

New Jersey Department of Environmental Protection  
Division of Air Quality  
Bureau of Evaluation and Planning  
Air Quality Evaluation Section

**REVISIONS TO THE NJDEP/DAQ INHALATION TOXICITY VALUES  
AND THE RISK SCREENING WORKSHEET**

June 2020

The NJDEP Division of Air Quality list of inhalation toxicity values and the risk screening worksheet have been updated.

Specific changes to the unit risk factors (URFs), long-term reference concentrations (RfCs), and short-term RfCs are noted below. The revisions are incorporated into the list of “Toxicity Values for Inhalation Exposure,” dated June 2020. This replaces the list dated August 2018. The list, which includes references, can be found at [www.nj.gov/dep/aqpp/risk.html](http://www.nj.gov/dep/aqpp/risk.html).

\* Changes implemented on June 2020.

***Unit Risk Factors***

**Changes (all values are in units “per  $\mu\text{g}/\text{m}^3$ ”)**

Benzo(a)pyrene – Changed from 1.1E-3 (Cal 11) to 6.0E-4 (IRIS) \*  
Ethylene oxide – Changed from 3E-3 (IRIS) to 5E-3 (IRIS) \*  
Nickel and compounds – Changed from 2.4E-4 (IRIS) to 4.8E-4 (IRIS) \*  
Tetrachloroethylene – Changed from 5.9E-6 (Cal 11) to 6.1E-6 (Cal 18) \*  
Ethylene oxide – Changed from 8.8E-5 (Cal 11) to 3E-3 (IRIS)  
Chloroprene – Corrected from 3E-4 (IRIS) to 5E-4 (IRIS)  
1,4-Dioxane - Changed from 7.7E-6 (IRIS) to 5E-6 (IRIS)  
Hexachloroethane – Changed from 4E-6 (IRIS, deleted) to 1.1E-5 (Cal 15b)  
Methylene chloride – Changed from 4.7E-7 (IRIS) to 1.3E-8 (IRIS)  
Trichloroethylene – Changed from 2E-6 (Cal) to 4.8E-6 (IRIS)

**Deletions**

Ethyl acrylate (USEPA 85)

**Additions**

Bromodichloromethane (Cal 15b)  
Dibromochloromethane (USEPA 14)

***Reference Concentrations (Long-Term)***

**Changes (all values are in  $\mu\text{g}/\text{m}^3$ )**

Chlordane – Changed from 0.7 (IRIS) to 0.02 (ATSDR) \*  
Ethylene glycol monobutyl ether – Changed from 1.6E+3 (IRIS) to 82 (Cal 18) \*  
Methylenediphenyl diisocyanate (4,4-) – Changed from 0.6 (IRIS) to 0.08 (Cal 18) \*  
Toluene – Changed from 5.0E+3 (IRIS) to 3.76E+3 (ATSDR) \*  
Toluene diisocyanate (2,4-), (2,6-) and mixtures (2,4-/2,6-) – Changed from 0.07 (IRIS) to 0.008 (Cal 18) \*  
Trimethylbenzene (1,2,4-) from 7 (USEPA14) to 60 (IRIS) \*

Acetone cyanohydrin – Changed from 60 to 2 (USEPA 14)  
Benzene – Changed from 30 (IRIS) to 3 (Cal 14)  
Dichlorodifluoromethane – Changed from 200 (HEAST 97) to 100 (USEPA 14)  
Dicyclopentadiene – Changed from 7 to 0.3 (USEPA 14)  
Diethylene glycol monobutyl ether – Changed from 20 to 0.1 (USEPA 14)  
Methylene chloride – Changed from 400 (Cal 08) to 600 (IRIS)  
Nickel and compounds – Changed from 0.05 (Cal 08) to 0.014 (Cal 14)  
Nickel oxide – Changed from 0.1 (Cal 08) to 0.02 (Cal 14)  
o-Nitroaniline – Changed from 0.1 to 0.05 (USEPA 14)  
1,2,4-Trichlorobenzene - Changed from 4 to 2 (USEPA 14)  
Tetrachloroethylene – Changed from 35 (Cal) to 40 (IRIS)  
Trichloroethylene – Changed from 600 (Cal 09a) to 2 (IRIS)

### **Additions**

Benzo(a)pyrene (IRIS) \*  
Bromopropane (1-) (ATSDR) \*  
Carbonyl sulfide (Cal 18) \*  
Trimethylbenzene (1,2,3-), (1,3,5-) and mixtures (1,2,3-/1,2,4-/1,3,5-) (IRIS) \*  
Sulfuryl fluoride (Cal 06)  
Bromochloromethane (USEPA 14)  
Caprolactam (Cal 14)  
Chloroform (Cal 14)  
1,4-Dioxane (IRIS)  
Ethyl acrylate (USEPA 14)  
Ethylene glycol monoethyl ether acetate (Cal 14)  
Hexachloroethane (IRIS)  
Mercury (inorganic) (Cal 14)  
2,3,7,8-Tetrachlorodibenzo(p)dioxin (Cal 15a)  
Tetrahydrofuran (IRIS)

### **Deletions**

Sulfuryl fluoride (Cal 06)

### ***Short-Term Reference Concentrations***

#### **Changes (all values are in $\mu\text{g}/\text{m}^3$ )**

Ethylene glycol monobutyl ether – Changed from 1.4E+4 (Cal 14) to 4.7E+3 (Cal 18) \*  
Hydrogen sulfide – Changed from 42 (Cal 14) to 98 (ATSDR) \*  
Toluene – Changed from 3.7E+4 (Cal 14) to 7.52E+3 (ATSDR) \*  
Toluene diisocyanate (2,4-) – Changed from 14 (AEGL) to 2 (Cal 18) \*  
Benzene – Changed from 1300 (Cal 08) to 27 (Cal 14)  
Nickel and compounds – Changed from 6 (Cal 08) to 0.2 (Cal 14)

### **Additions**

Bromopropane (1-) (ATSDR) \*  
Carbonyl sulfide (Cal 18) \*  
Glutaraldehyde (ATSDR) \*  
Methylenediphenyl diisocyanate (4,4-) (Cal 18) \*  
Phosphine (Cal 14p) \*  
Toluene diisocyanate (2,6-) and mixtures (2,4-/2,6-) (Cal 18) \*  
Sulfuryl fluoride (Cal 06)

1,3-Butadiene (Cal 14)  
Caprolactam (Cal 14)  
Trichloroethylene (IRIS)  
Vanadium (ATSDR)

**Deletions**

Sulfuryl fluoride (Cal 06)

***Other***

1,1-Biphenyl – corrected CAS number