

Current AIHA ERPG Values (2009)

| Chemical (CAS Number) | ERPG-1 | ERPG-2 | ERPG-3 |
|------------------------------------------------------------------|---------------------------|----------------------------|-----------------------------|
| Acetaldehyde (75-07-0) | 10 ppm | 200 ppm | 1000 ppm |
| Acetic Acid (64-19-7) | 5 ppm | 35 ppm | 250 ppm |
| Acetic Anhydride (108-24-7) | 0.5 ppm | 15 ppm | 100 ppm |
| Acrolein (107-02-8) | 0.05 ppm | 0.15 ppm | 1.5 ppm |
| Acrylic Acid (79-10-7) | 2 ppm | 50 ppm | 750 ppm |
| Acrylonitrile (107-13-1) | 10 ppm | 35 ppm | 75 ppm |
| Allyl Chloride (107-05-1) | 3 ppm | 40 ppm | 300 ppm |
| Ammonia (7664-41-7) | 25 ppm | 150 ppm | 750 ppm |
| Arsine (7784-42-1)* | NA† | 0.5 ppm | 1.5 ppm |
| Benzene (71-43-2) | 50 ppm | 150 ppm | 1000 ppm |
| Benzoyl Chloride (98-88-4) | 0.3 ppm | 5 ppm | 20 ppm |
| Benzyl Chloride (100-44-7) | 1 ppm | 10 ppm | 50 ppm |
| Beryllium (7440-41-7) | NA† | 25 µg/m ³ | 100 µg/m ³ |
| Bis (Chloromethyl) Ether (542-88-1)* | ID‡ | 0.1 ppm | 0.5 ppm |
| Boron Trifluoride (7637-07-2)* | 2 mg/m³ | 30 mg/m³ | 100 mg/m³ |
| Bromine (7726-95-6) | 0.1 ppm | 0.5 ppm | 5 ppm |
| 1,3-Butadiene (106-99-0) | 10 ppm | 200 ppm | 5000 ppm |
| n-Butyl Acetate (123-86-4) | 5 ppm | 200 ppm | 3000 ppm |
| n-Butyl Acrylate (141-32-2) | 0.05 ppm | 25 ppm | 250 ppm |
| n-Butyl Isocyanate (111-36-4) | 0.01 ppm | 0.05 ppm | 1 ppm |
| Carbon Disulfide (75-15-0) | 1 ppm | 50 ppm | 500 ppm |
| Carbon Monoxide (630-08-0) | 200 ppm | 350 ppm | 500 ppm |
| Carbon Tetrachloride (56-23-5) | 20 ppm | 100 ppm | 750 ppm |
| Chlorine (7782-50-5) | 1 ppm | 3 ppm | 20 ppm |
| Chlorine Dioxide (10049-04-4) | NA† | 0.5 ppm | 3 ppm |
| Chlorine Trifluoride (7790-91-2) | 0.1 ppm | 1 ppm | 10 ppm |
| 1-Chloro-1,1-Difluoroethane (HCFC-142b) (75-68-3) | 10,000 ppm | 15,000 ppm | 25,000 ppm |
| 2-Chloro-1,1,1,2-Tetrafluoroethane (2837-89-0) | 1,000 ppm | 5,000 ppm | 10,000 ppm |
| Chloroacetyl Chloride (79-04-9) | 0.05 ppm | 0.5 ppm | 10 ppm |
| o-Chlorobenzylidene Malononitrile (2698-41-1) | 0.005 mg/m ³ | 0.1 mg/m ³ | 25 mg/m ³ |
| Chloroform (67-66-3) | NA† | 50 ppm | 5000 ppm |
| Chloromethyl Methyl Ether* (107-30-2) | NA† | 1.0 ppm | 10 ppm |
| Chloropicrin (76-06-2) | 0.1 ppm | 0.3 ppm | 1.5 ppm |
| Chlorosulfonic Acid (7790-94-5) | 2 mg/m ³ | 10 mg/m ³ | 30 mg/m ³ |
| Chlorotrifluoroethylene (79-38-9) | 20 ppm | 100 ppm | 300 ppm |
| Cobalt Hydrocarbonyl (16842-03-8) (Value is given as cobalt.) | ID‡ | 0.13 ppm | 0.42 ppm |
| Crotonaldehyde (4170-30-3) | 0.2 ppm | 5 ppm | 15 ppm |

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|--------------------------------------------------|---------------------|-----------------------|----------------------|
| Cyanogen Chloride (506-77-4) | NA† | 0.4 ppm | 4 ppm |
| Diborane (19287-45-7) | NA† | 1 ppm | 3 ppm |
| 1,2-Dichloroethane (107-06-2) | 50 ppm | 200 ppm | 300 ppm |
| 2,4-Dichlorophenol (120-83-2) | 0.2 ppm | 2 ppm | 20 ppm |
| Dicyclopentadiene (77-73-6) | 0.01 ppm | 5 ppm | 75 ppm |
| 1,1-Difluoroethane (HFC 152a) (75-37-6) | 10,000 ppm | 15,000 ppm | 25,000 ppm |
| Diketene (674-82-8) | 1 ppm | 5 ppm | 20 ppm |
| Dimethylamine (124-40-3) | 0.6 ppm | 100 ppm | 350 ppm |
| Dimethyldichlorosilane (75-78-5) | 2 ppm | 10 ppm | 75 ppm |
| Dimethyl Disulfide (624-92-0) | 0.01 ppm | 50 ppm | 250 ppm |
| Dimethylformamide (68-12-2) | 2 ppm | 100 ppm | 200 ppm |
| Dimethyl Sulfide (75-18-3) | 0.5 ppm | 1000 ppm | 5000 ppm |
| Dowtherm J (25340-17-4) | 10 ppm | 100 ppm | 500 ppm |
| Dowtherm Q (68987-42-8) | ID‡ | 150 mg/m ³ | ID‡ |
| Epichlorohydrin (106-89-8) | 5 ppm | 20 ppm | 100 ppm |
| Ethyl Acrylate (140-88-5) | 0.01 ppm | 30 ppm | 300 ppm |
| Ethyl Chloroformate (541-41-3) | ID‡ | 5 ppm | 10 ppm |
| 2-Ethyl hexanol (104-76-7) | 0.1 ppm | 100 ppm | 200 ppm |
| Ethylene Oxide (75-21-8) | NA† | 50 ppm | 500 ppm |
| Ethylidene Norbornene (16219-75-3) | 0.2 ppm | 100 ppm | 500 ppm |
| Fluorine (7782-41-4) | 0.5 ppm | 5 ppm | 20 ppm |
| Fluosulfonic acid (7789-21-1) | 2 mg/m ³ | 10 mg/m ³ | 30 mg/m ³ |
| Formaldehyde (50-00-0) | 1 ppm | 10 ppm | 25 ppm |
| Furfural (98-01-1) | 2 ppm | 10 ppm | 100 ppm |
| Gluteraldehyde (111-30-8) | 0.2 ppm | 1 ppm | 5 ppm |
| HCFC-123 (306-83-2) | ID‡ | 1000 ppm | 10,000 ppm |
| Hexachlorobutadiene (87-68-3) | 1 ppm | 3 ppm | 10 ppm |
| Hexafluoroacetone (684-16-2) | NA† | 1 ppm | 50 ppm |
| Hexafluoropropylene* (116-15-4) | 10 ppm | 50 ppm | 500 ppm |
| 1-Hexene (592-41-6) | NA† | 500 ppm | 5,000 ppm |
| Hydrazine (302-01-2) | 0.5 ppm | 5 ppm | 30 ppm |
| Hydrogen Chloride (7647-01-0) | 3 ppm | 20 ppm | 150 ppm |
| Hydrogen Cyanide (74-90-8) | NA† | 10 ppm | 25 ppm |
| Hydrogen Fluoride (7664-39-3)* | 2 ppm | 20 ppm | 50 ppm |
| Hydrogen Peroxide (7722-84-1) | 10 ppm | 50 ppm | 100 ppm |
| Hydrogen Selenide (7783-07-5) | N/A | 0.2 ppm | 2 ppm |
| Hydrogen Sulfide (7783-06-4) | 0.1 ppm | 30 ppm | 100 ppm |
| Iodine (7553-56-2) | 0.1 ppm | 0.5 ppm | 5 ppm |
| Isobutyronitrile (78-82-0) | 10 ppm | 50 ppm | 200 ppm |
| 2-Isocyanatoethyl Methacrylate (30674-80-7) | ID‡ | 0.1 ppm | 1 ppm |
| Isoprene (78-79-5) | 5 ppm | 1000 ppm | 4000 ppm |
| Isopropyl Chloroformate (108-23-6) | ID‡ | 5 ppm | 20 ppm |

| Chemical (CAS Number) | ERPG-1 | ERPG-2 | ERPG-3 |
|-----------------------------------------------------------------------------------------------------|-----------------------------|---------------------------|----------------------------|
| Lithium Hydride (7580-67-8) | 25 µg/m ³ | 100 µg/m ³ | 500 µg/m ³ |
| Maleic Anhydride (108-31-6) | 0.2 ppm | 2 ppm | 20 ppm |
| Mercury Vapor (7439-97-6) | N/A | 0.25 ppm | 0.5 ppm |
| Methanol (67-56-1) | 200 ppm | 1000 ppm | 5000 ppm |
| Methyl Bromide (74-83-9) | NA† | 50 ppm | 200 ppm |
| Methyl Chloride (74-87-3) | NA† | 400 ppm | 1000 ppm |
| Methyl Chloroformate (79-22-1) | NA† | 2 ppm | 5 ppm |
| Methyl Iodide (74-88-4) | 25 ppm | 50 ppm | 125 ppm |
| Methyl Isocyanate (624-83-9) | 0.025 ppm | 0.25 ppm | 1.5 ppm |
| Methyl Mercaptan (74-93-1) | 0.005 ppm | 25 ppm | 100 ppm |
| Methyl tert-Butyl Ether (1634-0404) | 5 ppm | 1000 ppm | 5000 ppm |
| Methylene Chloride (75-09-2) | 300 ppm | 750 ppm | 4000 ppm |
| Methylene Diphenyl Diisocyanate (MDI) (101-68-8) | 0.2 mg/m ³ | 2 mg/m ³ | 25 mg/m ³ |
| Methyltrichlorosilane (75-79-6) | 0.5 ppm | 3 ppm | 15 ppm |
| Monomethylamine (74-89-5) | 10 ppm | 100 ppm | 500 ppm |
| Nitric Acid WFNA (7697-37-2) | 1 ppm | 6 ppm | 78 ppm |
| Nitrogen Dioxide (10102-44-0) | 1 ppm | 15 ppm | 30 ppm |
| Nitrogen Trifluoride (7783-54-2) | NA† | 400 ppm | 800 ppm |
| 1-Octene (111-66-0) | 40 ppm | 800 ppm ^b | 2000 ppm ^a |
| Perchloroethylene (127-18-4) | 100 ppm | 200 ppm | 1000 ppm |
| Perfluoroisobutylene (382-21-8)* | NA† | 0.1 ppm | 0.3 ppm |
| Phenol (108-95-2) | 10 ppm | 50 ppm | 200 ppm |
| Phosgene (75-44-5)* | NA† | 0.5 ppm | 1.5 ppm |
| Phosphine (7803-51-2) | NA† | 0.5 ppm | 5 ppm |
| Phosphorus Pentoxide (1314-56-3) | 1 mg/m ³ | 10 mg/m ³ | 50 mg/m ³ |
| Phosphorus Trichloride (7719-12-2) | 0.5 ppm | 3 ppm | 15 ppm |
| Propylene Glycol Methyl Ether Acetate (108-65-6 α-isomer) (70657-70-4 β-isomer) | 50 ppm | 1000 ppm | 5000 ppm |
| Propylene Oxide (75-56-9) | 50 ppm | 250 ppm | 750 ppm |
| Sodium Hydroxide* (1310-73-2) | 0.5 mg/m³ | 5 mg/m³ | 50 mg/m³ |
| Stibine (7803-52-3)* | ID‡ | 0.5 ppm | 1.5 ppm |
| Styrene (100-42-5) | 50 ppm | 250 ppm | 1000 ppm |
| Sulfur Dioxide (7446-09-5) | 0.3 ppm | 3 ppm | 15 ppm |
| Sulfuric Acid (Oleum [8014-95-7], Sulfur Trioxide [7446-11-9], and Sulfuric Acid [7664-93-9]) | 2 mg/m ³ | 10 mg/m ³ | 30 mg/m ³ |
| Sulfuryl Chloride (7791-25-5) | 0.3 ppm | 3 ppm | 15 ppm |
| Tetrachlorosilane (10026-04-7) | 0.75 ppm | 5 ppm | 37 ppm |
| Tetraethoxysilane (78-10-4) | 25 ppm | 100 ppm | 300 ppm |
| Tetrafluoroethylene (116-14-3) | 200 ppm | 1000 ppm | 10,000 ppm |
| Tetrahydrofuran (109-99-9) | 100 ppm | 500 ppm | 5000 ppm |

| Chemical (CAS Number) | ERPG-1 | ERPG-2 | ERPG-3 |
|--------------------------------------------------------------|---------------------|-----------------------|-----------------------|
| Tetramethoxysilane (681-84-5) | NA† | 10 ppm | 20 ppm |
| Thionyl Chloride (7719-09-7) | 0.2 ppm | 2 ppm | 10 ppm |
| Titanium Tetrachloride (7550-45-0) | 5 mg/m ³ | 20 mg/m ³ | 100 mg/m ³ |
| Toluene (108-88-3) | 50 ppm | 300 ppm | 1000 ppm |
| Toluene 2,4- (2,6-) Diisocyanate (TDI) (584-84-9), (91-08-7) | 0.01 ppm | 0.15 ppm | 0.6 ppm |
| 1,1,1-Trichloroethane (71-55-6) | 350 ppm | 700 ppm | 3500 ppm |
| Trichloroethylene* (79-01-6) | 100 ppm | 500 ppm | 5000 ppm |
| Trichlorosilane (10025-78-2) | 1 ppm | 3 ppm | 25 ppm |
| Triethoxysilane (998-30-1) | 0.5 ppm | 4 ppm | 10 ppm |
| Trimethoxysilane* (2487-90-3) | 0.5 ppm | 2 ppm | 5 ppm |
| Trimethylamine (75-50-3) | 0.1 ppm | 100 ppm | 500 ppm |
| Trimethylchlorosilane (75-77-4) | 3 ppm | 20 ppm | 150 ppm |
| Triuranium Octaoxide (1344-59-8) | ID‡ | 10 mg/m ³ | 50 mg/m ³ |
| Uranium Dioxide (1344-57-6) | ID‡ | 10 mg/m ³ | 30 mg/m ³ |
| Uranium Hexafluoride (7783-81-5) | 5 mg/m ³ | 15 mg/m ³ | 30 mg/m ³ |
| Uranium Trioxide (1344-58-7) | ID‡ | 0.5 mg/m ³ | 3 mg/m ³ |
| Vinyl Acetate (108-05-4) | 5 ppm | 75 ppm | 500 ppm |
| Vinyl Chloride (75-01-4) | 500 ppm | 5000 ppm | 20,000 ppm |
| Vinyl Trichlorosilane (75-94-5) | 0.5 ppm | 5 ppm | 50 ppm |
| Vinylidene Chloride (75-35-4) | ID‡ | 500 ppm | 1000 ppm |

Bold: Part of 2009 Update Set

* 2009 revised document

(ERPG-1: 2 ppm; ERPG-2: 50 ppm; ERPG-3: 170 ppm)

NA† = not appropriate

ID‡ = insufficient data

^a This level is 25% of the lower explosive level.

^b This level is 10% of the lower explosive level.

NOTE: This information is correct as of January 1, 2009. It is possible that an ERPG under review by the Committee will be balloted and approved in 2009, making it eligible for inclusion in the 2009 ERPG Document Set.

ERPG Values Under Ballot, Review, and Consideration

These chemicals are under consideration or review by the AIHA ERP Committee:

| | |
|---------------------------|---------------------------|
| Benzene | Chloroacetophenone |
| Boron trifluoride | Chloroacetic acid |
| 1,3-Butadiene | Chloroacetyl chloride |
| n-Butyl acetate | Chloroform |
| Carbon disulfide | Chloromethyl methyl ether |
| Carbon monoxide | Chloropicrin |
| 1-Chloro-1,1- (HCFC-142b) | Chlorosulfonic acid |

| | |
|--------------------------|-------------------------|
| Cyanogen chloride | 1-Octanol |
| Diborane | Phosphine |
| 1,2-Dichloroethane | Phosphoric acid |
| Diesel/Fuel Oil/Kerosene | Polyethylene glycol |
| Dimethyl disulfide | Polypropylene |
| Dimethyl sulfate | Propylene glycol |
| Ethyl acrylate | momomethylether acetate |
| Ethanol | Propylene oxide |
| Fluorine | Quinoline |
| Formaldehyde | Sodium chloroacetate |
| Formic acid | Sulfur dioxide |
| Furfural | Sulfuryl chloride |
| Gasoline | Sulfuryl fluoride |
| Hydrogen chloride | Tetrachlorosilane |
| Hydrogen peroxide | Tetraethoxysilane |
| Hydroquinone | Tetramethoxysilane |
| Iodine | Thionyl chloride |
| Isocyanuric acid | Toluene |
| Methyl bromide | Toluene 2,4-(2,6-) |
| Methyl mercaptan | Diisocyanate (TDI) |
| Methylene diphenyl | 1,1,1-Trichloroethane |
| diisocyanate (MDI) | Trichlorosilane |
| Naphthalene | Trimethyl Chlorosilane |