

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**
April 2023

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 April 2023. This replaces the list dated December 2022. The list, which includes references, can be found at <https://dep.nj.gov/boss/risk-screening-tools/> .

Unit Risk Factors

No changes, deletions or additions were made.

Reference Concentrations (Long-Term)

No changes, deletions or additions were made.

Short-Term Reference Concentrations

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

Methyl bromide – Changed from 3,900 (Cal 14) to 31,000 (NJDEP 22)

Additions

None

Deletions

None

Historical Revisions Listed Below

Unit Risk Factors

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

Cobalt – Changed from 9.0E-03 (USEPA) to 7.70E-03 (Cal 20)

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)

Past Deletions

Ethyl acrylate (USEPA 85)

Past Additions

Bromodichloromethane (Cal 15b)

Dibromochloromethane (USEPA 14)

Reference Concentrations (Long-Term)

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

Methylenediphenyl diisocyanate (MDI), Polymeric – Changed from 0.08 (Cal 18) to 1 (ATSDR)

Toluene – Changed from 3,760 (ATSDR) to 420 (Cal 20)

Toluene diisocyanate (TDI) (2,4- and 2,6-) – Changed from 0.008 (Cal 18) to 0.02 (ATSDR)

1,6-Hexamethylene diisocyanate (monomer) - Changed from 0.01 (IRIS) to 0.03 (Cal 20)

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)

Past 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)

Short-Term Reference Concentrations

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

Tetrachloroethylene – Changed from 20,000 (Cal 14) to 40 (ATSDR)

Toluene – Changed from 7,520 (ATSDR) to 5,000 (Cal 20)

Toluene diisocyanate (TDI) (2,4- and 2,6-) – Changed from 2 (Cal 18) to 0.07 (ATSDR)

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)

Past Additions

Sulfuryl fluoride (USEPA label clearance level)

1,1,2-Trichloroethane (ATSDR)

1,6-Hexamethylene diisocyanate (monomer) (Cal 20)

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)

Other

1,1-Biphenyl – corrected CAS number