

Environmental Protection Agency

Pt. 63, Subpt. JJ, Table 4

Emission point	Existing source	New source
(d) Use any combination of (a), (b), and (c) .....	1.0	0.8
Cleaning Operations:		
Strippable spray booth material (maximum VOC content, kg VOC/kg solids [lb VOC/lb solids])	0.8	0.8
Contact Adhesives:		
(a) Use compliant contact adhesives (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied) based on following criteria:		
i. For aerosol adhesives, and for contact adhesives applied to nonporous substrates	<sup>d</sup> NA	<sup>d</sup> NA
ii. For foam adhesives used in products that meet flammability requirements .....	1.8	0.2
iii. For all other contact adhesives (including foam adhesives used in products that do not meet flammability requirements); or .....	1.0	0.2
(b) Use a control device .....	<sup>e</sup> 1.0	<sup>e</sup> 0.2
All Finishing Operations and Contact Adhesives:		
(a) Achieve total free formaldehyde emissions across all finishing operations and contact adhesives, lb per rolling 12 month period, as applied	400	400
(b) Use coatings and contact adhesives only if they are low-formaldehyde coatings and contact adhesives .....	<sup>f</sup> 1.0	<sup>f</sup> 1.0

<sup>a</sup> The limits refer to the VHAP content of the coating, as applied.  
<sup>b</sup> Washcoats, basecoats, and enamels must comply with the limits presented in this table if they are purchased premade, that is, if they are not formulated onsite by thinning other finishing materials. If they are formulated onsite, they must be formulated using compliant finishing materials, i.e., those that meet the limits specified in this table, and thinners containing no more than 3.0 percent VHAP by weight.  
<sup>c</sup> The control device must operate at an efficiency that is equivalent to no greater than 1.0 kilogram (or 0.8 kilogram) of VHAP being emitted from the affected emission source per kilogram of solids used.  
<sup>d</sup> There is no limit on the VHAP content of these adhesives.  
<sup>e</sup> The control device must operate at an efficiency that is equivalent to no greater than 1.0 kilogram (or 0.2 kilogram) of VHAP being emitted from the affected emission source per kilogram of solids used.  
<sup>f</sup> The limits refer to the formaldehyde content by weight of the coating or contact adhesive, as specified on certified product data sheets.

[60 FR 62936, Dec. 7, 1995, as amended at 62 FR 30260, June 3, 1997; 76 FR 72073, Nov. 21, 2011]

TABLE 4 TO SUBPART JJ OF PART 63—POLLUTANTS EXCLUDED FROM USE IN CLEANING AND WASHOFF SOLVENTS

Chemical name	CAS No.	Chemical name	CAS No.
4-Aminobiphenyl .....	92671	Lindane (hexachlorocyclohexane, gamma) .....	58899
Styrene oxide .....	96093	2,4-Toluene diamine .....	95807
Diethyl sulfate .....	64675	Dichloroethyl ether (Bis(2-chloroethyl) ether) .....	111444
N-Nitrosomorpholine .....	59892	1,2-Diphenylhydrazine .....	122667
Dimethyl formamide .....	68122	Toxaphene (chlorinated camphene) .....	8001352
Hexamethylphosphoramide .....	680319	2,4-Dinitrotoluene .....	121142
Acetamide .....	60355	3,3'-Dimethoxybenzidine .....	119904
4,4'-Methylenedianiline .....	101779	Formaldehyde .....	50000
o-Anisidine .....	90040	4,4'-Methylene bis (2-chloroaniline) .....	101144
2,3,7,8-Tetrachlorodibenzo-p-dioxin .....	1746016	Acrylonitrile .....	107131
Beryllium salts .....		Ethylene dibromide (1,2-Dibromoethane) .....	106934
Benzidine .....	92875	DDE (1,1-p-chlorophenyl 1-2 dichloroethylene) ...	72559
N-Nitroso-N-methylurea .....	684935	Chlorobenzilate .....	510156
Bis (chloromethyl) ether .....	542881	Dichlorvos .....	62737
Dimethyl carbamoyl chloride .....	79447	Vinyl chloride .....	75014
Chromium compounds (hexavalent) .....		Coke Oven Emissions .....	
1,2-Propylenimine (2-Methyl aziridine) .....	75558	Ethylene oxide .....	75218
Arsenic and inorganic arsenic compounds .....	99999904	Ethylene thiourea .....	96457
Hydrazine .....	302012	Vinyl bromide (bromoethene) .....	593602
1,1-Dimethyl hydrazine .....	57147	Selenium sulfide (mono and di) .....	7488564
Beryllium compounds .....	7440417	Chloroform .....	67663
1,2-Dibromo-3-chloropropane .....	96128	Pentachlorophenol .....	87865
N-Nitrosodimethylamine .....	62759	Ethyl carbamate (Urethane) .....	51796
Cadmium compounds .....		Ethylene dichloride (1,2-Dichloroethane) .....	107062
Benzo (a) pyrene .....	50328	Propylene dichloride (1,2-Dichloropropane) .....	78875
Polychlorinated biphenyls (Aroclors) .....	1336363	Carbon tetrachloride .....	56235
Heptachlor .....	76448	Benzene .....	71432
3,3'-Dimethyl benzidine .....	119937	Methyl hydrazine .....	60344
Nickel subsulfide .....	12035722	Ethyl acrylate .....	140885
Acrylamide .....	79061	Propylene oxide .....	75599
Hexachlorobenzene .....	118741	Aniline .....	62533
Chlordane .....	57749	1,4-Dichlorobenzene(p) .....	106467
1,3-Propane sultone .....	1120714	2,4,6-Trichlorophenol .....	88062
1,3-Butadiene .....	106990	Bis (2-ethylhexyl) phthalate (DEHP) .....	117817
Nickel refinery dust .....		o-Toluidine .....	95534
2-Acetylaminoflourene .....	53963	Propoxur .....	114261
3,3'-Dichlorobenzidine .....	53963	1,4-Dioxane (1,4-Diethyleneoxide) .....	123911

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Chemical name	CAS No.
Acetaldehyde	75070
Bromoform	75252
Captan	133062
Epichlorohydrin	106898
Methylene chloride (Dichloromethane)	75092
Dibenz (ah) anthracene	53703
Chrysene	218019
Dimethyl aminoazobenzene	60117
Benzo (a) anthracene	56553
Benzo (b) fluoranthene	205992
Antimony trioxide	1309644
2-Nitropropane	79469
1,3-Dichloropropene	542756
7, 12-Dimethylbenz(a) anthracene	57976
Benz(c) acridine	225514
Indeno(1,2,3-cd)pyrene	193395
1,2,7,8-Dibenzopyrene	189559

TABLE 5 TO SUBPART JJ OF PART 63—  
LIST OF VHAP OF POTENTIAL CONCERN IDENTIFIED BY INDUSTRY

CAS No.	Chemical name	EPA de minimis, tons/yr
68122	Dimethyl formamide	1.0
50000	Formaldehyde	0.2
75092	Methylene chloride	4.0
79469	2-Nitropropane	1.0
78591	Isophorone	0.7
1000425	Styrene monomer	1.0
108952	Phenol	0.1
111422	Dimethanolamine	5.0
109864	2-Methoxyethanol	10.0
111159	2-Ethoxyethyl acetate	10.0

[63 FR 71382, Dec. 28, 1998]

[63 FR 71382, Dec. 28, 1998]

TABLE 6 TO SUBPART JJ OF PART 63—VHAP OF POTENTIAL CONCERN

CAS No.	Chemical name	EPA de minimis, tons/yr*
92671	4-Aminobiphenyl	1.0
96093	Styrene oxide	1.0
64675	Diethyl sulfate	1.0
59892	N-Nitrosomorpholine	1.0
68122	Dimethyl formamide	1.0
680319	Hexamethylphosphoramide	0.01
60355	Acetamide	1.0
101779	4,4'-Methylenedianiline	1.0
90040	o-Anisidine	1.0
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.0000006
92875	Benzidine	0.00003
684935	N-Nitroso-N-methylurea	0.00002
542881	Bis(chloromethyl) ether	0.00003
79447	Dimethyl carbamoyl chloride	0.002
75558	1,2-Propylenimine (2-Methyl aziridine)	0.0003
57147	1,1-Dimethyl hydrazine	0.0008
96128	1,2-Dibromo-3-chloropropane	0.001
62759	N-Nitrosodimethylamine	0.0001
50328	Benzo (a) pyrene	0.001
1336363	Polychlorinated biphenyls (Aroclors)	0.0009
76448	Heptachlor	0.002
119937	3,3'-Dimethyl benzidine	0.001
79061	Acrylamide	0.002
118741	Hexachlorobenzene	0.004
57749	Chlordane	0.005
1120714	1,3-Propane sultone	0.003
106990	1,3-Butadiene	0.007
53963	2-Acetylaminoflourine	0.0005
91941	3,3'-Dichlorobenzidine	0.02
58899	Lindane (hexachlorocyclohexane, gamma)	0.005
95807	2,4-Toluene diamine	0.002
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)	0.006
122667	1,2-Diphenylhydrazine	0.009
8001352	Toxaphene (chlorinated camphene)	0.006
121142	2,4-Dinitrotoluene	0.002
119904	3,3'-Dimethoxybenzidine	0.01
50000	Formaldehyde	0.2
101144	4,4'-Methylene bis(2-chloroaniline)	0.02
107131	Acrylonitrile	0.03
106934	Ethylene dibromide(1,2-Dibromoethane)	0.01
72559	DDE (1,1-p-chlorophenyl 1-2 dichloroethylene)	0.01
510156	Chlorobenzilate	0.04
62737	Dichlorvos	0.02
75014	Vinyl chloride	0.02
75218	Ethylene oxide	0.09
96457	Ethylene thiourea	0.06
593602	Vinyl bromide (bromoethene)	0.06