Materials Which Produce Large Amounts of Toxic-by-Inhalation (TIH) Gas(es)
When Spilled in Water

ID No.	Guide No.	Name of Material	TIH Gas(es) Produced
1716	156	Acetyl bromide	HBr
1717	155	Acetyl chloride	HCl
1724	155	Allyltrichlorosilane, stabilized	HCl
1725	137	Aluminum bromide, anhydrous	HBr
1726	137	Aluminum chloride, anhydrous	HCl
1728	155	Amyltrichlorosilane	HCl
1732	157	Antimony pentafluoride	HF
1745	144	Bromine pentafluoride	HF Br_2
1746	144	Bromine trifluoride	HF Br_2
1747	155	Butyltrichlorosilane	HCl
1752	156	Chloroacetyl chloride	HCl
1754	137	Chlorosulfonic acid	HCl
1754	137	Chlorosulfonic acid and Sulfur trioxide mixture	HCl
1754	137	Chlorosulphonic acid	HCl
1754	137	Chlorosulphonic acid and Sulphur trioxide mixture	HCl
1754	137	Sulfur trioxide and Chlorosulfonic acid	HCl
1754	137	Sulphur trioxide and Chlorosulphonic acid	HCl
1758	137	Chromium oxychloride	HCl
1763	156	Cyclohexyltrichlorosilane	HCl
1766	156	Dichlorophenyltrichlorosilane	HCl
1767	155	Diethyldichlorosilane	HCl
1769	156	Diphenyldichlorosilane	HCl
1771	156	Dodecyltrichlorosilane	HCl
1777	137	Fluorosulfonic acid	HF

Chemical Symbols for TIH Gases:

Br_2	Bromine	HF	Hydrogen fluoride	PH_3	Phosphine
Cl_2	Chlorine	HI	Hydrogen iodide	SO_2	Sulfur dioxide
HBr	Hydrogen bromide	H_2S	Hydrogen sulfide	SO_2	Sulphur dioxide
HCl	Hydrogen chloride	H_2S	Hydrogen sulphide	SO_3	Sulfur trioxide
HCN	Hydrogen cyanide	NH_3	Ammonia	SO_3	Sulphur trioxide

Materials Which Produce Large Amounts of Toxic-by-Inhalation (TIH) Gas(es)
When Spilled in Water

ID No.	Guide No.	Name of Material	TIH Gas(es) Produced
1777	137	Fluorosulphonic acid	HF
1784	156	Hexyltrichlorosilane	HCl
1799	156	Nonyltrichlorosilane	HCl
1800	156	Octadecyltrichlorosilane	HCl
1801	156	Octyltrichlorosilane	HCl
1804	156	Phenyltrichlorosilane	HCl
1806	137	Phosphorus pentachloride	HCl
1809	137	Phosphorus trichloride	HCl
1810	137	Phosphorus oxychloride	HCl
1816	155	Propyltrichlorosilane	HCl
1818	157	Silicon tetrachloride	HCl
1828	137	Sulfur chlorides	HCl SO_2 H_2S
1828	137	Sulphur chlorides	HCl SO_2 H_2S
1834	137	Sulfuryl chloride	HCl SO_3
1834	137	Sulphuryl chloride	HCl SO_3
1836	137	Thionyl chloride	HCl SO_2
1838	137	Titanium tetrachloride	HCl
1898	156	Acetyl iodide	HI
1923	135	Calcium dithionite	H_2S SO_2
1923	135	Calcium hydrosulfite	H_2S SO_2
1923	135	Calcium hydrosulphite	H_2S SO_2
1931	171	Zinc dithionite	H_2S SO_2
1931	171	Zinc hydrosulfite	H_2S SO_2
1931	171	Zinc hydrosulphite	H_2S SO_2

Chemical Symbols for TIH Gases:

Br_2	Bromine	HF	Hydrogen fluoride	PH_3	Phosphine
Cl_2	Chlorine	HI	Hydrogen iodide	SO_2	Sulfur dioxide
HBr	Hydrogen bromide	H_2S	Hydrogen sulfide	SO_2	Sulphur dioxide
HCl	Hydrogen chloride	H_2S	Hydrogen sulphide	SO_3	Sulfur trioxide
HCN	Hydrogen cyanide	NH_3	Ammonia	SO_3	Sulphur trioxide

Use this list only when material is spilled in water.

TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package) First ISOLATE in all Directions		Then PROTECT persons Downwind during- DAY		NIGHT		LARGE SPILLS (From a large package or from many small packages) First ISOLATE in all Directions		Then PROTECT persons Downwind during- DAY		NIGHT	
		Meters	(Feet)	Kilometers	(Miles)	Kilometers	(Miles)	Meters	(Feet)	Kilometers	(Miles)	Kilometers	(Miles)
1754	Chlorosulphonic acid **(when spilled on land)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.1 km	(0.1 mi)	30 m	(100 ft)	0.3 km	(0.2 mi)	0.4 km	(0.3 mi)
1754	Chlorosulphonic acid **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.6 km	(0.4 mi)	90 m	(300 ft)	0.7 km	(0.5 mi)	2.8 km	(1.7 mi)
1754	Chlorosulphonic acid and Sulphur trioxide mixture **(when spilled on land)**	60 m	(200 ft)	0.4 km	(0.2 mi)	1.0 km	(0.6 mi)	330 m	(1000 ft)	2.5 km	(1.5 mi)	6.5 km	(4.0 mi)
1754	Chlorosulphonic acid and Sulphur trioxide mixture **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.6 km	(0.4 mi)	90 m	(300 ft)	0.7 km	(0.5 mi)	2.8 km	(1.7 mi)
1754	Sulfur trioxide and Chlorosulfonic acid mixture **(when spilled on land)**	60 m	(200 ft)	0.4 km	(0.2 mi)	1.0 km	(0.6 mi)	330 m	(1000 ft)	2.5 km	(1.5 mi)	6.5 km	(4.0 mi)
1754	Sulfur trioxide and Chlorosulfonic acid mixture **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.6 km	(0.4 mi)	90 m	(300 ft)	0.7 km	(0.5 mi)	2.8 km	(1.7 mi)
1754	Sulphur trioxide and Chlorosulphonic acid mixture **(when spilled on land)**	60 m	(200 ft)	0.4 km	(0.2 mi)	1.0 km	(0.6 mi)	330 m	(1000 ft)	2.5 km	(1.5 mi)	6.5 km	(4.0 mi)
1754	Sulphur trioxide and Chlorosulphonic acid mixture **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.6 km	(0.4 mi)	90 m	(300 ft)	0.7 km	(0.5 mi)	2.8 km	(1.7 mi)
1758	Chromium oxychloride **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.2 km	(0.1 mi)	30 m	(100 ft)	0.3 km	(0.2 mi)	1.3 km	(0.8 mi)
1763	Cyclohexyltrichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.3 km	(0.2 mi)	90 m	(300 ft)	0.8 km	(0.5 mi)	3.0 km	(1.9 mi)
1766	Dichlorophenyltrichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.9 km	(0.6 mi)	210 m	(700 ft)	2.1 km	(1.3 mi)	5.7 km	(3.6 mi)

1767	Diethlydichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.1 km	(0.1 mi)	60 m	(200 ft)	0.4 km	(0.3 mi)	1.3 km	(0.8 mi)
1769	Diphenyldichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.1 km	(0.1 mi)	30 m	(100 ft)	0.3 km	(0.2 mi)	1.2 km	(0.8 mi)
1771	Dodecyltrichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.2 km	(0.1 mi)	60 m	(200 ft)	0.5 km	(0.3 mi)	1.8 km	(1.2 mi)
1777	Fluorosulfonic acid **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.5 km	(0.3 mi)	120 m	(400 ft)	1.0 km	(0.6 mi)	3.4 km	(2.1 mi)
1777	Fluorosulphonic acid **(when spilled in water)**												
1784	Hexyltrichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.4 km	(0.3 mi)	120 m	(400 ft)	1.0 km	(0.7 mi)	3.8 km	(2.4 mi)
1799	Nonyltrichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.3 km	(0.2 mi)	60 m	(200 ft)	0.6 km	(0.4 mi)	2.5 km	(1.6 mi)
1800	Octadecyltrichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.3 km	(0.2 mi)	90 m	(300 ft)	0.8 km	(0.5 mi)	2.9 km	(1.8 mi)
1801	Octyltrichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.3 km	(0.2 mi)	60 m	(200 ft)	0.6 km	(0.4 mi)	2.5 km	(1.6 mi)
1804	Phenyltrichlorosilane **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.9 km	(0.6 mi)	240 m	(800 ft)	2.2 km	(1.4 mi)	6.4 km	(4.0 mi)
1806	Phosphorus pentachloride **(when spilled in water)**	30 m	(100 ft)	0.1 km	(0.1 mi)	0.5 km	(0.3 mi)	90 m	(300 ft)	0.8 km	(0.5 mi)	3.1 km	(1.9 mi)
1809	Phosphorus trichloride **(when spilled on land)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.4 km	(0.3 mi)	150 m	(500 ft)	1.5 km	(1.0 mi)	3.5 km	(2.2 mi)
1809	Phosphorus trichloride **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.7 km	(0.4 mi)	180 m	(600 ft)	1.6 km	(1.0 mi)	4.8 km	(3.0 mi)
1810	Phosphorus oxychloride **(when spilled on land)**	30 m	(100 ft)	0.2 km	(0.2 mi)	0.4 km	(0.3 mi)	120 m	(400 ft)	1.0 km	(0.7 mi)	2.2 km	(1.4 mi)
1810	Phosphorus oxychloride **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	1.0 km	(0.6 mi)	240 m	(800 ft)	2.3 km	(1.5 mi)	6.3 km	(3.9 mi)