ALASKA TOP HAZARDOUS AIR POLLUTANTS

HEXAMETHYLENE-1,6-DIISOCYANATE

#2	Non Cancer Endpoint

Reference Concentration

- Hexamethylene-1,6-Diisocyanate Compounds- 0.00001 mg/m^3 for degeneration of the inner surface cell layer of the nose - rats

Inventory Estimates of Hexamethylene-1,6-Diisocyanate

Community	Ranking by Mass	Total Emitted (tons per year)*	Top Sources
Anchorage	50 of 71	0.059	military
Fairbanks	54 of 58	0.010	military
Juneau**	----	----	
Total of 2 Communities		0.069	

* The mass emission rates are based on input data that may or may not be accurate. The reader should not consider the inventory accurate to three decimal places (one thousandth of a ton). The use of three decimal places allows us to acknowledge small quantities of pollutants rather than showing the emission rate as zero.
** No data to indicate emissions

Hexamethylene-1,6-Diisocyanate Sources Expected in Alaska

- military bases

Potential Occupational Exposure to Hexamethylene-1,6-Diisocyanate

- use of polyurethane paint in spray painting, such as automobiles
- found in medical adsorbents, contact lenses, and dental materials

Hexamethylene-1,6-Diisocyanate Emission Inventory Improvements

- No outstanding concerns

Hexamethylene-1,6-Diisocyanate Health Effects

The following are estimated health effects from a lifetime of exposure to the listed concentrations, unless

otherwise noted. For Hexamethylene-1,6-Diisocyanate, there are few studies outlining an effect from a specific "dose" or concentration. The following are best estimates.

Low level (<0.03 mg/m^3 [0.2 ppb]): May cause sensitivity of lung to injury or allergy. Long term exposures may lead to asthma or chronic bronchitis. Short term exposures (7.5 hours) in controlled experiments seem to have no effect.

Medium level (0.03 - 1.0 mg/m^3 [0.2 - 6.0 ppb]): Occupational exposures lead to decreased lung function around 1 mg/m^3.

High level (? mg/m^3): Impacts respiratory tract mucous membranes leading to pulmonary edema.

Cancer ranking: EPA has not classified hexamethylene-1,6-diisocyanate for carcinogenicity.