

Health & Safety Extract

- Aerogels are classified as **amorphous silica**
- Aspen's silica supply is 100% synthetic, not mined, so there is zero crystalline silica content
- Amorphous silica is used in many consumer goods such as toothpaste and cosmetics
- Aerogels are *nanoporous*, not *nanoparticulate*
- Workplace monitoring indicates that OSHA would consider this a "nuisance dust" with the following personal exposure limits (PEL):
 - Inhalable particles ($>10\ \mu\text{m}$) $\rightarrow 15\ \text{mg}/\text{m}^3$
 - Respirable particles ($<10\ \mu\text{m}$) $\rightarrow 5\ \text{mg}/\text{m}^3$

EPA Health Conclusions

- "Silica, amorphous, fumed (crystalline free) has a demonstrated lack of toxicity"
- "Is not expected to pose a carcinogenic risk."
- "Silicas are inert when ingested, and unlikely to be absorbed through the skin."
- "There should be no concerns for human health, whether the exposure is acute, subchronic, or chronic by any route."



Aerogels are comprised of **amorphous** silica



Aerogels contain zero **crystalline** silica

Thermablok Aerogel - High Performance Insulation for Building Envelopes



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Concerns around dust exposure are common to most industrial insulation materials. Proper dust control and PPE will ensure a safe working environment.



Thermablok Aerogel - High Performance Insulation for Building Envelopes