

Appendix A: Illinois Toxic Emissions Inventory

BACKGROUND

The State of Illinois compiled its statewide air toxic emission inventory for the Great Lakes Air Toxic Emission Inventory Project for calendar year 2001. Illinois did not perform the emission calculations in RAPIDS. Rather, Illinois used the data from the Factor Information Retrieval System (FIRE version 6.23) and the reference tables of RAPIDS to calculate emissions outside of RAPIDS. The emission estimates calculated were then imported into RAPIDS.

DATA SOURCES

Illinois maintains a criteria pollutant emission inventory known as ISSIS (Illinois Stationary Source Inventory System). The stationary source inventory includes point sources which require a permit. In Illinois, permitting exemptions are based upon physical characteristics of a device (e.g., boilers with less than one million BTU per hour heat input) or throughput (e.g., less than 5,000 gallons of coating/solvent use per year). There are no exemptions for permitting for de minimis emission rates so the point source inventory has a large number of sources as compared to other states.

CALCULATION METHODS

Point Source Emissions

Point source emissions were calculated using the emission factors found in FIRE and RAPIDS using operating rate data from ISSIS. Since no control efficiencies existed in ISSIS for the pollutants of interest, Illinois applied the ISSIS removal efficiency value for particulate matter to particulate toxic pollutants and the VOC value to organic toxic pollutants.

Illinois also extended the use of emission factors. In performing its calculations external to RAPIDS, Illinois discovered that SCC codes that were similar didn't necessarily have the same number of pollutants/emission factors associated with them. For example, the SCC (10100601) for electric generating natural gas fired boilers over 100 million BTU/hr had an emission factor for mercury emissions while the SCC (10200601) for industrial natural gas fired boilers over 100 million BTU/hr did not. In cases such as this, the emission factor was applied to all similar SCCs. The majority of these substitutions occurred for fuel combustion and incinerating devices.

Previous inventories identified shortcomings in the emission rates for some organic materials (e.g., methylene chloride, dibutyl phthalate, etc.). To address this shortcoming, Illinois supplemented its emission data with TRI reported data for 2001. Emission sources obtained through TRI had to be match by address to match emission sources from ISSIS. Sources that couldn't be matched were not included in the inventory. Where matches were established, a further analysis was done to associate the emissions with a specific device at the source.

Two source categories typically identified as area sources were inventoried as point sources. One of these sources was chrome plating. Due to time constraints, emissions were calculated from permitted allowable amp-hours and standard emission factors.

The second area source inventoried as a point source were landfills. Data was obtained from the Illinois EPA's "Nonhazardous Solid Waste Management and Landfill Capacity in Illinois" report dated November 2002. Emissions were then calculated using the EIIP/AP-42 methodology. For sources with flaring and gas-to-energy systems, a capture percent of 75% and a destruction efficiency of 90% was assumed.

Area Source Emissions

Area sources were primarily calculated using EIIP methods and speciation profiles contained in RAPIDS. The County Business Patterns report from the Census Bureau reports employment by NAICS (North American Industrial Classification System) rather than SIC (Standard Industrial Classification). A cross-reference table, provided by the Census Bureau, between NAICS and SIC was used to apportion the data to the correct SIC. A description of the calculation methods, assumptions and data sources for each area source inventoried follows.

Architectural Coating

The EIIP methodology was followed. Nationwide production estimates were obtained from the Census Bureau report "MA325F(01)-1 – Paint and Allied Products", August 2002 (www.census.gov/cir/www/325/mq325f.html). These values were then apportioned to county level using population. Emissions were then calculated by using per capita factors.

Autobody Refinishing

Employment data was obtained from the Census Bureau report "2001 County Business Patterns", April 2003 (www.census.gov/prod/www/abs/cbptotal.html). RAPIDS had an emission factor of 0.84 lb VOC/person. The EIIP section had factors of 3519 lb VOC/employee and 2.3 lb VOC/person. These numbers were then used to obtain a per employee factor, to be consistent with other RAPIDS users, that was based upon RAPIDS data. This value was 1285.2 lb VOC/employee. Emissions were then speciated using profile 1194.

Chrome Plating

Inventoried as a point source.

Consumer Solvent Use

County population was multiplied by the overall emission factor, from USEPA's 1999 NTI methodology document to obtain emissions. Emission factors for individual categories (e.g., personal care products, household products, etc.) was not used.

Dry Cleaning

Employment data was obtained from the Census Bureau report "2001 County Business Patterns", April 2003 (www.census.gov/prod/www/abs/cbptotal.html). The EIIP emission factors were then used to calculate perchloroethylene emissions.

Ethylene Oxide Sterilizers

Inventoried as a point source.

Gasoline Marketing

The amount of gasoline and gasohol sold in Illinois was obtained from Monthly Gasoline Reported by States 2001 (Federal Highway Administration Highway Statistics, Table MF-33GA, October 2002). Use was apportioned to county by VMT (vehicle miles traveled). Emissions were calculated as follows:

- Tank Filling (Stage I) – Used EIIP calculation methodology assuming balanced operation in combination with the speciation profile for gasoline from USEPA's 1999 NTI.
- Vehicle Refueling (Stage II) – Multiplied monthly gasoline use times the monthly emission factor obtained from MOBILE 5b in combination with the speciation profile for gasoline from USEPA's 1999 NTI
- Underground Tank Breathing – Used EIIP calculation methodology in combination with the speciation profile for gasoline from USEPA's 1999 NTI.
- Gasoline Trucks in Transit – Used EIIP calculation methodology in combination with the speciation profile for gasoline from USEPA's 1999 NTI.

Graphic Arts

Inventoried as a point source.

Incineration/Crematories

Inventoried as a point source.

Industrial Surface Coating

Employment data was obtained from the Census Bureau report “2001 County Business Patterns”, April 2003 (www.census.gov/prod/www/abs/cbptotal.html) for the SIC categories of 25, 34, 35 and 37. The per employee EIIP emission factors were then used to calculate TOG emissions. Emissions were speciated by using profile 1003.

The calculated emissions were then converted to controlled emissions by assuming 90% control efficiency, 90% rule effectiveness and 90% rule penetration. The point source inventory values for solvent cleaning were then subtracted from the calculated emissions to obtain area source emissions.

Lamp Breakage and Lamp Recycling

Data from USEPA’s 1999 NTI inventory was used.

Landfills

Inventoried as a point source.

Pesticides

Pesticide use and application by county was obtained from the Illinois Agricultural Statistics website (www.agstats.state.il.us). Emission factors from EIIP were then used to calculate emissions.

Publicly Owned Treatment Works (POTWs)

Data from USEPA’s 1999 NTI inventory was used.

Residential Fuel Combustion

The amount of fuel burned in Illinois was obtained from the Department of Energy’s Energy Information Administration. Use by county was apportioned by the number of houses in a county (2000 census) divided by the total number of houses in the state in the following manner:

- Natural gas – apportioned to county level by residences in county

- Fuel oil – apportioned to county level by residences burning wood in county
- Kerosene – apportioned to county level by residences burning wood in county
- Coal – apportioned to county level by residences burning wood in county

The county-wide fuel use was then multiplied by the emission factors for commercial/institutional natural gas fired boilers < 10 million BTU/hr to obtain emissions for the county.

Residential Wood Combustion

The amount of fuel burned in Illinois was obtained from the Department of Energy’s Energy Information Administration. Use by county was apportioned by the number of houses in a county (2000 census) that burned wood.

EIIP emission factors for non-catalytic stoves were then used to calculate emissions.

Solvent Cleaning

Employment data was obtained from the Census Bureau report “2001 County Business Patterns”, April 2003 (www.census.gov/prod/www/abs/cbptotal.html) for the SIC categories of 25, 33, 34, 35, 36, 37, 38, 39 and 55. The per employee EIIP emission factors were then used to calculate TOG emissions. Emissions were speciated by using profile 1195.

The calculated emissions were then converted to controlled emissions by assuming 90% control efficiency, 80% rule effectiveness and 90% rule penetration. The point source inventory values for solvent cleaning were then subtracted from the calculated emissions to obtain area source emissions.

Structure Fires

Emissions calculated for 1998 were used for 2001.

Traffic Lane Markings

Coating specifications and use were obtained from the Illinois Department of Transportation. Coating use was available by district so coating use was apportioned at the county level by the percentage of miles of roads in the county compared to the total miles of roads in the district. This data was obtained for the previous 1993 inventory. Since the source category did not comprise a significant portion of the 1993 inventory, it was assumed that coating use was the same for 2001 as it was in 1993. Emissions were speciated using profile 2438.

Mobile Source Emissions

Emissions for mobile sources were calculated for the categories of aircraft, off-road and on-road sources. A description of the calculation methods, assumptions and data sources for each source inventoried follows.

Aircraft

For larger airports, the emissions were grown using the 1999 inventory and the number of landings and take-offs from the FAA (www.apo.data.faa.gov/faaatadsall.htm). Emissions from smaller airports were assumed to be the same as the 1999 inventory.

Off-road Mobile Sources

The USEPA's 1999 NEI inventory for off-road mobile sources was grown using equipment populations from the NONROAD model. Locomotive and commercial marine vessel emissions were assumed to be the same as 1999.

On-road Mobile Sources

The USEPA's 1999 NEI inventory for on-road mobile sources was grown using VMT.

Table A-1: Illinois Statewide Emissions (lb/yr)

Pollutant	Point Sources	Area Sources	Mobile Sources	Nonroad Sources	Total
ACENAPHTHEN	93.18	11,852.37	2,267.78	3,095.97	17,309.27
ACENAPHTHYL	489.18	37,925.74	11,998.16	4,730.72	55,143.79
ACETALDEHYDE	50,770.66	8,996.63	3,736,624.17	1,837,865.21	5,634,256.67
ACETAMIDE		1.52			1.52
ACETONITRILE	85,936.00	2,084.57			88,020.57
ACETOPHENONE	20,925.25	106.87			21,032.12
ACROLEIN	30,077.76	153,703.01	301,209.00	210,285.57	695,275.34
ACRYLAMIDE	1,829.20				1,829.20
ACRYLIC ACID	41,632.00	0.05			41,632.05
ACRYLONITRIL	227,810.09	2,313.78			230,123.87
ALLYL CHLORI		111.22			111.22
ANILINE	25.00				25.00
ANTHRACENE	13.71	10,667.50	2,729.31	1,479.48	14,890.01
ANTIMONY	3,099.89				3,099.89
ARSENIC	21,130.50	103.24	1,507.19	1,547.49	24,288.43
ATRAZINE	775.00	1,372,800.00			1,373,575.00
BENZ(A)ANTHR	8,822.34	1,345.52	656.58	1,005.02	11,829.45
BENZ(GHI)PE	2.06	23,703.62	801.51	1,281.10	25,788.29
BENZENE	954,316.89	558,065.39	12,145,439.34	5,196,664.71	18,854,486.32
BENZO(A)PYRE	3,517.08	7,111.50	407.73	876.26	11,912.58
BENZO(B)FLUO	1.69	4,741.45	450.07	834.38	6,027.59
BENZO(K)FLUO	1.32	1,185.99	450.07	845.84	2,483.22
BENZYL CHLOR	31,582.55	50.01			31,632.57
BERYLLIUM	4,486.11	12.98		701.46	5,200.56
BIPHENYL	1,837.68	26,529.84			28,367.52
BROMOFORM	1,679.05				1,679.05
BROMOMETH	41,259.87	2,781,487.06			2,822,746.93
BUTADIENE,13	353,611.80	152.08	1,688,443.78	744,881.00	2,787,088.66
CADMIUM	19,879.40	544.78		709.89	21,134.07
CAPTAN	11.20				11.20
CARBON DISUL	4,906,639.00	26,774.00			4,933,413.00
CARBON TETRA	3,171.18	8,819.81			11,991.00
CARBONYL SUL	3,291.75				3,291.75
CATECHOL	350.00				350.00
CHLORDANE	0.61				0.61
CHLORINE	493,933.22				493,933.22
CHLOROBENZ	49,200.76	900,036.49			949,237.25
CHLOROETHANE	87,592.23	97,076.72			184,668.94
CHLOROFORM	4,421.68	52,847.83			57,269.50
CHLOROPRENE		147.50			147.50
CHROMIUM	40,970.32	662.37	631.37	746.00	43,010.05
CHROMIUM VI	3,028.38		419.98	757.64	4,205.99
CHRYSENE	6,843.57	11,852.40	355.32	904.94	19,956.22
CLACETOPHE,2	301.12				301.12
COBALT	6,277.10	39.23			6,316.33
COKE OVEN GS	513,802.36				513,802.36
COPPER	82,556.32	906.91	67,306.64		150,769.87
CRESOL MX IS	10,018.90	10.67			10,029.58
CUMENE	131,952.00	4,479.80			136,431.80

Pollutant	Point Sources	Area Sources	Mobile Sources	Nonroad Sources	Total
CYANIDE	107,732.44				107,732.44
D,2,4	10.00	3,345,730.00			3,345,740.00
DIBENZAHAH	14.02	4,741.17	0.16	4.62	4,759.97
DIBROMOET,12	106.94				106.94
DIBUTYL PHTH	2,583.32				2,583.32
DICHLORETH12	7,290.34	0.39			7,290.73
DICLBENZ,14	27,633.75	977,324.16			1,004,957.91
DICLETH,11-	23,962.23				23,962.23
DICLPROPE,13	30.99	2,004,675.36			2,004,706.35
DIETH SULFAT	4,500.00				4,500.00
DIETHANOLAMI	14,552.80				14,522.80
DIEYLHEX PHT	9,364.17				9,364.17
DIMETH HY,11	10.00				10.00
DIMETH PHTHA	2,858.00				2,858.00
DIMETH SULFA	6,564.79	80.01			6,572.80
DIMETHFORMAM	998.00	394.67			1,392.67
DIMETHYLANIL		1,974.66			1,974.66
DINITROPH,24	0.06				0.06
DINITRTOL,24	12.04	294.25			306.30
DIOXANE	509.00	231.42			740.42
EPICLHYDRIN	67,852.50	29.35			67,881.85
ETH ACRYLATE	6,345.34	11.56			6,356.90
ETHYLBENZENE	799,885.76	610,905.25	5,330,230.32	2,957,858.54	9,698,879.87
ETHYLENE GLY	74,446.59	2,294,065.25			2,368,511.84
ETHYLENE OXI	192,075.13	1,379.96			193,455.09
ETHYLENE THI	10.00				10.00
FLUORANTHENE	8,961.97	9,482.68	2,845.32	2,570.33	23,860.30
FLUORENE	111.63	16,593.45	4,738.11	4,441.96	25,885.15
FORMALDEHYDE	1,177,150.29	84,843.80	6,334,753.83	4,387,082.69	11,983,830.62
GLYCOL ETHRS	2,652,212.10	7,121,318.80			9,773,530.90
HCL	29,773,841.07	490,002.09			30,263,843.16
HEPTACHLOR	0.17				0.17
HEXAOL-1,3-C		3.56			3.56
HEXANE	7,658,809.02	2,438,467.86	4,169,434.07	1,934,498.35	16,201,209.31
HEXCL-13-BUT		4.45			4.45
HEXCLBENZENE	0.17	0.71			0.88
HF	3,556,873.43	161.38			3,557,034.80
HYDRAZINE	5.00				5.00
HYDROGEN SUL	232,579.14				232,579.14
HYDROQUINONE	11.00				11.00
INDN(123CDPY	1.98	23,703.90	222.73	857.13	24,785.74
ISOPHORONE	20,193.11	11,865.17			32,058.29
LEAD	124,950.33	255.64		875.39	126,081.37
MALEIC ANHYD	165,731.00				165,731.00
MANGANESE	166,670.61	358.14	357.17	869.76	168,255.68
MERCURY	9,250.47	198.18	1,629.80	1,373.83	12,452.28
METH ETH KET	3,804,446.54	3,254,407.30			7,058,853.84
METH HYDRAZI	7,312.81				7,312.81
METH IODIDE	2.85				2.85
METH ISOBUT	1,517,075.33	876,342.12			2,393,417.45
METH METHACR	56,242.99	7,772.77			64,015.76

Pollutant	Point Sources	Area Sources	Mobile Sources	Nonroad Sources	Total
METH TERT BU	21,106.57	652.42			21,758.99
METHANOL	1,682,343.14	8,086,029.75			9,768,372.89
METHENE(B)4-	1,430.26				1,430.26
METHOXYCHLOR	0.64				0.64
METHYL CHLOR	29,477.97	80,897.26			110,375.24
METHYLENE CL	1,354,448.16	2,551,508.57			3,905,956.72
NAPHTHALENE	277,529.79	786,989.25	314,253.47	52,987.11	1,431,759.62
NICKEL	64,978.03	1,011.78	794.74	2,490.41	69,274.96
NITROBENZ		41.81			41.81
NITROPHENL,4	0.04				0.04
NITROPROPA,2	20.00	26.09			46.09
PCBS	0.29				0.29
PCDD	3.12				3.12
PCDF	1.77				1.77
PERC	1,108,724.09	4,613,572.08			5,722,296.16
PHENANTHRENE	1,041.25	139,855.99	7,800.06	7,683.78	156,381.08
PHENOL	544,794.64	1,185.15		11,846.40	557,826.19
PHOSGENE	Negl				Negl
PHOSPHINE	90.00				90.00
PHOSPHORUS	13,592.63				13,592.63
PHTHALIC ANH	127,846.00				127,846.00
PROPIONALDEH	17,577.90	22.24	325,938.75	392,733.85	736,272.74
PROPOXUR	10.00				10.00
PRPLENE DICH	2,188.30	62.22			2,250.52
PRPLENE OXID	5,228.14	18,290.51			23,518.66
PYRENE	20.23	9,483.56	3,961.49	2,742.68	16,207.96
QUINOLINE	719.81				719.81
QUINONE	770.27				770.27
SELENIUM	52,276.04	48.11		15.89	52,340.04
STYRENE	1,947,584.32	53,642.98	1,104,900.21	197,099.96	3,303,227.46
TCDD,2378	0.0005	0.0001	0.0140		0.0147
TCDF,2378	0.0387	0.0031			0.0419
TCE,111	144,307.40	11,033,389.28			11,177,696.68
TETCLET,1122	19,235.03	11.56			19,246.60
TOLUENE	7,300,956.97	45,585,103.08	35,910,746.68	15,364,561.20	104,161,367.92
TOLUENE24DII	1,055.00				1,055.00
TOLUIDINE,O-	10.00	11.56			21.56
TRICHLORETHY	1,236,938.85	6,023,428.77			7,260,367.62
TRICLBNZ,124	17.00	526.41			543.41
TRICLETH,112	47.32	7.12			54.44
TRICLPHN,245	10.00				10.00
TRIETHAMINE	37,661.00	10,512.02			48,173.02
TRIFLURALIN	29.86	616,320.00			616,349.86
TRIME-PENTAN	7,755.94	296,211.75	13,748,662.74	6,497,614.82	20,550,245.25
VINLIDENE CL	1,999.01	2,557.39			4,556.40
VINYL ACETAT	158,891.31	460.62			159,351.93
VINYL CHLOR	276,683.74	42.70			276,726.44
XYLENE,M	27,194.19				27,194.19
XYLENE,O	503,918.98	4,133,202.22		9,425.52	4,646,546.73
XYLENE,P	5,285.70				5,285.70
XYLENES ISO	3,575,263.19	11,328,005.18	20,334,506.64	12,908,464.88	48,146,239.89

Table A-2: Pollutant Codes

Code	Pollutant
ACENAPHTHEN	Acenaphthene
ACENAPHTHYL	Acenaphthylene
ACETALDEHYDE	Acetaldehyde
ACETAMIDE	Acetamide
ACETONITRILE	Acetonitrile
ACETOPHENONE	Acetophenone
ACROLEIN	Acrolein
ACRYLAMIDE	Acrylamide
ACRYLIC ACID	Acrylic Acid
ACRYLONITRIL	Acrylonitrile
ALLYL CHLORI	Allyl Chloride
ANILINE	Aniline
ANTHRACENE	Anthracene
ANTIMONY	Antimony
ARSENIC	Arsenic
ATRAZINE	Atrazine
BENZ(A)ANTHR	Benz(a)anthracene
BENZ(GHI)PE	Benzo(g,h,i)perylene
BENZENE	Benzene
BENZO(A)PYRE	Benzo(a)pyrene
BENZO(B)FLUO	Benzo(b)fluoranthene
BENZO(K)FLUO	Benzo(k)fluoranthene
BENZYL CHLOR	Benzyl Chloride
BERYLLIUM	Beryllium
BIPHENYL	Biphenyl
BROMOFORM	Bromoform
BROMOMETH	Bromomethane
BUTADIENE,13	1,3-Butadiene
CADMIUM	Cadmium
CAPTAN	Captan
CARBON DISUL	Carbon Disulfide
CARBON TETRA	Carbon Tetrachloride
CARBONYL SUL	Carbonyl Sulfide
CATECHOL	Catechol
CHLORDANE	Chlordane
CHLORINE	Chlorine
CHLOROBENZ	Chlorobenzene
CHLOROETHANE	Chloroethane
CHLOROFORM	Chloroform
CHLOROPRENE	Chloroprene
CHROMIUM	Chromium
CHROMIUM VI	Chromium VI
CHRYSENE	Chrysene
CLACETOPHE,2	2-Chloroacetophenone
COBALT	Cobalt
COKE OVEN GS	Coke Oven gas
COPPER	Copper
CRESOL MX IS	Cresol Isomers
CUMENE	Cumene
CYANIDE	Cyanide
D,2,4	2,4-D Salts and Esters

Code	Pollutant
DIBENZAHAH	Dibenzo(a,h)anthracene
DIBROMOET,12	1,2-Dibromoethane
DIBUTYL PHTH	Dibutyl Phthalate
DICHLORETH12	1,2-Dichloroethane
DICLBENZ,14	1,4-Dichlorobenzene
DICLETH,11-	1,1-Dichloroethane
DICLPROPE,13	1,3-Dichloropropene
DIETH SULFAT	Diethyl Sulfate
DIETHANOLAMI	Diethanolamine
DIEYLHEX PHT	Diethylhexyl Phthalate
DIMETH HY,11	1,1-Dimethyl hydrazine
DIMETH PHTHA	Dimethyl Phthalate
DIMETH SULFA	Dimethyl Sulfate
DIMETHFORMAM	Dimethylformamide
DIMETHYLANIL	Dimethylaniline
DINITROPH,24	2,4-Dinitrophenol
DINITRTOL,24	2,4-Dinitrotoluene
DIOXANE	Dioxane
EPICLHYDRIN	Epichlorohydrin
ETH ACRYLATE	Ethyl Acrylate
ETHYLBENZENE	Ethylbenzene
ETHYLENE GLYCOL	Ethylene Glycol
ETHYLENE OXI	Ethylene Oxide
ETHYLENE THI	Ethylene Thiourea
FLUORANTHENE	Fluroanthene
FLUORENE	Fluorene
FORMALDEHYDE	Formaldehyde
GLYCOL ETHRS	Glycol Ethers
HCL	Hydrochloric Chloride
HEPTACHLOR	Heptachlor
HEXACL-1,3-C	1,2,3,4,5,5-Hexachloro-1,3-cyclopentadiene
HEXANE	Hexane
HEXCL-13-BUT	Hexachloro-1,3-butadiene
HEXCLBENZENE	Hexachlorobenzene
HF	Hydrogen Fluoride
HYDRAZINE	Hydrazine
HYDROGEN SUL	Hydrogen Sulfide
HYDROQUINONE	Hydroquinone
INDN(123CDPY	Indeno(1,2,3-c,d)pyrene
ISOPHORONE	Isophorone
LEAD	Lead
MALEIC ANHYD	Maleic Anhydride
MANGANESE	Manganese
MERCURY	Mercury
METH ETH KET	Methyl Ethyl Ketone
METH HYDRAZI	Methyl Hydrazine
METH IODIDE	Methyl Iodide
METH ISOBUT	Methyl Isobutyl Ketone
METH METHACR	Methyl Methacrylate
METH TERT BU	Methyl t-Butyl Ether
METHANOL	Methanol

Code	Pollutant
METHENE(B)4-	Methylene diphenyl diisocyanate
METHOXYCHLOR	Methoxychlor
METHYL CHLOR	Methyl Chloride
METHYLENE CL	Methylene Chloride
NAPHTHALENE	Naphthalene
NICKEL	Nickel
NITROBENZ	Nitrobenzene
NITROPHENL,4	4-Nitrophenol
NITROPROPA,2	2-Nitropropane
PCBS	PCBs
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
PERC	Perchloroethylene
PHENANTHRENE	Phenanthrene
PHENOL	Phenol
PHOSGENE	Phosgene
PHOSPHINE	Phosphine
PHOSPHORUS	Phosphorus
PHTHALIC ANH	Phthalic Anhydride
PROPIONALDEH	Propionaldehyde
PROPOXUR	Propoxur
PRPLENE DICH	Propylene Dichloride
PRPLENE OXID	Propylene Oxide
PYRENE	Pyrene
QUINOLINE	Quinoline
QUINONE	Quinone
SELENIUM	Selenium
STYRENE	Styrene
TCDD,2378	2,3,7,8-Tetrachlorodibenzodioxin
TCDF,2378	2,3,7,8-Tetrachlorodibenzofuran
TCE,111	1,1,1-Trichloroethane
TETCLET,1122	1,1,2,2-Tetrachloroethane
TOLUENE	Toluene
TOLUENE24DII	Toluene-2,4-Diisocyanate
TOLUIDINE,O-	o-Toluidine
TRICHLORETHY	Trichloroethylene
TRICLBNZ,124	1,2,4-Trichlorobenzene
TRICLETH,112	1,1,2-Trichloroethane
TRICLPHN,245	2,4,5-Trichlorophenol
TRIETHAMINE	Triethylamine
TRIFLURALIN	Trifluralin
TRIME-PENTAN	2,2,4-Trimethylpentane
VINLIDENE CL	Vinylidene Chloride
VINYL ACETAT	Vinyl Acetate
VINYL CHLOR	Vinyl Chloride
XYLENE,M	m-Xylene
XYLENE,O	o-Xylene
XYLENE,P	p-Xylene
XYLENES ISO	Xylene Isomers