

Identification of Hazardous Activities

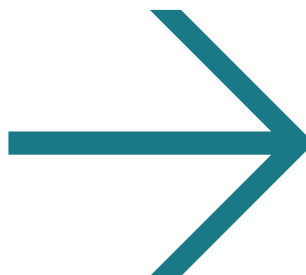
Insight into Categories of Annex 1

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Annex I In overview

- Annex I is: List of hazardous substances with threshold quantity's
- Industrial accidents in an installation or during transport
- Hazardous due to physical, chemical, toxicological properties
- Require special storage, producing, or processing conditions



Defining installations and chemicals

- Including all installations: storage, production, loading, distribution
- Including all chemicals: raw materials, intermediates, byproducts, finished products, substances built during chemical reactions
- Depends on maximum capacity for all installations








Annex I Two parts

- Two parts with thresholds:
 - Part I: Categories of substances
for example: Flammable
 - Part II: Named Substances
for example: Chlorine
- Installations at or above threshold are defined as hazardous activities
- If substance falls both Part I and Part II, threshold in Part II to be used



Part I Categories of substances

	<i>Category</i>	<i>Threshold (tons)</i>	<i>Example</i>
	1 Flammable	50,000	Butanol
	2 Highly flammable	200/50.000	Ethanol
	3 Extremely flammable	50	Dietyl ether
	4 Toxic	200	Parathion
	5 Very toxic	20	Potassium cyanide
	6 Oxidizing 	200	Sodium nitrate
	7 Explosive	50/200	TNT
	8 Dangerous for the environment 	200/500	Perchloorethylene

Note: categories 3, 4, 5 and 8 play an important role for the location criteria for the water path

➔ Part II Named substances

Substance	Threshold (tons)
1 Ammonium nitrate	50/2,500/5,000/10,000
2 Potassium nitrate	5,000/10,000
3 Chlorine	25
4 Ethylene oxide	50
5 Hydrogen	50
6 Toluene diisocyanate	100
7 Sulphur trioxide	75
8 Lead alkyls	50
9 Phosgene	0.75
10 Methyl isocyanate	0.15
11 Liquified extremely flammable gases	200
12 Petroleum products (gasolines, naftas, kerosenes, gasoils)	25,000

➔ Example Sodium Cyanide

SODIUM CYANIDE IBCB: 1118
Mar 2003

Hydrocyanic acid, sodium salt

TYPE OF HAZARD / EXPOSURE	ACUTE HAZARDS / SYMPTOMS	PREVENTION	FIRST AID / FIRE FIGHTING
FIRE	Flammable liquid. Toxic fumes. Toxic gas on contact with water or damp air. Green off-inhaling or toxic fumes (or gases) in fire.		Use special agents. Not water! Use carbon dioxide. In case of fire in the neighbourhood, evacuate people.
EXPLOSION			In case of fire, cool objects, etc., by spraying with water but avoid contact of the substance with steam.
EXPOSURE		PREVENT DISPERSION OF DUST/STEAM/SMOKE:	ALL CASES CONSULT A DOCTOR
Inhalation	Severe Headache, Confusion, Weakness, Shortness of breath, Convulsions, Unconsciousness.	Local exhaust or breathing protection.	Remove contaminated clothes. Flush skin with plenty of water or shower. Refer for medical attention.
Skin	MAY BE ABSORBED Redness, Pain. (Further see Irritation).	Protective gloves, Protective clothing.	Remove contaminated clothes. Flush skin with plenty of water or shower. Refer for medical attention.
Eyes	Redness, Pain. (Further see Irritation).	Safety goggles, face shield or eye protection in combination with breathing protection if powder.	Flush eyes with plenty of water for several minutes (ensure contact lenses if easily accessible, then refer to a doctor).
Ingestion	Severe irritation. Nausea, Vomiting, Diarrhoea (See Irritation).	Do not eat, drink, or smoke during work. Wash hands before eating.	Induce vomiting ONLY IN CASES OF ACUTE INGESTION. Wear protective gloves when inducing vomiting. No mouth-to-mouth artificial respiration. Ambulance enroute by trained personnel. Refer for medical attention. See tables.
SPILLAGE DISPOSAL	Do not dilute or spill on open fire. Evacuate spillage substance into dry, sealed and sealed containers. Caustically neutralise remaining with sodium hydroxide solution. Then wash away with plenty of water. Do NOT let this chemical enter the environment. Chemical protection suit including self-contained breathing apparatus.		
EMERGENCY RESPONSE	Transport Emergency Card: TEL: (90) 81 01 000 MSDS Code: (90) 713, 901		
IPCS International Programme on Chemical Safety		PACKAGING & LABELLING	
		Classification: Corrosive 1+ H 314 P 301+312 P 302+352 P 303+313 P 305+351+338 Label Classification: Corrosive Class. 1+ UN Hazard Class. 6.1 UN Past Group 1	
		STORAGE	
		Separated from strong oxidants, acids, food and feedstuffs, carbon dioxide, water or products containing water. Dry. Well-ventilated area in a well-ventilated room.	



Useful information

Industrial Accidents convention Annex I

- www.unece.org/env/teia/doc/ANNEX-I/AnnexIENG.pdf

International Chemical Safety Cards (MSDS)

- http://www.ilo.org/safework_bookshelf/english

Seveso EU Directive 96/82/EC en 2003/105/EC Annex I

ADR

- http://www.unece.org/trans/danger/publi/adr/adr_e.html

Chemfinder

- <http://chemfinder.cambridgesoft.com>

National information

- National registers (Seveso, IPPC)
- National legislation