

ALASKA TOP HAZARDOUS AIR POLLUTANTS

BIS(CHLORMETHYL)ETHER

| | |
|---------------------------|---------------------------|
| #8 | <u>Minimum Risk Level</u> |
| <u>Class A Carcinogen</u> | |

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.

Inhalation Unit Risk Estimate for Cancer

- Bis(chloromethyl)ether - 0.062 ($\mu\text{g}/\text{m}^3$)⁻¹ for lung tumors - people

Minimum Risk Level

- Bis(chloromethyl)ether - 0.0014 mg/m³ for respiratory effects - rats

Inventory Estimates of Bis(chloromethyl)ether

| 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

Bis(chloromethyl)ether Sources Expected* in Alaska

* No data to indicate emissions

Potential Occupational Exposure to Bis(chloromethyl)ether

- manufacture of industrial polymers

Bis(chloromethyl)ether Emission Inventory* Improvements

* No data to indicate emissions

Bis(chloromethyl)ether Health Effects

There is not enough data to ascertain specific effects from specific exposure concentrations. Studies indicate the following: Bis(chloromethyl)ether is extremely suffocating at small concentrations so that it is rare for acute poisonings to occur. It is an irritant of the respiratory tract, which may cause fluid in the lungs or bronchitis with long term inhalation of high concentrations. Below a concentration of 10 ppm, it is not considered an irritant.

Cancer ranking: The EPA classifies bis(chloromethyl)ether as a Group A carcinogen for lung cancer. Group A carcinogens are considered known human carcinogens, like cigarette smoke. There is a 0.062 (approximately 3 in 50) increase in lifetime risk of leukemia for every one $\mu\text{g}/\text{m}^3$ of continuous bis(chloromethyl)ether exposure over a lifetime.