; all other chemical product and preparation manufacturing 4) Incorporation as processing aid in soap, cleaning compound, and toilet preparation manufacturing 5) Industrial solvents (which become part of product formulation or mixture) in Printing ink manufacturing; Paint and coating manufacturing; Synthetic dye and pigment manufacturing; All other basic organic chemical manufacturing 6) Industrial functional		under-tsca/tsca-section-4a2-test-order-o-dichlorobenzene>	OECD 233) and facility-specific Occupational Exposure Testing (NIOSH Method 1003; OECD 428; Dermal Hand Wipe Sampling)	

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		fluids (closed system): all other basic organic chemical manufacturing 7) Commercial ink and toners 8) Commercial coatings and paints, thinners, and paint removers 9) Commercial and consumer lubricants and greases (e.g., oil additives, degreasers, penetrant for pneumatic tools) 10) Commercial and consumer fuel additive for gasoline and diesel 11) Commercial and consumer continuous action air fresheners (including toilet/urinal deodorizers/fresheners) 12) Commercial laboratory chemicals 13) Commercial and consumer sheep- branding fluid; cleaning and furnishing care products 15) Consumer thinners (Products for cleaning brushes and tools used with overglazes)				

<p>p-Dichlorobenzene Chemical Name <https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-p-dichlorobenzene></p>	<p>106-46-7 CAS Number</p>	<p>1) As intermediate in plastic material and resin manufacturing, all other basic organic chemical manufacturing 2) Incorporation in intermediate in plastic material and resin manufacturing (including PPS, high performance plastics) 3) Incorporation in solvents ((which become part of product formulation or mixture) in Plastic material and resin manufacturing); Petroleum lubricating oil and grease manufacturing; All other chemical product and preparation manufacturing 4) Incorporation in Odor agents in Soap, cleaning compound, and toilet preparation manufacturing (e.g. urinal block, toilet/garbage deodorizers) 5) Incorporation into articles including plastic product manufacturing 6) Industrial solvents (which become part of</p>	<p>EPA-HQ-OPPT-2018-0446 Docket Number <https://www.regulations.gov/docket/epa-hq-oppt-2018-0446></p>	<p>January 19, 2021 Test Order and Effective Date <https://www.regulations.gov/assessing-and-managing-chemicals-under-tsca/tsca-section-4a2-test-order-p-dichlorobenzene></p>	<p>Environmental Hazard Testing Required (OPPTS 850.1735; OECD 233), and facility-specific Occupational Exposure Testing (NIOSH Method 1003; OECD 428; Dermal Hand Wipe Sampling)</p>	<p>Title of Study Received by EPA</p>

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		product formulation or mixture) in synthetic dye and pigment manufacturing 7) Industrial functional fluids (closed system) in all other basic organic chemical manufacturing 8) Commercial continuous action air fresheners (including toilet/urinal/garbage deodorizers/fresheners), cleaning and furnishing care uses 9) Commercial lubricants and greases, degreasers (for oil additives for engines and pneumatic tools) 10) Commercial fuel additive for gasoline and diesel 11) Commercial laboratory chemicals and analytical uses, embalming uses 12) Commercial and consumer building and construction products e.g., plastic foam insulation, foam sealant 13) Consumer continuous action air				

Chemical Name	CAS Number	Chemical Uses	Docket Number	Test Order and Effective Date	Testing Required	Title of Study Received by EPA
		<p>fresheners (including toilet/urinal deodorizers/fresheners)</p> <p>14) Consumer lubricants and greases (greases and oils for engines, gears and pneumatic tools)</p> <p>15) Consumer fuel additive for gasoline and diesel</p>				
<p>Phosphoric acid, Triphenyl Ester</p> <p><https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-phosphoric-acid-triphenyl-ester-tpp></p>	115-86-6	<p>1) Incorporation in flame retardant used in all other chemical product and preparation manufacturing</p> <p>2) Incorporation in flame retardant used in computer and electronic product manufacturing</p> <p>3) Incorporation in flame retardant used in plastics material and resin manufacturing</p> <p>4) Incorporation in plasticizer and flame retardant used in plastic product manufacturing</p> <p>5) Incorporation in flame retardant used in rubber product manufacturing</p>	<p>EPA-HQ-OPPT-2018-0458</p> <p><https://www.regulations.gov/docket/epa-hq-oppt-2018-0458></p>	<p>January 19, 2021</p> <p><https://epa.gov/assessing-and-managing-chemicals-under-tsca/tsca-section-4a2-test-order-phosphoric-acid-triphenyl></p>	<p>Environmental Hazard Testing (OCSPP 850.4400; OCSPP 850.4500; OECD 225; OECD 233; OECD 222), and facility-specific Occupational Exposure Testing (Inhalation Monitoring; Dermal Hand Wipe Sampling; OECD 428)</p>	

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		6) Incorporation in flame retardant used in textiles, apparel, and leather manufacturing 7) Incorporation in flame retardant used in utilities 8) Incorporation in paint additive and coating additive used in paint and coating manufacturing 9) Incorporation in paint additive and coating additive used in paint and coating manufacturing 10) Incorporation in flame retardant used in furniture and related product manufacturing 11) Incorporation in flame retardant used in furniture and related product manufacturing 12) Incorporation in flame retardant used in operational fluids, maintenance fluids and semisolids, reactive fluids, and solids used in aerospace industry 13) Incorporation in flame retardant used in				

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		turbine engine oils in aviation 14) Incorporation in flame retardant used in turbine engine oils in non-aviation industries 15) Incorporation in flame retardant in lubricants and greases 16) Incorporation into article: flame retardant used in plastics material and resin manufacturing; plasticizer used in plastics product manufacturing; flame retardant used in furniture and related product manufacturing 17) Industrial/commercial paints and coatings 18) Industrial, commercial, and consumer plastic and rubber products not covered elsewhere 19) Industrial/commercial laboratory chemical 20) Industrial, commercial, and consumer lubricants				

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		and greases 21) Industrial/commercial operational fluids, maintenance fluids and semisolids, reactive fluids, and solids used in aerospace industry 22) Industrial/commercial turbine engine oils used in aviation 23) Industrial/commercial turbine engine oils used in non-aviation industries 24) Industrial, commercial, and consumer electrical and electronic products 25) Industrial, commercial, and consumer foam seating and bedding products 26) Industrial/commercial furniture and furnishings not covered elsewhere				
trans-1,2-Dichloroethylene	156-60-5	1) Reactant in plating agents and surface	EPA-HQ-OPPT-2018-0465 < https://www.regulations.gov/docket/epa-	January 19, 2021 < https://epa.gov/assessing-	Facility-specific	

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
https://epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-trans-12-dichloroethylene		treating agents 2) Intermediate in chemical product and preparation manufacturing 3) Incorporation in solvents for cleaning or degreasing 4) Incorporation in solvents which become part of product formulation or mixture 5) Incorporation in adhesives and sealant chemicals 6) Incorporation in foam blowing additive 7) Incorporation in carrier solvent in adhesives, coatings, inks, lubricants, and silicones 8) Incorporation in articles: propellant and blowing agent in plastics product manufacturing; flexible polyurethane foam manufacturing 9) Industrial/commercial solvent: vapor degreaser 10) Industrial/commercial solvent: aerosol spray	hq-oppt-2018-0465	and-managing-chemicals-under-tsca/tsca-section-4a2-test-order-trans-12-dichloroethylene	Occupational Exposure Testing (NIOSH Method 1003; OECD 428; Dermal Hand Wipe Sampling)	

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		cleaner/degreaser 11) Industrial/commercial solvent: non-aerosol cleaner/degreaser 12) Industrial/commercial solvent: flux remover (liquid and aerosol) 13) Industrial/commercial cleaning and furnishing care products: spot cleaner; stain remover 14) Industrial/commercial functional fluids (open systems): smoothing fluid in additive manufacturing 15) Industrial/commercial anti-adhesive agent: mold release 16) Industrial/commercial solvents: urethane coatings 17) Industrial/commercial liquid and spray lubricants and greases, and penetrating lubricants				

Chemical Name ▲	CAS Number ▼	Chemical Uses	Docket Number	Test Order and Effective Date ▼	Testing Required	Title of Study Received by EPA
		18) Industrial/commercial solvent-based adhesives and sealants; adhesive accelerant 19) Industrial/commercial functional fluids (closed systems): refrigerant 20) Industrial/commercial extraction solvent for thermoplastics 21) Industrial/commercial laboratory chemicals 22) Commercial and consumer propellants and blowing agents particularly in polyurethane foam building insulation 23) Commercial solvent for cleaning or degreasing: refrigerant flush 24) Consumer solvent for cleaning or degreasing: aerosol degreaser 25) Consumer adhesive accelerant				

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