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 Compounds[1]
0	Glycol ethers[2]
0	Lead Compounds
0	Manganese Compounds
0	Mercury Compounds
0	Fine mineral fibers[3]
0	Nickel Compounds
0	Polycyclic Organic Matter[4]

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-$(OCH_2CH_2)_n$-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.)