

**Appendix 8c - Table 8.1: Base Quantities (B) for all Effect Types and Hazard Ratings**

HSNO Category	UN Class Equivalent	Hazard Level	Unit	Base Quantity (B)		
				Fire/ Explosion	Human Health	Environment
<b>Explosiveness</b>						
1.1	Class 1.1	High	<i>t</i>	0.1	-	-
1.2	Class 1.2	Medium	<i>t</i>	1	-	-
1.3	Class 1.3	Low	<i>t</i>	3	-	-
<b>Flammable gases</b>						
2.1 A+B (LPG)	Class 2.1	Medium	<i>t</i>	30	-	-
2.1 A+B (excluding LPG)	Class 2.1	High	m <sup>3</sup>	10,000*	-	-
<b>Flammable liquids</b>						
3 A and 3 B	Class 3PGI and 3PGII	High	<i>t</i>	10	-	-
3 C	Class 3PGIII	Medium	<i>t</i>	30	-	-
3 D		Low	<i>t</i>	100	-	-
<b>Flammable solids</b>						
4.1 (all categories)	Class 4.1	Medium	<i>t</i>	10	-	-
4.2 (all categories)	Class 4.2	High	<i>t</i>	1	-	-
4.3 (all categories)	Class 4.3	High	<i>t</i>	1	-	-
<b>Oxidising gases, liquids and solids</b>						
5.1 (all categories)	Class 5.1	Medium	<i>t</i> (m <sup>3</sup> )	10 (10,000*)	-	-
5.2 (all categories)	Class 5.2	High	<i>t</i>	1	-	-
<b>Toxic gases, liquids and solids</b>						
6.1 A and 6.1 B	Class 6.1 PGI and PGII	High	<i>t</i>	-	0.5	-
6.1 A and	Class 2.3	High	m <sup>3</sup>	-	30*	-

HSNO Category	UN Class Equivalent	Hazard Level	Unit	Base Quantity (B)		
				Fire/ Explosion	Human Health	Environment
6.1 B	PGI and PGII					
6.1 C	Class 6.1 PGIII	Medium	t	-	10	-
6.1 C	Class 2.3 PGIII	Medium	m <sup>3</sup>	-	50*	-
6.7-6.9 (chronic toxicity categories)	OECD	Medium	t	-	10	-
6.1 D		Low	t	-	30	-
6.1 D		Low	m <sup>3</sup>	-	500*	-
<b>Corrosive gases, liquids and solids</b>						
(8A) 6.3-6.4 (corrosives, all categories)	Class 8	Medium	t (m <sup>3</sup> )	-	10	-
<b>Ecotoxic gases, liquids and solids</b>						
9.1-9.4A	(OECD 1)	High	t (m <sup>3</sup> )	-	-	1 (30*)
9.1-9.4B	(OECD 2)	Medium	t (m <sup>3</sup> )	-	-	30 (50*)
9.1-9.4C	(OECD 3)	Low	t (m <sup>3</sup> )	-	-	100 (500*)

\* Quantity Threshold in m3 at 101.3 kPA and 20 0C for permanent or compressed gases.

**Table 8.2: Adjustment Factors**

<b>Adjustment Factors for All Effect Types</b>		
<b>Fire/ Explosion</b>	<b>Human Health</b>	<b>Environment</b>
<b>FF1: substance form</b>	<b>FH1: substance form</b>	<b>FE1: substance form</b>
Solid = 1	Solid = 3	Solid = 3
Liquid, powder = 1	Liquid, powder = 1	Liquid, powder = 1
Gas (101.3 kPA and 20 <sup>0</sup> C) = 0.1	Gas (101.3 kPA and 20 <sup>0</sup> C)= 0.1	Gas (101.3 kPA and 20 <sup>0</sup> C)= 0.1
<b>FF2: separation distance from site boundary (sub-facility)</b>	<b>FH2: separation distance from site boundary (sub-facility) (gases only)</b>	<b>FE2: environmental sensitivity</b>
< 30 m = 1	< 30 m = 1	Normal = 1
> 30 m (>60 m) <sup>1</sup> = 3	> 30 m (>60 m) <sup>2</sup> = 3	Adjacent to water resource <sup>2</sup> = 0.3
<b>FF3: type of activity</b>	<b>FH3: type of activity</b>	<b>FE3: type of activity</b>
Use = 0.3	Use = 0.3	Use = 0.3
Above-ground storage = 1	Above-ground storage = 1	Above-ground storage = 1
Underground storage <sup>3</sup> = 10	Underground storage <sup>3</sup> = 10	Underground storage <sup>3</sup> = 3
<b>Final Fire/Explosion Adjustment Factor</b>	<b>Final Human Health Adjustment Factor</b>	<b>Final Environment Adjustment Factor</b>
<b>FF = FF1 x FF2 x FF3</b>	<b>FH = FH1 x FH2 x FH3</b>	<b>FE = FE1 x FE2 x FE3</b>

<sup>1</sup> If the facility is assessed as a sub-facility, the distance to the neighbouring sub-facility must be more than 60 metres (ie, 2 x 30 metres) to qualify for an Adjustment Factor of 3 (a hazardous sub-facility is a hazardous facility that is separated by more than 30 metres from any other hazardous facility on the same site).

<sup>2</sup> Water resources include aquifers and water supplies, streams, springs, lakes, indigenous wetlands, estuaries and the sea, but do not include entry points to the stormwater drainage network. 'Adjacent' must be defined in respective district plans and will depend on the type of water resource potentially affected (adjacent is variably defined as between 30 and 100 metres).

<sup>3</sup> Applicable to Class 3 substances (flammable liquids) only.

