



# U.S. Environmental Protection Agency

## Technology Transfer Network

### Clearinghouse for Inventories & Emission Factors

Contact Us | [Print Version](#) Search:

[EPA Home](#) > [Technology Transfer Network](#) > [Clearinghouse for Inventories & Emission Factors](#)  
> [Emission Factor Information](#) > AP-42, Compilation of Air Pollutant Emission Factors

## Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: *Stationary Point and Area Sources*

For information about emission factors from highway vehicles and nonroad mobile sources, visit the [Office of Transportation and Air Quality web site](#).

Please call the Info CHIEF help desk at 919-541-1000 if you have any questions about the information in AP-42, Volume I. Ordering information for hard copy of the 5th edition and the supplements is available on the [CHIEF Publications site](#).

### AP-42, Volume I, Fifth Edition

<a href="#">AP-42 FAQs</a>	Answers to frequently asked questions about AP-42
<a href="#">Drafts</a>	Draft Sections Under Review
<a href="#">Supplements</a>	AP-42 historical listing of supplements
<a href="#">Older Editions of AP-42, Vol. I</a>	<b>This information is available for historical purposes only.</b> For the most recent emission factors, supported by the EPA, please see the table of contents below.
<a href="#">Procedures</a>	<i>Procedures for Preparing Emission Factor Documents</i> -- Describes procedures for developing and reporting emission factors in EPA publications -- November 1997 (PDF 477K)
<a href="#">Contents</a>	Detailed Table of Contents, Publications in Series, Insertion Instructions, and Key Word Index -- May 1998 (PDF 128K)

Select the appropriate chapter below to display a directory of available source categories which can be downloaded.

<a href="#">Introduction</a>	Introduction to AP-42, Volume I, Fifth Edition -- January 1995 (PDF 40K)
Chapter 1	<a href="#">External Combustion Sources</a>
Chapter 2	<a href="#">Solid Waste Disposal</a>
Chapter 3	<a href="#">Stationary Internal Combustion Sources</a>
Chapter 4	<a href="#">Evaporation Loss Sources</a>
Chapter 5	<a href="#">Petroleum Industry</a>

Chapter 6	<b><u>Organic Chemical Process Industry</u></b>
Chapter 7	<b><u>Liquid Storage Tanks</u></b>
Chapter 8	<b><u>Inorganic Chemical Industry</u></b>
Chapter 9	<b><u>Food and Agricultural Industries</u></b>
Chapter 10	<b><u>Wood Products Industry</u></b>
Chapter 11	<b><u>Mineral Products Industry</u></b>
Chapter 12	<b><u>Metallurgical Industry</u></b>
Chapter 13	<b><u>Miscellaneous Sources</u></b>
Chapter 14	<b><u>Greenhouse Gas Biogenic Sources</u></b>
Appendix A	<b><u>Miscellaneous Data &amp; Conversion Factors</u></b> -- September 1985 (PDF 103K)
Appendix B.1 Pages 1-49	<b><u>Part 1 - Particle Size Distribution Data and Sized Emission Factors for Selected Sources</u></b> -- October 1986 (PDF 1M)
Appendix B.1 Pages 50-103	<b><u>Part 2 - Particle Size Distribution Data and Sized Emission Factors for Selected Sources</u></b> -- October 1986 (PDF 1M)
Appendix B.2	<b><u>Generalized Particle Size Distributions</u></b> -- September 1996 (PDF 137K)
Appendix C.1	<b><u>Procedures for Sampling Surface/Bulk Dust Loading</u></b> -- July 1993 (PDF 65K)
Appendix C.2	<b><u>Procedures for Laboratory Analysis of Surface/Bulk Dust Loading Samples</u></b> -- July 1993 (PDF 42K)

#### Draft Sections Under Review

Chapter & Section	Description	Comments Requested by:
11.19.2	<b><u>Crushed Stone Processing and Pulverized Mineral Processing</u></b> - June 26, 2003	Comment period past
12.2	<b><u>Coke Production</u></b> - August 2001	Comment period past
13.2.2	<b><u>Unpaved Roads</u></b> - October 2001	Comment period past

| [Office of Air Quality Planning & Standards](#) | [Technology Transfer Network](#) |  
| [Clearinghouse for Inventories & Emission Factors](#) |

---

[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)

This page was generated on Thursday, December 4, 2003

View the graphical version of this page at: <http://www.epa.gov/ttn/chief/ap42/index.html>

Table 2.4-1. DEFAULT CONCENTRATIONS FOR LFG CONSTITUENTS<sup>a</sup>

(SCC 50100402, 50300603)

Compound	Molecular Weight	Default Concentration (ppmv)	Emission Factor Rating
1,1,1-Trichloroethane (methyl chloroform) <sup>a</sup>	133.41	0.48	B
1,1,2,2-Tetrachloroethane <sup>a</sup>	167.85	1.11	C
1,1-Dichloroethane (ethylidene dichloride) <sup>a</sup>	98.97	2.35	B
1,1-Dichloroethene (vinylidene chloride) <sup>a</sup>	96.94	0.20	B
1,2-Dichloroethane (ethylene dichloride) <sup>a</sup>	98.96	0.41	B
1,2-Dichloropropane (propylene dichloride) <sup>a</sup>	112.99	0.18	D
2-Propanol (isopropyl alcohol)	60.11	50.1	E
Acetone	58.08	7.01	B
Acrylonitrile <sup>a</sup>	53.06	6.33	D
Bromodichloromethane	163.83	3.13	C
Butane	58.12	5.03	C
Carbon disulfide <sup>a</sup>	76.13	0.58	C
Carbon monoxide <sup>b</sup>	28.01	141	E
Carbon tetrachloride <sup>a</sup>	153.84	0.004	B
Carbonyl sulfide <sup>a</sup>	60.07	0.49	D
Chlorobenzene <sup>a</sup>	112.56	0.25	C
Chlorodifluoromethane	86.47	1.30	C
Chloroethane (ethyl chloride) <sup>a</sup>	64.52	1.25	B
Chloroform <sup>a</sup>	119.39	0.03	B
Chloromethane	50.49	1.21	B
Dichlorobenzene <sup>c</sup>	147	0.21	E
Dichlorodifluoromethane	120.91	15.7	A
Dichlorofluoromethane	102.92	2.62	D
Dichloromethane (methylene chloride) <sup>a</sup>	84.94	14.3	A
Dimethyl sulfide (methyl sulfide)	62.13	7.82	C
Ethane	30.07	889	C
Ethanol	46.08	27.2	E
Ethyl mercaptan (ethanethiol)	62.13	2.28	D
Ethylbenzene <sup>a</sup>	106.16	4.61	B
Ethylene dibromide	187.88	0.001	E
Fluorotrichloromethane	137.38	0.76	B
Hexane <sup>a</sup>	86.18	6.57	B
Hydrogen sulfide	34.08	35.5	B
Mercury (total) <sup>a,d</sup>	200.61	2.92x10 <sup>-4</sup>	E

Table 2.4-1. (Concluded)

Compound	Molecular Weight	Default Concentration (ppmv)	Emission Factor Rating
Methyl ethyl ketone <sup>a</sup>	72.11	7.09	A
Methyl isobutyl ketone <sup>a</sup>	100.16	1.87	B
Methyl mercaptan	48.11	2.49	C
Pentane	72.15	3.29	C
Perchloroethylene (tetrachloroethylene) <sup>a</sup>	165.83	3.73	B
Propane	44.09	11.1	B
t-1,2-dichloroethene	96.94	2.84	B
Trichloroethylene (trichloroethene) <sup>a</sup>	131.40	2.82	B
Vinyl chloride <sup>a</sup>	62.50	7.34	B
Xylenes <sup>a</sup>	106.16	12.1	B

NOTE: This is not an all-inclusive list of potential LFG constituents, only those for which test data were available at multiple sites. References 10-67. Source Classification Codes in parentheses.

<sup>a</sup> Hazardous Air Pollutants listed in Title III of the 1990 Clean Air Act Amendments.

<sup>b</sup> Carbon monoxide is not a typical constituent of LFG, but does exist in instances involving landfill (underground) combustion. Therefore, this default value should be used with caution. Of 18 sites where CO was measured, only 2 showed detectable levels of CO.

<sup>c</sup> Source tests did not indicate whether this compound was the para- or ortho- isomer. The para isomer is a Title III-listed HAP.

<sup>d</sup> No data were available to speciate total Hg into the elemental and organic forms.

Table 2.4-2. DEFAULT CONCENTRATIONS OF BENZENE, NMOC, AND TOLUENE BASED ON WASTE DISPOSAL HISTORY<sup>a</sup>

(SCC 50100402, 50300603)

Pollutant	Molecular Weight	Default Concentration (ppmv)	Emission Factor Rating
Benzene <sup>b</sup>	78.11		
Co-disposal		11.1	D
No or Unknown co-disposal		1.91	B
NMOC (as hexane) <sup>c</sup>	86.18		
Co-disposal		2420	D
No or Unknown co-disposal		595	B
Toluene <sup>b</sup>	92.13		
Co-disposal		165	D
No or Unknown co-disposal		39.3	A

<sup>a</sup> References 10-54. Source Classification Codes in parentheses.

<sup>b</sup> Hazardous Air Pollutants listed in Title III of the 1990 Clean Air Act Amendments.

<sup>c</sup> For NSPS/Emission Guideline compliance purposes, the default concentration for NMOC as specified in the final rule must be used. For purposes not associated with NSPS/Emission Guideline compliance, the default VOC content at co-disposal sites = 85 percent by weight (2,060 ppmv as hexane); at No or Unknown sites = 39 percent by weight 235 ppmv as hexane).