

Working Group on the Development of the Convention

**“DRAFT OF NEW ANNEX I”
(Working document)**

Hazardous substances for the purposes of defining hazardous activities

The quantities set out below relate to each activity or group of activities. ~~Where a range of quantities is given in Part I, the threshold quantities are the maximum quantities given in each range. Five years after the entry into force of this Convention, the lowest quantity given in each range shall become the threshold quantity, unless amended.~~

Where a substance or preparation named in Part II also falls within a category in Part I, the threshold quantity set out in Part II shall be used.

For the identification of hazardous activities, Parties shall take into consideration the foreseeable possibility of aggravation of the hazards involved and the quantities of the hazardous substances and their proximity, whether under the charge of one or more operators.

PART I. <i>Categories of substances and preparations not specifically named in Part II</i>	
<i>Category</i>	<i>Threshold Quantity (Tonnes)</i>
1. Flammable gases <u>1(a)</u> / including LPG	200
2. Highly flammable liquids <u>1(b)</u> /	50,000
3. Very toxic <u>1(c)</u> /	20
4. Toxic <u>1(d)</u> /	500-200
5. Oxidizing <u>1(e)</u> /	500-200
6. Explosive <u>1(f)</u>/	200-50
6a. Explosive 2/ where the substance, preparation or article falls under Division 1.4 of the GHS criteria	200
6b. Explosive 2/ where the substance, preparation or article falls under Divisions: 1.1, 1.2, 1.3, 1.5 or 1.6 of the GHS criteria	50
7. Flammable liquids <u>1(g)</u> / (handled under special conditions of pressure and temperature)	200
8. Dangerous for the environment <u>1(h)</u> /	200
PART II. <i>Named substances</i>	
<i>Substance</i>	<i>Threshold Quantity (Tonnes)</i>
1. Ammonia	500
2 a Ammonium nitrate 2	2,500
2 b Ammonium nitrate in the form of fertilizers 3	40,000

2a. Ammonium nitrate 3/	10,000
2b. Ammonium nitrate 4/	5,000
2c. Ammonium nitrate 5/	2,500
2d. Ammonium nitrate 6/	50
3a. Potassium nitrate 7/	10,000
3b. Potassium nitrate 8/	5,000
3. Acrylonitrile	200
4. Chlorine	25
5. Ethylene oxide	50
6. Hydrogen	50
6. Hydrogen cyanide	20
7. Hydrogen fluoride	50
8. Hydrogen sulphide	50
9. Sulphur dioxide	250
9.-Toluene diisocyanate	100
10. Sulphur trioxide	75
11. Lead alkyls	50
12. Phosgene	0.75
13. Methyl isocyanate	0.15
14. Petroleum products (a) gasolines and naphthas (b) kerosens (including jet fuels) (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams)	25000

NOTES

1. *Indicative criteria.* In the absence of other appropriate criteria, Parties may use the following criteria when classifying substances or preparations for the purposes of Part I of this Annex.

(a) **FLAMMABLE GASES:** substances which in the gaseous state at normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20°C or below.

(b) **HIGHLY FLAMMABLE LIQUIDS:** substances which have a flash point lower than 21°C and the boiling point of which at normal pressure is above 20°C.

(c) **VERY TOXIC:** substances with properties corresponding to those in table 1 or table 2 below, and which, owing to their physical and chemical properties, are capable of creating industrial accident hazards.

TABLE 1		
LD ₅₀ (oral)(1) mg/kg body weight LD ₅₀ ≤ 25	LD ₅₀ (dermal)(2) mg/kg body weight LD ₅₀ ≤ 50	LC ₅₀ (3) mg/l (inhalation) LC ₅₀ ≤ 0.5
(1) LD ₅₀ oral in rats		
(2) LD ₅₀ dermal in rats or rabbits		
(3) LC ₅₀ by inhalation (four hours) in rats		
TABLE 2		
Discriminating dose mg/kg body weight < 5		
where the acute oral toxicity in animals of the substance has been determined using the fixed-dose procedure.		

(d) TOXIC: substances with properties corresponding to those in table 3 or 4 and having physical and chemical properties capable of creating industrial accident hazards.

TABLE 3		
LD ₅₀ (oral)(1) mg/kg body weight 25 < LD ₅₀ ≤ 200	LD ₅₀ (dermal)(2) mg/kg body weight 50 < LD ₅₀ ≤ 400	LC ₅₀ (3) mg/l(inhalation) 0.5 < LC ₅₀ ≤ 2
(1) LD ₅₀ oral in rats		
(2) LD ₅₀ dermal in rats or rabbits		
(3) LC ₅₀ by inhalation (four hours) in rats		
TABLE 4		
Discriminating dose mg/kg body weight =5		
where the acute oral toxicity in animals of the substance has been determined using the fixed-dose procedure.		

(e) OXIDIZING: substances which give rise to highly exothermic reaction when in contact with other substances, particularly flammable substances.

(f) EXPLOSIVE: substances which may explode under the effect of flame or which are more sensitive to shocks or friction than dinitrobenzene.

(g) FLAMMABLE LIQUIDS: substances which have a flash point lower than 55oC and which remain liquid under pressure, where particular processing conditions, such as high pressure and high temperature, may create industrial accident hazards.

(h) DANGEROUS FOR THE ENVIRONMENT: substances showing the values for acute toxicity to the aquatic environment corresponding to table 5.

TABLE 5		
LC ₅₀ (1) mg/l LC ₅₀ ≤ 10	EC ₅₀ (2) mg/l EC ₅₀ ≤ 10	C ₅₀ (3) mg/l IC ₅₀ ≤ 10
(1) LC ₅₀ fish (96 hours)		
(2) EC ₅₀ daphnia (48 hours)		
(3) IC ₅₀ algae (72 hours)		
where the substance is not readily degradable, or the log Pow > 3.0 (unless the experimentally determined BCF < 100).		

- (i) LD - lethal dose.
- (j) LC - lethal concentration.
- (k) EC - effective concentration.
- (l) IC - inhibiting concentration.
- (m) Pow - partition coefficient octanol/water.
- (n) BCF - bioconcentration factor.

~~2. This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is > 28% by weight, and to aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is > 90% by weight.~~

~~3. This applies to straight ammonium nitrate fertilizers and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is > 28% by weight (a compound fertilizer contains ammonium nitrate together with phosphate and/or potash).~~

~~2/~~

3/ Ammonium nitrate (10,000): fertilizers capable of self-sustaining decomposition.

This applies to ammonium nitrate-based compound/composite fertilizers (compound/composite fertilizers containing ammonium nitrate with phosphate and/or potash) in which the nitrogen content as a result of ammonium nitrate is:

- **between 15,75% and 24,5% by weight, (15,75% and 24.5% nitrogen content by weight as a result of ammonium nitrate corresponds to 45% and 70% ammonium nitrate, respectively) and either with not more than 0.4% total combustible/organic materials or which fulfil the requirements of Annex II of Directive 80/876/EEC,**
- **15,75% by weight or less and unrestricted combustible materials, and which are capable of self-sustaining decomposition according to the UN Trough Test (see United Nations Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria, Part III, subsection 38.2).**

4/ Ammonium nitrate (5,000): fertilizer grade

This applies to straight ammonium nitrate-based fertilizers and to ammonium nitrate-based compound/composite fertilizers in which the nitrogen content as a result of ammonium nitrate is:

- more than 24,5% by weight, except for mixtures of ammonium nitrate with dolomite, limestone and/or calcium carbonate with a purity of at least 90%,
- more than 15,75% by weight for mixtures of ammonium nitrate and ammonium sulphate,
- more than 28% (28% nitrogen content by weight as a result of ammonium nitrate corresponds to 80% ammonium nitrate) by weight for mixtures of ammonium nitrate with dolomite, limestone and/or calcium carbonate with a purity of at least 90%.

~~and which fulfil the requirements of Annex II of Directive 80/876/EEC.~~

5/ Ammonium nitrate (2,500): technical grade

This applies to:

- ammonium nitrate and preparations of ammonium nitrate in which the nitrogen content as a result of ammonium nitrate is:
 - o between 24,5% and 28% by weight and which contain not more than 0,4% combustible substances,
 - o more than 28% by weight, and which contain not more than 0,2% combustible substances,
- aqueous ammonium nitrate solutions, in which the concentration of ammonium nitrate is more than 80% by weight.

6/ Ammonium nitrate (50): “off-specs” material and fertilizers not fulfilling the detonation test

This applies to:

- material rejected during the manufacturing process and to ammonium nitrate and preparations of ammonium nitrate, straight ammonium nitrate-based fertilizers and ammonium nitrate-based compound/composite fertilizers referred to in notes 3 and 4, that are being or have been returned from the final user to a manufacturer, temporary storage or reprocessing plant for reworking, recycling or treatment for safe use, because they no longer comply with the specifications of notes 3 and 4.
~~— fertilizers referred to in note 2, first indent and note 3 which do not fulfil the requirements of Annex II of Directive 80/876/EEC.~~

7/ Potassium nitrate (10,000): composite potassium-nitrate based fertilizers composed of potassium nitrate in prilled/granular form.

8/ Potassium nitrate (5,000): composite potassium-nitrate based fertilizers composed of potassium nitrate in crystalline form.

X4. Mixtures and preparations containing such substances shall be treated in the same way as the pure substance unless they no longer exhibit equivalent properties and are not capable of producing transboundary effects.