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Nontechnical Summary of the TSCA Risk Evaluation for Asbestos (Part 2)

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Why Is EPA Providing This Document?

EPA has evaluated the risks of asbestos to human health and the environment under the Toxic Substances Control Act (TSCA) in two parts. This document summarizes the results of the completed Part 2 of the asbestos risk evaluation.

What Is Asbestos and How Is It Used?

Asbestos is a naturally occurring fibrous silicate mineral. Historically, asbestos was primarily used as a fire/flame retardant in construction materials like floor tiles, insulation, and shingles. Asbestos was also added to a wide variety of industrial/commercial and consumer products, ranging from brake pads to gaskets to cement water pipes. These "legacy uses" and their associated disposal of six fiber types of asbestos (chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite), Libby amphibole asbestos, and asbestos containing talc are included in Part 2 of the asbestos risk evaluation.

How Might Asbestos Harm People Who Are Exposed?

Based on long-term studies of human populations, exposure to inhaled asbestos fibers is associated with a range of health effects. These include *mesothelioma*[1] and cancer of the lung, ovaries, and larynx. Other, non-cancerous, effects include *asbestosis* (long-term lung inflammation and scarring), *pleural* (lining of the lungs) thickening, and overall impairment of lung function.

How Might Persons be Exposed to Asbestos?

Exposure to asbestos occurs when asbestos-containing materials are released into the air, typically when the materials are disturbed. Asbestos fibers can be released to the air during construction, renovation, or demolition of asbestos-containing materials in older homes, schools, or commercial buildings. Exposure to asbestos can occur by breathing in airborne ("friable") asbestos fibers in and near older buildings and construction sites.

Construction workers can be exposed when they cut through pipes insulated with asbestos or demolish asbestos-containing building materials. Workers might also expose others if fibers adhere to their clothing and is brought home. Firefighters can be exposed to friable asbestos by entering older buildings during an emergency that disturbs asbestos containing materials. In residential areas, do-it-yourself (DIY) home remodelers and bystanders can be exposed to friable asbestos fibers when they remove asbestos-containing materials like ceiling tiles .

The Agency also assessed consumer and occupational exposure to imported asbestos-containing talc products, such as fillers and putties used in construction. EPA evaluated all these exposures to determine if there was unreasonable risk to human health.

How Has EPA Assessed Asbestos under TSCA?

Finalized in late 2020, the *Risk Evaluation for Asbestos (Part 1)* focused on current uses of chrysotile asbestos fibers. EPA's 2024 *Risk Evaluation for Asbestos (Part 2)* expanded this

[1] Mesothelioma is a cancer that forms in the mesothelium, the thin tissue that lines many internal organs, most commonly around the lungs.

evaluation to consider risks to the following groups:

- workers;
- "take home" exposures;
- DIY home-remodelers and renovators who dismantle asbestos-containing materials; and
- members of the general population exposed to asbestos that is released into the environment via structural fires or through building demolition.

The 2024 assessment also considered groups of people who have higher exposures to asbestos or are more likely or liable to be harmed by exposure. Such "potentially exposed or susceptible subpopulations" include:

- workers, including career firefighters who go into burning buildings containing asbestos, maintenance workers, and construction workers routinely involved in demolition work;
- DIY home-remodelers and renovators in older buildings who could disturb asbestos;
- Children, because health effects from exposures early in life may not be apparent for decades;
- People who smoke or are especially susceptible to respiratory effects.

The 2024 risk evaluation also assessed risks to the environment, including aquatic organisms like sunfish, clams, and minnows. It also assessed risks to land animals that might be exposed to asbestos.

Why Did EPA Evaluate Asbestos in Two Parts?

Finalized in late 2020, Part 1 of the risk evaluation focused on chrysotile asbestos fibers, which are the only fibers with ongoing domestic use (import, processing, or distribution). Following a 2019 court ruling that required EPA to evaluate the risks of legacy asbestos,[2] the Agency determined that the risk evaluation would be issued in two parts. In Part 2, released in November 2024, the Agency evaluated legacy uses (*i.e.*, uses without ongoing or prospective manufacturing, processing, or distribution for use) and associated disposals of (1) chrysotile asbestos, (2) other types of asbestos fibers, (3) use and importation of asbestos-containing talc products, and (4) additional human hazard non-cancer effects of asbestos exposure that were not considered in Part 1.

What Is EPA's Final Risk Determination for Asbestos under TSCA?

Asbestos presents an unreasonable risk of injury to human health but not to the environment.

EPA considered the following factors when determining unreasonable risk from asbestos:

- the types of health effects being considered;
- the reversibility of effects;
- exposure considerations (the duration, amount, and frequency of asbestos exposures), as well as the populations exposed; and
- the Agency's confidence in the risk estimates.

EPA evaluated TSCA conditions of use.[3] The following conditions of use significantly contribute to the unreasonable risk:

- Industrial/commercial use – chemical substances in construction, paint, electrical, and metal products – construction and building materials covering large surface areas – paper articles; metal articles; stone plaster, cement, glass, and ceramic articles;
- Industrial/commercial use – chemical substances in construction, paint, electrical, and metal products – machinery, mechanical appliances, electrical/electronic articles

[2] See *Safer Chemicals, Healthy Families v. EPA*, 943 F.3d 397 (9th Cir. 2019).

[3] Under TSCA, conditions of use are the specific circumstances, "as determined by the Administrator, under which a chemical substance is intended, known, or reasonably foreseen to be manufactured, processed, distributed in commerce, used, or disposed of."

- Industrial/commercial use – chemical substances in construction, paint, electrical, and metal products – other machinery, mechanical appliances, electronic/electronic articles
- Industrial/commercial use – chemical substances in furnishing, cleaning, treatment care products – construction and building materials covering large surface areas – fabrics, textiles, and apparel
- Industrial/commercial use – chemical substances in furnishing, cleaning, treatment care products – furniture and furnishings – stone, plaster, cement, glass, ceramic articles, metal articles, and rubber articles
- Consumer use – chemical substances in construction, paint, electrical, and metal products – construction and building materials covering large surface areas – paper articles; metal articles; stone, plaster, cement, glass, and ceramic articles
- Disposal

The following TSCA conditions of use do not significantly contribute to the unreasonable risk:

- Industrial/commercial use – chemical substances in construction, paint, electrical, and metal products – fillers and putties
- Industrial/commercial use – chemical substances in construction, paint, electrical, and metal products – solvent based/water based paint
- Industrial/commercial use – chemical substances in construction, paint, electrical, and metal products – electrical batteries and accumulators
- Industrial/commercial use – chemical substances in packaging, paper, plastic – packaging (excluding food packaging) – rubber articles; plastic articles (hard); plastic articles (soft)
- Industrial/commercial use – chemical substances in automotive, fuel, agriculture, outdoor use products – lawn and garden care products
- Industrial/commercial use – mining of non-asbestos commodities – mining of non-asbestos commodities
- Industrial/ commercial use – laboratory chemicals – laboratory chemicals
- Industrial/commercial use – chemical substances in products not described by other codes – other (artifacts)
- Industrial/commercial use – chemical substances in products not described by other codes – other (aerospace applications)
- Consumer use – chemical substances in construction, paint, electrical, and metal products – machinery, mechanical appliances, electrical/ electronic articles
- Consumer use – chemical substances in construction, paint, electrical, and metal products – fillers and putties
- Consumer use – construction, paint, electrical, and metal products – solvent-based/water-based paint
- Consumer use – chemical substances in furnishing, cleaning, treatment care products – construction and building materials covering large surface areas, including fabrics, textiles, and apparel
- Consumer use – chemical substances in furnishing, cleaning, treatment care products – furniture and furnishings – stone, plaster, cement, glass, and ceramic articles; metal articles; or rubber articles
- Consumer use – chemical substances in packaging paper, plastic, toys, hobby products – packaging (excluding food packaging) – rubber articles; plastic articles (hard); plastic articles (soft)
- Consumer use – chemical substances in packaging paper, plastic, toys, hobby products – toys intended for children's use (and child dedicated articles) – fabrics, textiles, and apparel; or plastic articles (hard)
- Consumer use – chemical substances in products not described by other codes – other (artifacts)
- Consumer use – chemical substances in automotive, fuel, agriculture, outdoor use products – lawn and garden care products

Human Health: Long-term exposure to asbestos fibers can cause mesothelioma, lung, ovarian, and laryngeal cancers. Exposure over longer periods can also cause asbestosis, pleural thickening, and impaired lung function. These risks apply to (1) workers who breathe in asbestos, such as career firefighters, maintenance workers, and construction workers; (2) children who are more susceptible to the respiratory effects of asbestos; (3) individuals exposed through DIY activities; and (4) smokers or those persons especially susceptible to respiratory effects.

The Environment: EPA did not find that asbestos presents an unreasonable risk to the environment.

The Agency did not assess exposures from asbestos unintentionally present in trace amounts in products that are not subject to TSCA, such as personal care products with talc containing asbestos.

How Will EPA Protect Human Health from Asbestos under TSCA?

EPA finalized an Asbestos Risk Management Rule banning all ongoing uses of chrysotile asbestos based on the Part 1 asbestos risk evaluation. Following a final determination of unreasonable risk in the Part 2 risk evaluation, TSCA requires the Agency to address the unreasonable risk. EPA will propose additional regulatory measures to address the unreasonable risk identified in Part 2. After taking public comment on proposed regulations, TSCA requires the Agency to finalize risk management regulations within 2 years of the completed risk evaluation.

For More Technical Information, Including Previous EPA Actions, See the Following:

- Risk Evaluations for Existing Chemicals under TSCA
- Proposed Significant New Uses Rules for Certain Non-ongoing Uses: Flame Retardants
- 2023 White Paper: Quantitative Human Health Approach to be Applied in the Risk Evaluation for Asbestos Part 2 – Supplemental Evaluation including Legacy Uses and Associated Disposals of Asbestos
- 2020 Final Risk Evaluation for Asbestos, Part 1: Chrysotile Asbestos
- Asbestos Part 1; Chrysotile Asbestos; Regulation of Certain Conditions of Use Under the Toxic Substance Control Act (TSCA)