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 Meters	(Feet)	Then PROTECT persons Downwind during- DAY Kilometers	(Miles)	NIGHT Kilometers	(Miles)	LARGE SPILLS (From a large package or from many small packages) First ISOLATE in all Directions Meters	(Feet)	Then PROTECT persons Downwind during- DAY Kilometers	(Miles)	NIGHT Kilometers	(Miles)
1818	Silicon tetrachloride **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.3 km	(0.2 mi)	125 m	(400 ft)	1.3 km	(0.8 mi)	3.4 km	(2.1 mi)
1828	Sulfur chlorides **(when spilled on land)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.3 km	(0.2 mi)	60 m	(200 ft)	0.5 km	(0.3 mi)	1.0 km	(0.6 mi)
1828	Sulfur chlorides **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	60 m	(200 ft)	0.6 km	(0.4 mi)	2.3 km	(1.4 mi)
1828	Sulphur chlorides **(when spilled on land)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.3 km	(0.2 mi)	60 m	(200 ft)	0.5 km	(0.3 mi)	1.0 km	(0.6 mi)
1828	Sulphur chlorides **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	60 m	(200 ft)	0.6 km	(0.4 mi)	2.3 km	(1.4 mi)
1829	Sulfur trioxide	60 m	(200 ft)	0.3 km	(0.2 mi)	1.1 km	(0.7 mi)	305 m	(1000 ft)	2.1 km	(1.3 mi)	5.6 km	(3.5 mi)
1829	Sulfur trioxide, inhibited												
1829	Sulfur trioxide, stabilized												
1829	Sulfur trioxide, uninhibited												
1829	Sulphur trioxide												
1829	Sulphur trioxide, inhibited												
1829	Sulphur trioxide, stabilized												
1829	Sulphur trioxide, uninhibited												
1831	Oleum	60 m	(200 ft)	0.3 km	(0.2 mi)	1.1 km	(0.7 mi)	305 m	(1000 ft)	2.1 km	(1.3 mi)	5.6 km	(3.5 mi)
1831	Oleum, with not less than 30% free Sulfur trioxide												
1831	Oleum, with not less than 30% free Sulphur trioxide												
1831	Sulfuric acid, fuming												
1831	Sulfuric acid, fuming, with not less than 30% free Sulfur trioxide												
1831	Sulphuric acid, fuming												
1831	Sulphuric acid, fuming, with not less than 30% free Sulphur trioxide												

1834	Sulfuryl chloride **(when spilled on land)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	30 m	(100 ft)	0.3 km	(0.2 mi)	0.6 km	(0.4 mi)
1834	Sulfuryl chloride **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	125 m	(400 ft)	1.1 km	(0.7 mi)	2.4 km	(1.5 mi)
1834	Sulphuryl chloride **(when spilled on land)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	30 m	(100 ft)	0.3 km	(0.2 mi)	0.6 km	(0.4 mi)
1834	Sulphuryl chloride **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	125 m	(400 ft)	1.1 km	(0.7 mi)	2.4 km	(1.5 mi)
1836	Thionyl chloride **(when spilled on land)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.5 km	(0.3 mi)	60 m	(200 ft)	0.5 km	(0.3 mi)	1.1 km	(0.7 mi)
1836	Thionyl chloride **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	1.0 km	(0.6 mi)	335 m	(1100 ft)	3.2 km	(2.0 mi)	7.1 km	(4.4 mi)
1838	Titanium tetrachloride **(when spilled on land)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	30 m	(100 ft)	0.3 km	(0.2 mi)	0.8 km	(0.5 mi)
1838	Titanium tetrachloride **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.3 km	(0.2 mi)	125 m	(400 ft)	1.1 km	(0.7 mi)	2.9 km	(1.8 mi)
1859 1859	Silicon tetrafluoride Silicon tetrafluoride, compressed	30 m	(100 ft)	0.2 km	(0.1 mi)	0.5 km	(0.3 mi)	60 m	(200 ft)	0.5 km	(0.3 mi)	1.6 km	(1.0 mi)
1892	ED **(when used as a weapon)**	30 m	(100 ft)	0.3 km	(0.2 mi)	0.8 km	(0.5 mi)	125 m	(400 ft)	1.3 km	(0.8 mi)	2.6 km	(1.6 mi)
1892	Ethyldichloroarsine	30 m	(100 ft)	0.2 km	(0.1 mi)	0.3 km	(0.2 mi)	60 m	(200 ft)	0.5 km	(0.3 mi)	1.0 km	(0.6 mi)
1898	Acetyl iodide **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	60 m	(200 ft)	0.6 km	(0.4 mi)	1.6 km	(1.0 mi)
1911 1911	Diborane Diborane, compressed	30 m	(100 ft)	0.2 km	(0.1 mi)	0.3 km	(0.2 mi)	95 m	(300 ft)	1.0 km	(0.6 mi)	2.7 km	(1.7 mi)
1923 1923 1923	Calcium dithionite **(when spilled in water)** Calcium hydrosulfite **(when spilled in water)** Calcium hydrosulphite **(when spilled in water)**	30 m	(100 ft)	0.2 km	(0.1 mi)	0.2 km	(0.1 mi)	30 m	(100 ft)	0.3 km	(0.2 mi)	1.1 km	(0.7 mi)

"+" means distance can be larger in certain atmospheric conditions

TABLE OF WATER-REACTIVE MATERIALS WHICH PRODUCE TOXIC GASES

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		
1726	137	Aluminum chloride, anhydrous	HCl		
1728	155	Amyltrichlorosilane	HCl		
1732	157	Antimony pentafluoride	HF		
1736	137	Benzoyl chloride	HCl		
1745	144	Bromine pentafluoride	HF	HBr	Br_2
1746	144	Bromine trifluoride	HF	HBr	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		
1777	137	Fluorosulfonic acid	HF		
1777	137	Fluorosulphonic acid	HF		
1801	156	Octyltrichlorosilane	HCl		
1806	137	Phosphorus pentachloride	HCl		
1809	137	Phosphorus trichloride	HCl		
1810	137	Phosphorus oxychloride	HCl		
1818	157	Silicon tetrachloride	HCl		
1828	137	Sulfur chlorides	HCl	SO_2	H_2S
1828	137	Sulphur chlorides	HCl	SO_2	H_2S

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 WATER-REACTIVE MATERIALS WHICH PRODUCE TOXIC GASES

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	
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
1939	137	Phosphorus oxybromide	HBr	
1939	137	Phosphorus oxybromide, solid	HBr	
2004	135	Magnesium diamide	NH_3	
2011	139	Magnesium phosphide	PH_3	
2012	139	Potassium phosphide	PH_3	
2013	139	Strontium phosphide	PH_3	
2442	156	Trichloroacetyl chloride	HCl	
2495	144	Iodine pentafluoride	HF	
2576	137	Phosphorus oxybromide, molten	HBr	
2691	137	Phosphorus pentabromide	HBr	
2692	157	Boron tribromide	HBr	
2806	138	Lithium nitride	NH_3	
2977	166	Radioactive material, Uranium hexafluoride, fissile	HF	
2977	166	Uranium hexafluoride, fissile containing more than 1% Uranium-235	HF	
2978	166	Radioactive material, Uranium hexafluoride, non-fissile or fissile excepted	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

Use this list only when material is spilled in water.