

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
2988	139	Chlorosilanes, n.o.s.	HCl
2988	139	Chlorosilanes, water-reactive, flammable, corrosive, n.o.s.	HCl
3048	157	Aluminum phosphide pesticide	PH ₃
3049	138	Metal alkyl halides, n.o.s.	HCl
3049	138	Metal alkyl halides, water-reactive, n.o.s.	HCl
3049	138	Metal aryl halides, n.o.s.	HCl
3049	138	Metal aryl halides, water-reactive, n.o.s.	HCl
3052	135	Aluminum alkyl halides	HCl
3052	135	Aluminum alkyl halides, liquid	HCl
3052	135	Aluminum alkyl halides, solid	HCl
3461	135	Aluminum alkyl halides, solid	HCl
9191	143	Chlorine dioxide, hydrate, frozen	Cl 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 ₂ S	Hydrogen sulfide	SO ₂	Sulphur dioxide
HCl	Hydrogen chloride	H ₂ S	Hydrogen sulphide	SO ₃	Sulfur trioxide
HCN	Hydrogen cyanide	NH ₃	Ammonia	SO ₃	Sulphur trioxide

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)						LARGE SPILLS (From a large package or from many small packages)					
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-				First ISOLATE in all Directions		Then PROTECT persons Downwind during-			
		Meters	(Feet)	DAY Kilometers (Miles)		NIGHT Kilometers (Miles)		Meters	(Feet)	DAY Kilometers (Miles)		NIGHT Kilometers (Miles)	
3386	Poisonous by inhalation liquid, water-reactive, n.o.s. (Inhalation Hazard Zone B)	60 m	(200 ft)	0.5 km	(0.3 mi)	1.8 km	(1.1 mi)	330 m	(1100 ft)	3.3 km	(2.1 mi)	7.3 km	(4.6 mi)
3386	Toxic by inhalation liquid, water-reactive, n.o.s. (Inhalation Hazard Zone B)												
3387	Poisonous by inhalation liquid, oxidizing, n.o.s. (Inhalation Hazard Zone A)	150 m	(500 ft)	1.3 km	(0.8 mi)	3.5 km	(2.2 mi)	1000 m	(3000 ft)	11.0+ km	(7.0+ mi)	11.0+ km	(7.0+ mi)
3387	Toxic by inhalation liquid, oxidizing, n.o.s. (Inhalation Hazard Zone A)												
3388	Poisonous by inhalation liquid, oxidizing, n.o.s. (Inhalation Hazard Zone B)	30 m	(100 ft)	0.4 km	(0.2mi)	1.4 km	(0.9 mi)	270 m	(900 ft)	2.7 km	(1.7 mi)	6.9 km	(4.3 mi)
3388	Toxic by inhalation liquid, oxidizing, n.o.s. (Inhalation Hazard Zone B)												
3389	Poisonous by inhalation liquid, corrosive, n.o.s. (Inhalation Hazard Zone A)	90 m	(300 ft)	0.8 km	(0.5 mi)	2.4 km	(1.5 mi)	800 m	(2500 ft)	6.2 km	(3.9 mi)	11.0+ km	(7.0+ mi)
3389	Toxic by inhalation liquid, corrosive, n.o.s. (Inhalation Hazard Zone A)												
3390	Poisonous by inhalation liquid, corrosive, n.o.s. (Inhalation Hazard Zone B)	60 m	(200 ft)	0.5 km	(0.3 mi)	1.8 km	(1.1 mi)	330 m	(1100 ft)	3.3 km	(2.1 mi)	7.3 km	(4.6 mi)
3390	Toxic by inhalation liquid, corrosive, n.o.s. (Inhalation Hazard Zone B)												

3461	Aluminum alkyl halides, solid (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)
9191	Chlorine dioxide, hydrate, frozen (when spilled in water)	30 m (100 ft)	0.1 km (0.1 mi)	0.1 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.7 km (0.4 mi)
9192	Fluorine, refrigerated liquid (cryogenic liquid)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	90 m (300 ft)	0.8 km (0.5 mi)	3.5 km (2.2 mi)
9202	Carbon monoxide, refrigerated liquid (cryogenic liquid)	30 m (100 ft)	0.1 km (0.1 mi)	0.1 km (0.1 mi)	90 m (300 ft)	0.7 km (0.4 mi)	2.4 km (1.5 mi)
9206	Methyl phosphonic dichloride	30 m (100 ft)	0.1 km (0.1 mi)	0.1 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)
9263	Chloropivaloyl chloride	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)	0.5 km (0.3 mi)
9264	3,5-Dichloro-2,4,6-trifluoropyridine	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)
9269	Trimethoxysilane	30 m (100 ft)	0.2 km (0.1 mi)	0.4 km (0.3 mi)	120 m (400 ft)	1.1 km (0.7 mi)	2.2 km (1.4 mi)

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