

ALASKA TOP HAZARDOUS AIR POLLUTANTS

PHOSGENE

#10	Non Cancer Endpoint
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The inventory method and available data do not indicate emissions occurring in the three inventoried communities. However, this does not mean there are no emissions of this pollutant in the state.

Reference Concentration (from the California Environmental Protection Agency)

- Phosgene - 0.0003 mg/m³ for lung toxicity - rats

Inventory Estimates of Phosgene

Community	Ranking by Mass	Total Emitted (tons per year)	Top Sources
Anchorage*	n/a	---	n/a
Fairbanks*	n/a	---	n/a
Juneau*	n/a	---	n/a
Total of 3 Communities		---	

* No data to indicate emissions

Phosgene Sources* Expected in Alaska

* No data to indicate emissions

Potential Occupational Exposure to Phosgene

welding	isocyanate manufacturing	intermediate in synthesis of carbonic acid esters and acid chlorides.
intermediate in synthesis of dyes, insecticides,		

and pharmaceuticals		
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Phosgene Emission Inventory* Improvements

* No data to indicate emissions

Phosgene Health Effects

Low (<0.5 ppm): Odor recognition occurs around 0.5 ppm, but is not sufficient to protect. May be health problems.

Medium (0.5 - 5 ppm): Exposure to 1 ppm causes little irritation, but may lead to fluid in the lungs after some period of time. 3 ppm causes immediate throat irritation. 4 ppm causes irritation of the eyes, and 5 ppm causes a cough.

High (30 - 300 ppm): Three phases occur. first phase includes eye and throat pain, with chest tightness and shortness of breath. Some heart effects occur in the first phase. The second phase is without symptoms. In the third phase, fluid collects in the lungs, sometimes leading to death. Exposure to 50 ppm may be immediately fatal.

Cancer ranking: EPA has classified phosgene as a Group D compound, not classifiable as to human carcinogenicity, based on a lack of animal and human data.