401 KAR 63:060. List of hazardous air pollutants, petitions process, lesser quantity designations, and source category list.

RELATES TO: KRS 224.10-100, 224.20-110, 40 C.F.R. Part 63, Part 70, 42 U.S.C. 7401-7671q

STATUTORY AUTHORITY: KRS 224.10-100, 224.20-110, 224.20-120

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(5) authorizes the cabinet to promulgate administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation provides the list of hazardous air pollutants pursuant to 42 U.S.C. 7412(b) as amended in 40 C.F.R. Part 63, Subpart C and the list of source categories and subcategories.

Section 1. Definitions. As used in this administrative regulation, terms not defined in this section shall have the meaning given to them in 40 C.F.R. 63.2.

(1) "Hazardous air pollutant" means a substance listed in Section 2 of this administrative regulation.

(2) "MACT" means maximum achievable control technology.

(3) "Major source" means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, ten (10) tons per year or more of a hazardous air pollutant or twenty-five (25) tons per year or more of any combination of hazardous air pollutants, or a lesser quantity which the cabinet may establish on the basis of the potency, persistence, potential for bioaccumulation, or other characteristics or relevant factors pertaining to the pollutant.

(4) "NESHAP" means national emission standards for hazardous air pollutant.

Section 2. List of Hazardous Air Pollutants. The following chemicals are hazardous air pollutants:

|  |  |
| --- | --- |
| CAS number | Chemical name |
| 75070 | Acetaldehyde |
| 60355 | Acetamide |
| 75058 | Acetonitrile |
| 98862 | Acetophenone |
| 53963 | 2-Acetylaminofluorene |
| 107028 | Acrolein |
| 79061 | Acrylamide |
| 79107 | Acrylic acid |
| 107131 | Acrylonitrile |
| 107051 | Allyl chloride |
| 92671 | 4-Aminobiphenyl |
| 62533 | Aniline |
| 90040 | o-Anisidine |
| 1332214 | Asbestos |
| 71432 | Benzene (including benzene from gasoline) |
| 92875 | Benzidine |
| 98077 | Benzotrichloride |
| 100447 | Benzyl chloride |
| 92524 | Biphenyl |
| 117817 | Bis(2-ethylhexyl)phthalate (DEHP) |
| 542881 | Bis(chloromethyl)ether |
| 75252 | Bromoform |
| 106990 | 1,3-Butadiene |
| 156627 | Calcium cyanamide |
| 133062 | Captan |
| 63252 | Carbaryl |
| 75150 | Carbon disulfide |
| 56235 | Carbon tetrachloride |
| 463581 | Carbonyl sulfide |
| 120809 | Catechol |
| 133904 | Chloramben |
| 57749 | Chlordane |
| 7782505 | Chlorine |
| 79118 | Chloroacetic acid |
| 532274 | 2-Chloroacetophenone |
| 108907 | Chlorobenzene |
| 510156 | Chlorobenzilate |
| 67663 | Chloroform |
| 107302 | Chloromethyl methyl ether |
| 126998 | Chloroprene |
| 1319773 | Cresols/Cresylic acid (isomers and mixture) |
| 95487 | o-Cresol |
| 108394 | m-Cresol |
| 106445 | p-Cresol |
| 98828 | Cumene |
| 94757 | 2,4-D, salts and esters |
| 3547044 | DDE |
| 334883 | Diazomethane |
| 132649 | Dibenzofurans |
| 96128 | 1,2-Dibromo-3-chloropropane |
| 84742 | Dibutylphthalate |
| 106467 | 1,4-Dichlorobenzene(p) |
| 91941 | 3,3-Dichlorobenzidene |
| 111444 | Dichloroethyl ether (Bis(2-chloroethyl)ether) |
| 542756 | 1,3-Dichloropropene |
| 62737 | Dichlorvos |
| 111422 | Diethanolamine |
| 121697 | N,N-Diethyl aniline (N,N-Dimethylaniline) |
| 64675 | Diethyl sulfate |
| 119904 | 3,3-Dimethoxybenzidine |
| 60117 | Dimethyl aminoazobenzene |
| 119937 | 3,3'-Dimethyl benzidine |
| 79447 | Dimethyl carbamoyl chloride |
| 68122 | Dimethyl formamide |
| 57147 | 1,1-Dimethyl hydrazine |
| 131113 | Dimethyl phthalate |
| 77781 | Dimethyl sulfate |
| 534521 | 4,6-Dinitro-o-cresol, and salts |
| 51285 | 2,4-Dinitrophenol |
| 121142 | 2,4-Dinitrotoluene |
| 123911 | 1,4-Dioxane (1,4-Diethyleneoxide) |
| 122667 | 1,2-Diphenylhydrazine |
| 106898 | Epichlorohydrin (1-Chloro-2,3-epoxypropane) |
| 106887 | 1,2-Epoxybutane |
| 140885 | Ethyl acrylate |
| 100414 | Ethyl benzene |
| 51796 | Ethyl carbamate (Urethane) |
| 75003 | Ethyl chloride (Chloroethane) |
| 106934 | Ethylene dibromide (Dibromoethane) |
| 107062 | Ethylene dichloride (1,2-Dichloroethane) |
| 107211 | Ethylene glycol |
| 151564 | Ethylene imine (Aziridine) |
| 75218 | Ethylene oxide |
| 96457 | Ethylene thiourea |
| 75343 | Ethylidene dichloride (1,1-Dichloroethane) |
| 50000 | Formaldehyde |
| 76448 | Heptachlor |
| 118741 | Hexachlorobenzene |
| 87683 | Hexachlorobutadiene |
| 77474 | Hexachlorocyclopentadiene |
| 67721 | Hexachloroethane |
| 822060 | Hexamethylene-1,6-diisocyanate |
| 680319 | Hexamethylphosphoramide |
| 110543 | Hexane |
| 302012 | Hydrazine |
| 7647010 | Hydrochloric acid |
| 7664393 | Hydrogen fluoride (Hydrofluoric acid) |
| 123319 | Hydroquinone |
| 78591 | Isophorone |
| 58899 | Lindane (all isomers) |
| 108316 | Maleic anhydride |
| 67561 | Methanol |
| 72435 | Methoxychlor |
| 74839 | Methyl bromide (Bromomethane) |
| 74873 | Methyl chloride (Chloromethane) |
| 71556 | Methyl chloroform (1,1,1-Trichloroethane) |
| 60344 | Methyl hydrazine |
| 74884 | Methyl iodide (Iodomethane) |
| 108101 | Methyl isobutyl ketone (Hexone) |
| 624839 | Methyl isocyanate |
| 80626 | Methyl methacrylate |
| 1634044 | Methyl tert butyl ether |
| 101144 | 4,4-Methylene bis(2-chloroaniline) |
| 75092 | Methylene chloride (Dichloromethane) |
| 101688 | Methylene diphenyl diisocyanate (MDI) |
| 101779 | 4,4'-Methylenedianiline |
| 91203 | Naphthalene |
| 98953 | Nitrobenzene |
| 92933 | 4-Nitrobiphenyl |
| 100027 | 4-Nitrophenol |
| 79469 | 2-Nitropropane |
| 684935 | N-Nitroso-N-methylurea |
| 62759 | N-Nitrosodimethylamine |
| 59892 | N-Nitrosomorpholine |
| 56382 | Parathion |
| 82688 | Pentachloronitrobenzene (Quintobenzene) |
| 87865 | Pentachlorophenol |
| 108952 | Phenol |
| 106503 | p-Phenylenediamine |
| 75445 | Phosgene |
| 7803512 | Phosphine |
| 7723140 | Phosphorus |
| 85449 | Phthalic anhydride |
| 1336363 | Polychlorinated biphenyls (Arochlors) |
| 1120714 | 1,3-Propane sultone |
| 57578 | beta-Propiolactone |
| 123386 | Propionaldehyde |
| 114261 | Propoxur (Baygon) |
| 78875 | Propylene dichloride (1,2-Dichloropropane) |
| 75569 | Propylene oxide |
| 75558 | 1,2-Propylenimine (2-Methyl aziridine) |
| 91225 | Quinoline |
| 106514 | Quinone |
| 100425 | Styrene |
| 96093 | Styrene oxide |
| 1746016 | 2,3,7,8-Tetrachlorodibenzo-p-dioxin |
| 79345 | 1,1,2,2-Tetrachloroethane |
| 127184 | Tetrachloroethylene (Perchloroethylene) |
| 7550450 | Titanium tetrachloride |
| 108883 | Toluene |
| 95807 | 2,4-Toluene diamine |
| 584849 | 2,4-Toluene diisocyanate |
| 95534 | o-Toluidine |
| 8001352 | Toxaphene (chlorinated camphene) |
| 120821 | 1,2,4-Trichlorobenzene |
| 79005 | 1,1,2-Trichloroethane |
| 79016 | Trichloroethylene |
| 95954 | 2,4,5-Trichlorophenol |
| 88062 | 2,4,6-Trichlorophenol |
| 121448 | Triethylamine |
| 1582098 | Trifluralin |
| 540841 | 2,2,4-Trimethylpentane |
| 108054 | Vinyl acetate |
| 593602 | Vinyl bromide |
| 75014 | Vinyl chloride |
| 75354 | Vinylidene chloride (1,1-Dichloroethylene) |
| 1330207 | Xylenes (isomers and mixture) |
| 95476 | o-Xylenes |
| 108383 | m-Xylenes |
| 106423 | p-Xylenes |
| 0 | Antimony Compounds |
| 0 | Arsenic Compounds (inorganic including arsine) |
| 0 | Beryllium Compounds |
| 0 | Cadmium Compounds |
| 0 | Chromium Compounds |
| 0 | Cobalt Compounds |
| 0 | Coke Oven Emissions |
| 0 | Cyanide Compounds1 |
| 0 | Glycol ethers2 |
| 0 | Lead Compounds |
| 0 | Manganese Compounds |
| 0 | Mercury Compounds |
| 0 | Fine mineral fibers3 |
| 0 | Nickel Compounds |
| 0 | Polycyclic Organic Matter4 |
| 0 | Radionuclides (including radon)5 |
| 0 | Selenium Compounds |

Footnotes: For all listings in the table that contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical as part of that chemical's infrastructure.
1 X'CN where X = H' or any other group where a formal dissociation may occur.
2 Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH2CH2)n-OR'.
Where:
n = 1, 2, or 3;
R = alkyl C7 or less; or
R = phenyl or alkyl substituted phenyl;
R' = H or alkyl C7 or less; or
OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.
3 Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter one (1) micrometer or less.
4 Includes organic compounds with more than one (1) benzene ring and that have a boiling point greater than or equal to 100°C.
5 A type of atom that spontaneously undergoes radioactive decay.

Section 3. List of Categories and Subcategories of Hazardous Air Pollutants. The following are major and area source categories and subcategories:

(1) Major sources:

(a) Aerospace industries;

(b) Asphalt processing and asphalt roofing manufacturing;

(c) Auto and light duty truck (surface coating);

(d) Boat manufacturing;

(e) Brick and structural clay products;

(f) Cellulose products manufacturing:

1. Cellulose ethers production:

a. Methyl cellulose;

b. Carboxymethylcellulose; or

c. Cellulose ethers; or

2. Miscellaneous viscose processes:

a. Cellulose food casing;

b. Rayon;

c. Cellulosic sponge; or

d. Cellophane;

(g) Chemical recovery combustion sources at kraft, soda, sulfite and stand-alone semi-chemical pulp mills - MACT II;

(h) Chromium electroplating:

1. Chromic acid anodizing;

2. Decorative acid; or

3. Hard chromium electroplating;

(i) Clay ceramics ceramics manufacturing;

(j) Coke ovens: charging, top side and door leaks;

(k) Coke ovens: pushing, quenching and battery;

(l) Combustion turbines;

(m) Commercial sterilizers;

(n) Dry cleaning:

1. Commercial dry cleaning dry-to-dry;

2. Commercial dry cleaning transfer machines;

3. Industrial dry cleaning dry-to-dry; or

4. Industrial dry cleaning transfer machines;

(o) Engine test cells/stands;

(p) Fabric printing, coating, and dyeing;

(q) Ferroalloys production: silicomanganese and ferromanganese;

(r) Flexible polyurethane foam fabrication operations;

(s) Flexible polyurethane foam production;

(t) Friction materials manufacturing;

(u) Gasoline distribution (Stage 1);

(v) Generic MACT I:

1. Acetal resins production;

2. Acrylic fibers/modacrylic fibers production;

3. Hydrogen fluoride production; or

4. Polycarbonates production;

(w) Generic MACT II:

1. Carbon black production;

2. Spandex production;

3. Cyanide chemicals manufacturing; or

4. Ethylene processes;

(x) Hazardous waste combustors;

(y) Hydrochloric acid production;

(z) Industrial/commercial/institutional boilers and process heaters;

(aa) Industrial process cooling towers;

(bb) Integrated iron and steel manufacturing;

(cc) Iron and steel foundries;

(dd) Large appliance (surface coating);

(ee) Leather finishing operations;

(ff) Lime manufacturing;

(gg) Magnetic tapes (surface coating);

(hh) Manufacturing of nutritional yeast;

(ii) Marine vessel loading operations;

(jj) Metal can (surface coating);

(kk) Metal coil (surface coating);

(ll) Metal furniture (surface coating);

(mm) Mineral wool production;

(nn) Miscellaneous coatings manufacturing;

(oo) Miscellaneous metal parts and products (surface coating);

(pp) Miscellaneous organic chemical manufacturing:

1. Alkyd resins;

2. Ammonium sulfate production-caprolactum by-products;

3. Benzyltrimethylammonium chloride;

4. Carbonyl sulfide;

5. Chelating agents;

6. Chlorinated paraffins;

7. Ethylidene norbornene;

8. Explosives;

9. Hydrazine;

10. Maleic anhydride copolymers;

11. OBPA/1, 3–diisocyanate;

12. Photographic chemicals;

13. Phthalate plasticizers;

14. Polyester resins;

15. Polymerized vinylidene chloride;

16. Polymethyl methacrylate resins;

17. Polyvinyl acetate emulsions;

18. Polyvinyl alcohol;

19. Polyvinyl butyral;

20. Quaternary ammonium compounds;

21. Rubber chemicals; or

22. Symmetrical tetrachloropyridine;

(qq) Municipal solid waste landfills;

(rr) Off-site waste and recovery operations;

(ss) Oil and natural gas production;

(tt) Organic liquids distribution (non-gasoline);

(uu) Paper and other web (surface coating);

(vv) Pesticide active ingredient production:

1. 4-chloro-2-methyl acid production;

2. 2,3 salts and esters production;

3. 4,6-dinitro-o-cresol production;

4. Butadiene furfural cotrimer;

5. Captafol production;

6. Captan production;

7. Chloroneb production;

8. Chlorothalonil production;

9. Dacthal (tm) production;

10. Sodium pentachlorophenate production; or

11. Tordon (tm) acid production;

(ww) Petroleum refineries - catalytic cracking units, catalytic reforming units, and sulfur recovery units;

(xx) Petroleum refineries - other sources not distinctly listed;

(yy) Pharmaceuticals productions;

(zz) Phosphate fertilizers production and phosphoric acid manufacturing;

(aaa) Plastic parts and products (surface coating);

(bbb) Plywood and composite wood products;

(ccc) Polyether polyols production;

(ddd) Polymers and resins:

1. Butyl rubber;

2. Epichlorohydrin elastomers;

3. Ethylene-propylene rubber;

4. Hypalon (tm);

5. Neoprene;

6. Nitrile butadiene rubber;

7. Polybutadiene rubber;

8. Polysulfide rubber; or

9. Styrene-butadiene rubber and latex;

(eee) Polymers and resins II:

1. Epoxy resins; or

2. Non-nylon polyamides;

(fff) Polymers and resins III—Amino/phenolic resins;

(ggg) Polymers and resins IV:

1. Acrylonitrile-butadiene-styrene;

2. Methyl methacrylate-acrylonitrile-butadiene-styrene;

3. Methyl methacrylate-butadiene-styrene terpolymers;

4. Nitrile resins;

5. Polyethylene terephthalate;

6. Polystyrene; or

7. Styrene-acrylonitrile;

(hhh) Polyvinyl chloride and copolymers;

(iii) Portland cement manufacturing;

(jjj) Primary aluminum;

(kkk) Primary copper smelting;

(lll) Primary lead smelting;

(mmm) Primary magnesium refining;

(nnn) Printing and publishing (surface coating);

(ooo) Publicly owned treatment works;

(ppp) Pulp and paper production (MACT I and III);

(qqq) Reciprocating internal combustion engines;

(rrr) Refractory products manufacturing;

(sss) Reinforced plastic composites production;

(ttt) Rubber tire manufacturing;

(uuu) Secondary aluminum production;

(vvv) Secondary lead smelting;

(www) Semiconductor manufacturing;

(xxx) Shipbuilding and ship repair (surface coating);

(yyy) Site remediation;

(zzz) Solvent extraction for vegetable oil production;

(aaaa) Steel pickling - HCl process facilities and hydrochloric acid regeneration plants;

(bbbb) Synthetic organic chemical manufacturing - hazardous organic NESHAP –tetrahydrobenzaldehyde manufacture;

(cccc) Taconite iron ore processing;

(dddd) Wet-formed fiberglass mat production;

(eeee) Wood building products (surface coating);

(ffff) Wood furniture (surface coating); or

(gggg) Wool fiberglass manufacturing;

(2) Area sources:

(a) Acrylic fibers/modacrylic fibers production;

(b) Agricultural chemicals and pesticide manufacturing;

(c) Aluminum foundries;

(d) Asphalt processing and asphalt roofing manufacturing;

(e) Autobody refinishing paint shops;

(f) Carbon black production;

(g) Chemical manufacturing: Chromium compounds;

(h) Chemical preparations;

(i) Chromic acid anodizing;

(j) Clay products manufacturing (clay ceramics manufacturing);

(k) Commercial sterilization facilities;

(l) Copper foundries;

(m) Cyclic crude and intermediate production;

(n) Decorative chromium electroplating;

(o) Dry cleaning facilities;

(p) Electrical and electronic equipment – finishing operations;

(q) Fabricated metal products;

(r) Fabricated plate work;

(s) Fabricated structural metal manufacturing;

(t) Ferroalloys production: Ferromanganese and Silicomanganese;

(u) Flexible polyurethane foam fabrication operations;

(v) Flexible polyurethane foam production;

(w) Gas distribution stage 1;

(x) Halogenated solvent cleaners;

(y) Hard chromium electroplating;

(z) Hazardous waste incineration;

(aa) Heating equipment, except electric;

(bb) Hospital sterilizers;

(cc) Industrial boilers fired by coal, wood and oil;

(dd) Industrial inorganic chemical manufacturing;

(ee) Industrial machinery and equipment – finish operations;

(ff) Industrial organic chemical manufacturing;

(gg) Inorganic pigments manufacturing;

(hh) Institutional/commercial boilers fired by coal, wood and oil;

(ii) Iron and steel forging;

(jj) Iron foundries;

(kk) Lead acid battery manufacturing;

(ll) Medical waste incinerators;

(mm) Mercury cell chlor-alkali plants;

(nn) Miscellaneous organic NESHAP;

(oo) Municipal landfills;

(pp) Municipal waste combustors (MWC);

(qq) Nonferrous foundries;

(rr) Oil and natural gas production;

(ss) Paint strippers;

(tt) Paints and allied products manufacturing;

(uu) Pharmaceutical production;

(vv) Plastic materials and resins manufacturing;

(ww) Plastic parts and products (surface coating);

(xx) Plating and polishing;

(yy) Polyvinyl chloride and copolymers production;

(zz) Portland cement;

(aaa) Prepared feeds materials;

(bbb) Pressed and blown glass and glassware manufacturing;

(ccc) Primary copper (not subject to MACT);

(ddd) Primary metal products manufacturing;

(eee) Primary nonferrous metals (Zn, Cd and Be);

(fff) Public owned treatment works;

(ggg) Secondary copper smelting;

(hhh) Secondary lead smelting;

(iii) Secondary nonferrous metals;

(jjj) Sewage sludge incineration;

(kkk) Stainless and nonstainless steel manufacturing electric arc furnace;

(lll) Stationary internal combustion engines;

(mmm) Steel foundries;

(nnn) Synthetic rubber manufacturing;

(ooo) Valves and pipe fittings; or

(ppp) Wood preserving.

(20 Ky.R. 698; 1000; eff. 11-29-1993; Recodified from 401 KAR 57:061, 6-2-1997; 24 Ky.R. 1765; eff. 6-10-1998; TAm eff. 8-9-2007; 43 Ky.R. 1043; eff. 3-3-2017; Crt eff. 9-12-2018.)