

Appendix 11.4.4

Hazard Distances

Appendix 11.4.4 Hazard Distances for Representative Cases

Release Scenario	Probability of fatality (%)	Kerry DG Godown	
		weather:C4 (daytime)	weather:E3 (night-time)
LPG (500kg Instantaneous) - D-LF-AE		Hazard distance from release source (m)	
Fireball (radius)	100	23	23
Flash fire (0.85 LFL)	100	75	63
Pool fire (60m diameter) - D-PF-EX		Downwind distance (m)	
Burn rate (kg/s)		285	285
Flame length (m)		81	81
Flame angle (degree)		36	31
Thermal radiation	90	62	62
Thermal radiation	50	63	63
Thermal radiation	3	73	86
Warehouse fire - D-WF		Downwind distance (m)	
Release rate for toxic gas (kg/s)		0.35	0.35
Toxic cloud	90	-	53
Toxic cloud	50	60	76
Toxic cloud	3	75	110
Ammonia (1-ton 25mm hole indoor continuous release) - DG-AT-AI		Downwind distance (m)	
Release rate from cylinder (kg/s)		8	8
Mass rate air entrained (kg/s)		34	34
Toxic cloud	90	28	29
Toxic cloud	50	52	47
Toxic cloud	3	81	74
Chlorine (1-ton 25mm hole indoor continuous release) - DG-CT-AI		Downwind distance (m)	
Release rate from cylinder (kg/s)		12	12
Mass rate air entrained (kg/s)		41	41
Toxic cloud	90	110	113
Toxic cloud	50	139	180
Toxic cloud	3	188	258
Ammonia (25mm hole outdoor continuous release) - DG-AT-AE		Downwind distance (m)	
Release rate to atmosphere (kg/s)		8	8
Toxic cloud	90	39	43
Toxic cloud	50	93	107
Toxic cloud	3	165	188
Chlorine (25mm hole outdoor continuous release) - DG-CT-AE		Downwind distance (m)	
Release rate to atmosphere (kg/s)		12	12
Toxic cloud	90	193	187
Toxic cloud	50	235	259
Toxic cloud	3	297	344