

Initial Isolation and Protective Action Distances (UN 1834-2013)

ID No.	NAME OF MATERIAL	<u>SMALL SPILLS</u>						<u>LARGE SPILLS</u>					
		(From a small package or small leak from a large package)						(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-			
		<u>DAY</u>		<u>NIGHT</u>		<u>DAY</u>		<u>NIGHT</u>					
		m	(ft)	km	(mi)	km	(mi)	m	(ft)	km	(mi)	km	(mi)
1834	Sulfuryl chloride (when spilled in water)	30	(100)	0.2	(0.1)	0.2	(0.1)	125	(400)	1.1	(0.7)	2.4	(1.5)
1834	Sulfuryl chloride (when spilled on land)	30	(100)	0.2	(0.1)	0.2	(0.1)	30	(100)	0.3	(0.2)	0.6	(0.4)
1834	Sulphuryl chloride (when spilled in water)	30	(100)	0.2	(0.1)	0.2	(0.1)	125	(400)	1.1	(0.7)	2.4	(1.5)
1834	Sulphuryl chloride (when spilled on land)	30	(100)	0.2	(0.1)	0.2	(0.1)	30	(100)	0.3	(0.2)	0.6	(0.4)
1836	Thionyl chloride (when spilled in water)	30	(100)	0.2	(0.1)	1.0	(0.6)	335	(1100)	3.2	(2.0)	7.1	(4.4)
1836	Thionyl chloride (when spilled on land)	30	(100)	0.2	(0.1)	0.5	(0.3)	60	(200)	0.5	(0.3)	1.1	(0.7)
1838	Titanium tetrachloride (when spilled in water)	30	(100)	0.2	(0.1)	0.3	(0.2)	125	(400)	1.1	(0.7)	2.9	(1.8)
1838	Titanium tetrachloride (when spilled on land)	30	(100)	0.2	(0.1)	0.2	(0.1)	30	(100)	0.3	(0.2)	0.8	(0.5)
1859	Silicon tetrafluoride	30	(100)	0.2	(0.1)	0.5	(0.3)	60	(200)	0.5	(0.3)	1.6	(1.0)
1859	Silicon tetrafluoride, compressed	30	(100)	0.2	(0.1)	0.5	(0.3)	60	(200)	0.5	(0.3)	1.6	(1.0)
1892	ED (when used as a weapon)	30	(100)	0.3	(0.2)	0.8	(0.5)	125	(400)	1.3	(0.8)	2.6	(1.6)
1892	Ethylidichloroarsine	30	(100)	0.2	(0.1)	0.3	(0.2)	60	(200)	0.5	(0.3)	1.0	(0.6)
1898	Acetyl iodide (when spilled in water)	30	(100)	0.2	(0.1)	0.2	(0.1)	60	(200)	0.6	(0.4)	1.6	(1.0)
1911	Diborane	30	(100)	0.2	(0.1)	0.3	(0.2)	95	(300)	1.0	(0.6)	2.7	(1.7)
1911	Diborane, compressed	30	(100)	0.2	(0.1)	0.3	(0.2)	95	(300)	1.0	(0.6)	2.7	(1.7)
1923	Calcium dithionite (when spilled in water)	30	(100)	0.2	(0.1)	0.2	(0.1)	30	(100)	0.3	(0.2)	1.1	(0.7)
1923	Calcium hydrosulfite (when spilled in water)	30	(100)	0.2	(0.1)	0.2	(0.1)	30	(100)	0.3	(0.2)	1.1	(0.7)
1923	Calcium hydrosulphite (when spilled in water)	30	(100)	0.2	(0.1)	0.2	(0.1)	30	(100)	0.3	(0.2)	1.1	(0.7)
1939	Phosphorus oxybromide (when spilled in water)	30	(100)	0.2	(0.1)	0.3	(0.2)	95	(300)	0.6	(0.4)	1.9	(1.2)
1939	Phosphorus oxybromide, solid (when spilled in water)	30	(100)	0.2	(0.1)	0.3	(0.2)	95	(300)	0.6	(0.4)	1.9	(1.2)
1953	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone A)	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone B)	30	(100)	0.3	(0.2)	1.1	(0.7)	305	(1000)	3.1	(1.9)	7.7	(4.8)
1953	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.2	(0.1)	1.0	(0.6)	215	(700)	2.1	(1.3)	5.6	(3.5)
1953	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1953	Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone A)	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone B)	30	(100)	0.3	(0.2)	1.1	(0.7)	305	(1000)	3.1	(1.9)	7.7	(4.8)
1953	Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.2	(0.1)	1.0	(0.6)	215	(700)	2.1	(1.3)	5.6	(3.5)
1953	Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)	30	(100)	0.3	(0.2)	1.1	(0.7)	305	(1000)	3.1	(1.9)	7.7	(4.8)
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.2	(0.1)	1.0	(0.6)	215	(700)	2.1	(1.3)	5.6	(3.5)
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1953	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)	30	(100)	0.3	(0.2)	1.1	(0.7)	305	(1000)	3.1	(1.9)	7.7	(4.8)
1953	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.2	(0.1)	1.0	(0.6)	215	(700)	2.1	(1.3)	5.6	(3.5)
1953	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1953	Liquefied gas, flammable, poisonous, n.o.s.	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)

1953	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone A)	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone B)	30	(100)	0.3	(0.2)	1.1	(0.7)	305	(1000)	3.1	(1.9)	7.7	(4.8)
1953	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.2	(0.1)	1.0	(0.6)	215	(700)	2.1	(1.3)	5.6	(3.5)
1953	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1953	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone A)	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Liquefied gas, flammable, toxic, n.o.s.	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone B)	30	(100)	0.3	(0.2)	1.1	(0.7)	305	(1000)	3.1	(1.9)	7.7	(4.8)
1953	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.2	(0.1)	1.0	(0.6)	215	(700)	2.1	(1.3)	5.6	(3.5)
1953	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1953	Poisonous gas, flammable, n.o.s.	185	(600)	1.8	(1.1)	5.6	(3.5)	915	(3000)	10.8	(6.7)	11.0+	(7.0+)
1953	Poisonous liquid, flammable, n.o.s.	155	(500)	1.3	(0.8)	3.4	(2.1)	915	(3000)	8.7	(5.4)	11.0+	(7.0+)
1955	Compressed gas, poisonous, n.o.s.	430	(1400)	4.2	(2.6)	8.4	(5.2)	915	(3000)	11.0+	(7.0+)	11.0+	(7.0+)
1955	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone A)	430	(1400)	4.2	(2.6)	8.4	(5.2)	915	(3000)	11.0+	(7.0+)	11.0+	(7.0+)
1955	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	60	(200)	0.5	(0.3)	1.6	(1.0)	430	(1400)	4.0	(2.5)	9.8	(6.1)
1955	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.3	(0.2)	1.3	(0.8)	215	(700)	3.1	(1.9)	7.2	(4.5)
1955	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1955	Compressed gas, toxic, n.o.s.	430	(1400)	4.2	(2.6)	8.4	(5.2)	915	(3000)	11.0+	(7.0+)	11.0+	(7.0+)
1955	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone A)	430	(1400)	4.2	(2.6)	8.4	(5.2)	915	(3000)	11.0+	(7.0+)	11.0+	(7.0+)
1955	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone B)	60	(200)	0.5	(0.3)	1.6	(1.0)	430	(1400)	4.0	(2.5)	9.8	(6.1)
1955	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.3	(0.2)	1.3	(0.8)	215	(700)	3.1	(1.9)	7.2	(4.5)
1955	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1955	Liquefied gas, poisonous, n.o.s.	430	(1400)	4.2	(2.6)	8.4	(5.2)	915	(3000)	11.0+	(7.0+)	11.0+	(7.0+)
1955	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone A)	430	(1400)	4.2	(2.6)	8.4	(5.2)	915	(3000)	11.0+	(7.0+)	11.0+	(7.0+)
1955	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	60	(200)	0.5	(0.3)	1.6	(1.0)	430	(1400)	4.0	(2.5)	9.8	(6.1)
1955	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.3	(0.2)	1.3	(0.8)	215	(700)	3.1	(1.9)	7.2	(4.5)
1955	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1955	Liquefied gas, toxic, n.o.s.	430	(1400)	4.2	(2.6)	8.4	(5.2)	915	(3000)	11.0+	(7.0+)	11.0+	(7.0+)
1955	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone A)	430	(1400)	4.2	(2.6)	8.4	(5.2)	915	(3000)	11.0+	(7.0+)	11.0+	(7.0+)
1955	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone B)	60	(200)	0.5	(0.3)	1.6	(1.0)	430	(1400)	4.0	(2.5)	9.8	(6.1)
1955	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone C)	30	(100)	0.3	(0.2)	1.3	(0.8)	215	(700)	3.1	(1.9)	7.2	(4.5)
1955	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone D)	30	(100)	0.2	(0.1)	0.6	(0.4)	185	(600)	1.6	(1.0)	4.3	(2.7)
1955	Methyl bromide and nonflammable, nonliquefied compressed gas mixture	30	(100)	0.2	(0.1)	0.3	(0.2)	95	(300)	0.5	(0.3)	1.4	(0.9)
1955	Organic phosphate compound mixed with compressed gas	30	(100)	0.3	(0.2)	1.3	(0.8)	400	(1300)	4.0	(2.5)	7.2	(4.5)
1955	Organic phosphate mixed with compressed gas	30	(100)	0.3	(0.2)	1.3	(0.8)	400	(1300)	4.0	(2.5)	7.2	(4.5)
1955	Organic phosphorus compound mixed with compressed gas	30	(100)	0.3	(0.2)	1.3	(0.8)	400	(1300)	4.0	(2.5)	7.2	(4.5)
1967	Insecticide gas, poisonous, n.o.s.	30	(100)	0.3	(0.2)	1.3	(0.8)	400	(1300)	4.0	(2.5)	7.2	(4.5)
1967	Insecticide gas, toxic, n.o.s.	30	(100)	0.3	(0.2)	1.3	(0.8)	400	(1300)	4.0	(2.5)	7.2	(4.5)
1967	Parathion and compressed gas mixture	30	(100)	0.2	(0.1)	0.3	(0.2)	95	(300)	1.0	(0.6)	3.2	(2.0)
1975	Dinitrogen tetroxide and Nitric oxide mixture	30	(100)	0.3	(0.2)	1.3	(0.8)	155	(500)	1.3	(0.8)	3.5	(2.2)
1975	Nitric oxide and Dinitrogen tetroxide mixture	30	(100)	0.3	(0.2)	1.3	(0.8)	155	(500)	1.3	(0.8)	3.5	(2.2)
1975	Nitric oxide and Nitrogen dioxide mixture	30	(100)	0.3	(0.2)	1.3	(0.8)	155	(500)	1.3	(0.8)	3.5	(2.2)
1975	Nitric oxide and Nitrogen tetroxide mixture	30	(100)	0.3	(0.2)	1.3	(0.8)	155	(500)	1.3	(0.8)	3.5	(2.2)
1975	Nitrogen dioxide and Nitric oxide mixture	30	(100)	0.3	(0.2)	1.3	(0.8)	155	(500)	1.3	(0.8)	3.5	(2.2)
1975	Nitrogen tetroxide and Nitric oxide mixture	30	(100)	0.3	(0.2)	1.3	(0.8)	155	(500)	1.3	(0.8)	3.5	(2.2)

1994 Iron pentacarbonyl	30	(100)	0.3	(0.2)	0.6	(0.4)	125	(400)	1.1	(0.7)	2.4	(1.5)
2004 Magnesium diamide (when spilled in water)	30	(100)	0.2	(0.1)	0.2	(0.1)	60	(200)	0.5	(0.3)	1.3	(0.8)
2011 Magnesium phosphide (when spilled in water)	30	(100)	0.2	(0.1)	0.8	(0.5)	245	(800)	2.3	(1.4)	6.0	(3.7)
2012 Potassium phosphide (when spilled in water)	30	(100)	0.2	(0.1)	0.5	(0.3)	155	(500)	1.3	(0.8)	4.0	(2.5)
2013 Strontium phosphide (when spilled in water)	30	(100)	0.2	(0.1)	0.5	(0.3)	155	(500)	1.3	(0.8)	3.7	(2.3)
