

4188
11/9/09

HARYANA GOVERNMENT
LABOUR DEPARTMENT
Notification

The 21th August, 2009.

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PATC
2008-09

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No. 11/35/2004 – 4 Lab.- In exercise of powers conferred by section 41 read with section 112 of the Factories Act, 1948 (Central Act 63 of 1948), and with reference to Haryana Government, Labour Department, Notification No. 11/35/2004-4-Lab dated the 16th April, 2008 the Governor of Haryana hereby makes the following rules regulating the control on major accident hazard in Haryana, namely:-

Short title and commencement.

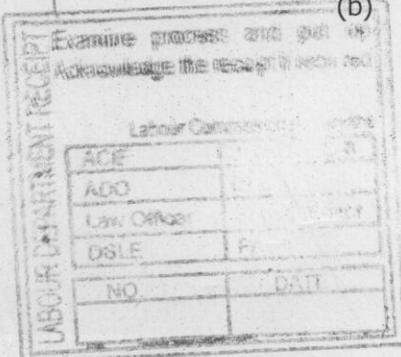
1136-ALC(0)
27/8/09

1. (1) These rules may be called the Haryana Major Accident Hazard Control Rules, 2009.

(2) They shall come into force on the date of their publication in the Official Gazette.

Definitions.

2. In these rules, unless the context otherwise requires,-



(c)

"**Act**" means the Factories Act, 1948 (Central Act 63 of 1948);
"hazardous chemical" means-

- (i) any chemical which satisfies any of the criteria laid down in Part I of Schedule I and is listed in column 2 of Part II of that Schedule; or
- (ii) any chemical listed in column 2 of Schedule 2; or
- (iii) any chemical listed in column 2 of Parts I and II of Schedule 3;

"**industrial activity**" means an operation or process carried out in a factory referred to in Schedule 4 involving or likely to involve one or more hazardous chemicals and includes on-site storage or on-site transport, which is associated with that operation or process, as the case may be;

(d)

"**isolated storage**" means storage where no other manufacturing process other than pumping of hazardous chemicals is carried out and that storage involves at least a quantity of that chemical set out in Schedule 2, but does not

- (e) "**major accident**" means an incident involving loss of life inside or outside the site or 10 or more injuries inside or one or more injuries outside or release of toxic chemical or explosion or fire or spillage of hazardous chemical resulting in 'on-site' or 'off-site' emergencies or damage to equipment leading to stoppage of process or adverse effects to the environment;
- (f) "**pipeline**" means a pipe (together with any apparatus and works associated therewith), or system of pipes (together with any apparatus and works associated therewith), for the conveyance of a hazardous chemical other than a flammable gas as set out in column 2 of Part II of Schedule 3 at a pressure of less than 8 bars absolute;
- (g) "**schedule**" means schedule appended to these rules;
- (h) "**section**" means the section of the Act;
- (i) words and expressions not defined in these rules but defined or used in the Factories Act, 1948 (63 of 1948) and the rules made thereunder, shall have the same meaning, as respectively assigned therein.

**Collection,
development
and
dissemination
of information.
Section 41 B.**

- 3.**
 - (1) This rule shall apply to an industrial activity or isolated storage in which a hazardous chemical which satisfies any of the criteria laid down in Part I of Schedule I or is listed in column 2 of Part II of the said Schedule is or may be involved.
 - (2) An occupier of an industrial activity or isolated storage in terms of sub-rule (1) of this rule shall arrange to obtain or develop information in the form of Safety Data Sheet as specified in Schedule 5. The information shall be made accessible to workers upon request for reference.
 - (3) The occupier while obtaining or developing a Safety Data Sheet as specified in Schedule 5 in respect of a hazardous chemical handled by him shall ensure that the information is recorded accurately and reflects the scientific evidence used in making the hazard determination. In case, any significant information regarding hazard of a chemical is available, it shall be added to the Safety Data Sheet as specified in Schedule 5 as soon as practicable.

(4) Every container of a hazardous chemical shall be clearly labelled or marked to identify: -

- (a) the contents of the container;
- (b) the name and address of the manufacturer or importer of the hazardous chemical; and
- (c) the physical, chemical and toxicological data of the hazardous chemical.

(5) In terms of sub-rule (4), where it is impracticable to label a chemical in view of the size of the container or the nature of the package, provision shall be made for other effective means like tagging or accompanying documents.

Powers of Inspector. Sections 8 and 9.

4. The Inspector shall-

- (a) inspect the industrial activity or isolated storage at least once in a calendar year;
- (b) send annually status report on the compliance with the rules by occupiers to the Ministry of Environment and Forests through the Directorate General, Factory Advice Service and Labour Institute and Ministry of Labour, Government of India; and
- (c) enforce direction and procedures in respect of industrial activities or isolated storages covered under the Factories Act, 1948 and in respect of pipelines upto a distance of 500 m from the outside of the perimeter of the factory, regarding-
 - (i) notification of the major accidents as per rule 6 (1) and 6 (2);
 - (ii) notification of sites as per rules 8 and 9;
 - (iii) safety reports and safety audits as per rules 10, 11 and 12;
 - (iv) preparation of on-site emergency plans as per rule 13 and involvement in the preparation of off-site emergency plans in consultation with District Collector or District Emergency Authority.

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**General duties
of the occupier.
Section 7A.**

5. (1) This rule shall apply to-
- (a) an industrial activity in which a hazardous chemical which satisfies any of the criteria laid down in Part I of Schedule I or is listed in column 2 of Part II of the said Schedule is or may be involved; and
 - (b) isolated storage in which there is involved a quantity of a hazardous chemical listed in column 2 of Schedule 2 which is equal to or more than the threshold quantity specified in that Schedule for that chemical in column 3 thereof.

(2) An occupier in terms of sub-rule (1) shall provide information on demand to show that he has-

- (a) identified the major accident hazards; and
- (b) taken adequate steps to-
 - (i) prevent such major accidents and to limit their consequences to persons and the environment;
 - (ii) and provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety and health.

**Notification
of major
accident.
Sections 88
and 88 A.**

6. (1) Where a major accident occurs on a site or in a pipeline, the occupier shall within 48 hours, notify the Inspector and Chief Inspector of Factories of that accident, and furnish thereafter to the Inspector and Chief Inspector a report relating to the accident in installments, if necessary, in Schedule 6.

(2) The Inspector and Chief Inspector shall, on receipt of the report in accordance with sub-rule (1) of this rule, undertake a full analysis of the major accident and send the requisite information to the Ministry of Environment and Forests through the Directorate General Factory Advice Service and Labour Institutes and Ministry of Labour, Government of India.

(3) An occupier shall notify to the Inspector steps taken to avoid any repetition of such occurrences on a site.

(4) The Inspector and the Chief Inspector shall compile information regarding major accidents and make available a copy of the same to the Ministry

of Environment and Forests through the Directorate General Factory Advice Service and Labour Institutes and Ministry of Labour, Government of India.

(5) The Inspector and the Chief Inspector shall inform the occupier in writing of any lacunae, which in their opinion need to be rectified to avoid major accidents.

**Industrial activity or isolated storage to which rules 8 to 14 apply.
Section 41 B.**

7. The rules 8 to 14 shall apply to:-

- (a) an industrial activity in which there is involved a quantity of a hazardous chemical listed in column 2 of Part I and II of Schedule 3 which is equal to or more than the quantity specified in the entry for that chemical in columns 3 and 4 (rules 10-12 only for column 4); and
- (b) isolated storage in which there is involved a quantity of a hazardous chemical listed in column 2 of Schedule 2 which is equal to or more than the quantity specified in the entry for that chemical in columns 3 and 4 (rules 10-12 only for column 4).

**Notification of site.
Section 41 B**

8. (1) An occupier shall not undertake any industrial activity or isolated storage unless he has submitted a written report to the Chief Inspector containing the particulars specified in Schedule 7 at least 90 days before commencing that activity or before such shorter time as the Chief Inspector may agree and for the purpose of this sub-rule, an activity in which subsequently there is or is liable to be a threshold quantity given in column 3 of Schedules 2 and 3 or more of an additional hazardous chemical shall be deemed to be a different activity and shall be notified accordingly.

(2) The Chief Inspector within 60 days from the date of receipt of the report in accordance with sub-rule (1) of this rule shall examine and on examination of the report if he is of the opinion that contravention of the provisions of the Act or the rules made thereunder has taken place, he may issue notice for obtaining compliance.

**Updating of the site notification.
Section 41 B.**

9. Where an activity has been reported in accordance with rule 8(1) and the occupier makes a change in it (including an increase or decrease in the maximum quantity of a hazardous chemical to which this rules applies which is or is liable to be at the site or in the pipeline or at the cessation of the activity)

which affects the particulars specified in that report or any subsequent report made under this rule, the occupier shall forthwith furnish a further report to the Inspector and the Chief Inspector.

**Safety reports
and safety
audit reports
Section 41 B.**

10. (1) Subject to the sub-rules (2) and (3) of this rule, an occupier shall not undertake any industrial activity or isolated storage to which this rule applies, unless he has prepared a safety report on that industrial activity containing the information specified in Schedule 8 and has sent a copy of that report to the Chief Inspector at least 90 days before commencing that activity.

(2) After the commencement of these rules, the occupiers of both the new and the existing industrial activities, isolated storage shall arrange to carry out safety audit by the officers of Directorate General Factory Advice Service and Labour Institute, Mumbai as approved by competent auditors in this behalf. Further, such auditing shall be carried out as under: -

- (a) internally once in a year by a team of suitable plant personnel;
- (b) externally once in two years by a competent agency accredited in this behalf;
- (c) in the year when an external audit is carried out, internal audit need not be carried out;

(3) The occupier within 30 days of the completion of the audit shall send a report to the Chief Inspector with respect to the implementation of the audit recommendations.

**Updating of
safety
reports
under rule
10.
Section 41B.**

11. (1) Where an occupier has made a safety report in accordance with sub-rule (1) of rule 10, he shall not make any modification to the industrial activity or isolated storage to which that safety report relates which could materially affect the particulars in that report, unless he has made a further report to take account of those modifications and has sent a copy of that report to the Inspector and Chief Inspector at least 90 days before making those modifications.

(2) Where an occupier has made a report in accordance with sub-rule (1) of rule 10 and that industrial activity or isolated storage is continuing, the occupier shall within three years of the date of the last such report, make a further report which shall have regard in particular to new technical knowledge

which has affected the particulars in the previous report relating to safety and hazard assessment, and shall within 30 days or in such longer time as the Chief Inspector may agree in writing, send a copy of the report to the Inspector and the Chief Inspector.

**Requirement
for further
information to
be sent to the
Inspector and
the Chief
Inspector.
Section 41B.**

12. Where in accordance with rules 10 and 11 an occupier has sent safety report and safety audit report relating to an industrial activity or isolated storage to the Inspector and Chief Inspector, the Inspector and Chief Inspector may, by a notice served on the occupier, require him to provide such additional information as may be specified in the notice and the occupier shall send that information to the Inspector and the Chief Inspector within 90 days.

**Preparation of
on site
emergency
plan by the
occupier.
Section 41 B.**

13. (1) The occupier shall prepare, keep up-to-date and furnish to the Inspector and Chief Inspector an on-site emergency plan containing details specified in Schedule 9 and detailing how major accidents will be dealt with on the site on which the industrial activity or isolated storage is carried on and that plan shall include the name of the person who is responsible for safety on the site and the names of those who are authorised to take action in accordance with the plan in case of an emergency.

(2) The occupier shall ensure that the emergency plan prepared in accordance with sub-rule (1) of this rule, takes into account any modification made in the industrial activity or isolated storage and that every person on the site who is concerned with the plan is informed of its relevant provisions.

(3) The occupier shall prepare the emergency plan required under sub-rule (1) of this rule-

- (a) before the commencement of industrial activity or isolated storage;
- (b) within 90 days of coming into operation of these rules in case of an existing industrial activity or isolated storage.

(4) The occupier shall ensure that a mock drill of the on-site emergency is conducted at least once in every six months.

(5) A detailed report of the mock drill conducted under sub-rule (4) shall be made immediately available to the Inspector and Chief Inspector.

**Information to
be given to
persons liable
to be affected
by a major
accident.
Section 41 B.**

- 14.** (1) The occupier shall take appropriate steps to inform persons outside the site who are likely to be in an area, which may be affected by a major accident about-
- (a) the nature of the major accident hazard; and
 - (b) the safety measures and the "Do's" and "Don'ts" which should be adopted in the event of major accident.
- (2) The occupier shall take steps required under sub-rule (1) of this rule to inform persons about an industrial activity or isolated storage before that activity is commenced, except that in respect of an existing industrial activity or isolated storage, the occupier shall comply with the requirements of sub-rule (1) of this rule within 90 days of coming into operation of these rules.

**Disclosure of
information.
Section 41 B**

- 15.** Where for the purpose of evaluating information notified under rule 6 or rules 8 to 14, the Inspector or the Chief Inspector discloses that information to some other persons, that other person shall not use that information for any purpose except for the purpose of the Inspector or the Chief Inspector to disclose it, as the case may be, and before disclosing that information the Inspector or the Chief Inspector, as the case may be, shall inform that other person of his obligations under this rule.

**Power of
State
Government
to modify
Schedules.
Section 112.**

- 16.** The State Government at any time, by notification in the Official Gazette, may make suitable changes in the Schedules.

SCHEDULE 1

{See rules 2(a)(i), 3(1) and 5(1)(a)}

PART I

(a) Toxic Chemicals:

Chemicals having the following values of acute toxicity and which owing to their physical and chemical properties, are capable of producing major accident hazards:

Seri al Num ber	Toxicity	Oral toxicity LD50 (milligram/kilogram)	Dermal toxicity (LD50 (milligram/ kilogram))	Inhalation toxicity LC50 (Milligram/ Litre)
1.	Extremely toxic	>5	<40	<0.5
2.	Highly toxic	>5-50	>40-200	<0.5-2.0
3.	Toxic	>50-200	>200-1000	<2-10

(b) Flammable Chemicals:

(i) **Flammable gases:** Gases which at 20°C and at standard pressure of 101.3 Kilopascal are:-

- (a) ignitable when in a mixture of 13 percent or less by volume with air, or
- (b) have a flammable range with air of at least 12 percentage point regardless of the lower flammable limits.

Note: The flammability shall be determined by tests or by calculation in accordance with methods adopted by International Standards Organisation ISO Number 10156 of 1990 or by Bureau of Indian Standards ISI Number 1446 of 1985.

(ii) **Extremely flammable liquids:** Chemical which have flash point lower than or equal to 23°C and boiling point less than 35°C.

(iii) **Very highly flammable liquids:** Chemicals which have flash point lower than or equal to 23°C and initial boiling point higher than 35°C.

(iv) **Highly flammable liquids:** Chemicals which have a flash point lower than or equal to 60°C but higher than 23°C.

(v) **Flammable liquids:** Chemicals which have a flash point higher than 60°C and lower than 90°C.

(c) Explosives:

Explosives means a solid or liquid or pyrotechnic substance (or a mixture of substances) or an article-

- (a) Which is in itself capable of chemical reaction of producing gas at such a temperature and pressure and such a speed as to cause damage to the surroundings;
- (b) Which is designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative self sustaining exothermic chemical reaction.

PART II

Serial Number List of Hazardous Chemicals

1. Acetaldehyde
2. Acetic Acid
3. Acetic anhydride
4. Acetone
5. Acetone Cyanohydrin
6. Acetone Thiosemicarbazide
7. Acetonitrile
8. Acetylene
9. Acetylene Tetra Chloride
10. Acrolein
11. Acrylamide
12. Acrylonitrile
13. Adiponitrile
14. Aldicarb
15. Aldrin
16. Allyl Alcohol
17. Allyl Amine

18. Allyl Chloride
19. Aluminium (powder)
20. Aluminium Azide
21. Aluminium Borohydride
22. Aluminium Chloride
23. Aluminium Fluoride
24. Aluminium phosphide
25. Amino diphenyl
26. Amino pyridine
27. Aminophenol-2
28. Aminopterin
29. Amiton
30. Amiton dialate
31. Ammonia
32. Ammonium Chloro platinate
33. Ammonium Nitrate
34. Ammonium Nitrite
35. Ammonium picrate
36. Anabasine
37. Aniline
38. Aniline 2,4,6, - Trimethyl
39. Anthraquinone
40. Antimony pentafluoride
41. Antimycin A
42. ANTU
43. Arsenic pentoxide
44. Arsenic Trioxide
45. Arsenous Trichloride
46. Arsine
47. Asphalt
48. Azinpho-ethyl
49. Azinphos methyl
50. Bacitracin
51. Barium azide
52. Barium Nitrate

53. Barium Nitride
54. Benzal Nhloride
55. Benzenamine, 3-Trifluoromethyl
56. Benzene
57. Benzene sulfonyl chloride
58. Benzene, 1-(Chlormethyl)-4-Nitro
59. Benzene arsenic acid
60. Benzidine
61. Benzidine salts
62. Benzimidazole, 4,5-Dichloro-2 (Trifluoromethyl)
63. Bezoquinone-P
64. Benzotrichloride
65. Benzoyl Chloride
66. Benzoyl peroxide
67. Benzyl Chloride
68. Beryllium (powder)
69. Bicyclo (2,2,1) Heptane-2- Carbonitrile
70. Biphenyl
71. Bis (2-chloroethyl) Sulphide
72. Bis (Chloromethyl) Ketone
73. Bis (Tert-butyl peroxy) Cyclohexane
74. Bis (Terbutylperoxy) butane
75. Bis (2,4,6-Trimitrophenylamine)
76. Bis (Chloromethyl) Ether
77. Bismuth and compounds
78. Bisphenol-A
79. Bitoscanate
80. Boron Powder
81. Boron Trichloride
82. Boron Trifluoride
83. Boron Trifluoride comp. With methylether, 1:1
84. Bromine
85. Bromine pentafluoride
86. Bromo Chloro methane
87. Bromodialone

88. Butadiene
89. Butane
90. Butanone-2
91. Butyl amine tert
92. Butyl glycidal ether
93. Butyl isovalerate
94. Butyl peroxy maleate tert
95. Butyl vinyl ether
96. Butyl-n-mercaptan
97. C.I. Basic green
98. Cadmium Oxide
99. Cadmium Stearate
100. Calcium arsenate
101. Calcium Carbide
102. Calcium Cyanide
103. Camphechlor (Toxaphene)
104. Cantharidin
105. Captan
106. Carbachol Chloride
107. Carbaryl
108. Carbofuran (Furadan)
109. Carbon Tetrachloride
110. Carbon disulphide
111. Carbon monoxide
112. Carbophenothion
113. Carvone
114. Cellulose Nitrate
115. Chloroacetic Acid
116. Chlordane
117. Chlorofenvinphos
118. Chlorinated benzene
119. Chlorine
120. Chlorine Oxide
121. Chlorine Trifluoride
122. Chlormephos

123. Chlormequat Chloride
124. Chloroacetalchloride
125. Chloroacetadhyde
126. Chloroaniline-2
127. Chloroaniline-4
128. Chlorobenzene
129. Chloroethyl Chloroformate
130. Chloroform
131. Chloroformyl morpholine
132. Chloromethane
133. Chloromethyl methylether
134. Chlorotrobenzene
135. Chlorophacinone
136. Chlorosulphonic
137. Chlorothiophos
138. Chloroxuron
139. Chromic Acid
140. Chromic Chloride
141. Chromium powder
142. Cobalt Carbonyl
143. Cobalt Nitrilmethylidyne compound
144. Cobalt (powder)
145. Colchicine
146. Copper and compounds
147. Copperoxychloride
148. Coumafuryl
149. Coumaphos
150. Coumatertralyl
151. Crimidine
152. Crotenaldehyde
153. Crotonaldehyde
154. Cumene
155. Cyanogen bromide
156. Cyanogen iodide
157. Cyanophos

158. Cyanothoate
159. Cyanuric fluoride
160. Cyclo Hexylamine
161. Cyclohexane
162. Cyclohexanone
163. Cycloheximide
164. Cyclopentadiene
165. Cyclopentane
166. Cyclotetramethyl lenetetranitramine
167. Cyclotramethylenetrinnitramine
168. Cypermethrin
169. DDT
170. Decaborane(1:4)
171. Demeton
172. Demeton S-Methyl
173. Di-n-propyl peroxydicarbonate(Concentration=80%)
174. Dialifos
175. Diazodinitrophenol
176. Dibenzyl peroxydicarbonate (Concentration>-90%)
177. Diborane
178. Dichloroacetylene
179. Dichlorobenzalkonium Chloride
180. Dichloroethyl ether
181. Dichloromethyl phenylsilane
182. Dichlorophenol-2.6
183. Dichlorophenol-2.4
184. Dichlorophenoxy Acetic Acid
185. Dichloropane-2.2
186. Dichlorosalicylic Acid-3.5
187. Dichlorvos (DDVP)
188. Dicrotophos
189. Dieldrin
190. Diepoxy butane
191. Diethyl carbamazine citrate
192. Diethyl chlorophosphate

193. Diethyl ethanolamine
194. Diethyl peroxydicarbonate (Concentration=30%)
195. Diethyl phenylene diamine
196. Diethylamine
197. Diethylene glycol
198. Diethylene glycol dinitrate
199. Diethylene Triamine
200. Diethleneglycol butyl ether
201. Diglycidyl ether
202. Digitoxin
203. Dihydroperoxypropane (Concentration>=30%)
204. Dissobutyl peroxide
205. Dimefox
206. Dimethoate
207. Dimethyl dichlorosilane
208. Dimethyl Hydrazine
209. Dimethyl Nitrosoamine
210. Dimethyl P phenylene diamine
211. Dimethyl phosphoramidi cyanidic acid (TABUM)
212. Dimethyl phosphorochloridithioate
213. Dimethyl Sufolane (DMS)
214. Dimethyl Sulphide
215. Dimethylamine
216. Dimethylamine
217. Dimethlearbonylchloride
218. Dimetilan
219. Dinitro O-cresol
220. Dinitrorphenol
221. Dinitrotoluene
222. Dinoseb
223. Dinoterb
224. Dioxane-p
225. Dioxathion
226. Dioxine N
227. Diphenacnone

- 228. Diphosphoramide Octamethyl
- 229. Diphenyl methane di-isocynate (MDI)
- 230. Dipropylene Glycol Butyl ether
- 231. Dipropylene glycolmethyl ether
- 232. Disec-butyl peroxydicarbonate (Concentration>80%)
- 233. Disufoton
- 234. Dithiazamine iodide
- 235. Dithiobiurate
- 236. Endosulfan
- 237. Endothion
- 238. Endrin
- 239. Epichlorohydrine
- 240. EPN
- 241. Ergocalciferol
- 242. Ergotamine Tartarate
- 243. Ethanesulfenyl Chloride, 2 chloro
- 244. Ethanol 1-2 dichloracetate
- 245. Ethion
- 246. Ethoprophos
- 247. Ethyl Acetate
- 248. Ethyl Alcohol
- 249. Ethyl benzene
- 250. Ethyl bis amine
- 251. Ethyl bromide
- 252. Ethyl Carbanmate
- 253. Ethyl ether
- 254. Ethyl Hexanol-2
- 255. Ethyl mercaptan
- 256. Ethyl mercuric phosphate
- 257. Ethyl methacrylate
- 258. Ethyl Nitrate
- 259. Ethyl Thiocyanate
- 260. Ethylamine
- 261. Ethylene
- 262. Ethylene Chlorohydrine

263. Ethylene dibromide
264. Ethylene diamine
265. Ethylene diamine hydrochloride
266. Ethylene flourohydride
267. Ethylene glycol
268. Ethylene glycol dinitrate
269. Ethylene Oxide
270. Ethylenimine
271. Ethylene di Chloride
272. Femamilhos
273. Femitrothion
274. Fensulphothion
275. Fluemetill
276. Fluorine
277. Fluori-Hydroxy butyric acid amid salt and ester
278. Fluoroacetamide
279. Fluoroacetic acid amide salts and esters
280. Fluoroacetyl Chloride
281. Fluorobutyric acid amide salt esters
282. Fluorobutyric acid amides salts esters
283. Fluorouracil
284. Fonofos
285. Formaldyhyde
286. Formetanate hydrochloride
287. Formic Acid
288. Formoparanate
289. Formothion
290. Fosthiotan
291. Fuberidazole
292. Furan
293. Gallium Trichloride
294. Glyconitrile (Hydroxyacetonitrile)
295. Guanyl-4-nitrosaminoguanyl-I-Tetrazene
296. Heptachlor
297. Hexa methyl-terta-Oxyacyclonoate (Concentration 75%)

298. Hexachlorobenzene
299. Hexachlorocyclohexan (Lindane)
300. Hexachlorocyclopentadiene
301. Hexachlorodibenzo-p-dioxin
302. Hexachloronaphthalene
303. Hexafluoropropanone sesquihydrate
304. Hexamethyl phosphoroamide
305. Hexamethylene diamine N N dibutyl
306. Hexane
307. Hexanitrostilbene 2 2 4 4 6 6
308. Hexane
309. Hydrogen Selenide
310. Hydrogen Sulphide
311. Hydrazine
312. Hydrazine Nitrate
313. Hydrochloric Acid (Gas)
314. Hydrogen
315. Hydrogen bromide
316. Hydrogen cyanide
317. Hydrogen fluoride
318. Hydrogen peroxide
319. Hydroquinone
320. Indine
321. Indium powder
322. Indomethacin
323. Iodine
324. Iridium tetrachloride
325. Ironpentacarbonyl
326. Iso benzan
327. Isoamyl Alcohol
328. Isobutyl Alchol
329. Isobutro Nitrile
330. Isocyanic anid 3 4-dichlorophenyl ester
331. Isodrin
332. Isofluorophosphate

- 333. Isophorone diisocyanate
- 334. Isopropy Alchol
- 335. Isopropy Chlorocarbonate
- 336. Isopropyl formate
- 337. Isopropy methyl pyrazolyl dimethyl carbamate
- 338. Juglone (5-Hydroxy Naphthalent-1,4 dione)
- 339. Ketene
- 340. Lactonitrile
- 341. Lead arsenite
- 342. Lead at high temp (molten)
- 343. Lead azide
- 344. Lead Styphante
- 345. Leptophos
- 346. Lenosite
- 347. Liquified petroleum gas
- 348. Lithium Hydride
- 349. N-Dinitrobenzene
- 350. Magnesium powder or ribbon
- 351. Malathion
- 352. Maleic anhydride
- 353. Malononitrile
- 354. Manganese Tricarbonyl Cyclopentadience
- 355. Mechlor ethamine
- 356. Mephospholan
- 357. Mercuric chloride
- 358. Mercuric oxide
- 359. Mercury acetate
- 360. Mercury fulminate
- 361. Mercury methyl Chloride
- 362. Mesitylene
- 363. Methaacrolein diacetate
- 364. Methacrylyic anhydride
- 365. Methacrylonitrile
- 366. Methacryloyl Oxyethyl isocyanate
- 367. Methanidophos

368. Methane
369. Methanesulphonyl fluoride
370. Methidathion
371. Methiocarb
372. Methonyl
373. Methoxy ethanol (2-methyl cellosolve)
374. Methoxyethyl mercuric acetate
375. Methyacrylol Chloride
376. Methyl 2-Chloroacrylate
377. Methyl Alchol
378. Methyl Amine
379. Methyl bromide (Bromonethane)
380. Methyl Chloride
381. Methyl Chloroform
382. Methyl Chloroforate
383. Methyl Cyclohexence
384. Methyl disulphide
385. Methyl ethyl ketone peroxide (Concentration 60%)
386. Methyl formate
387. Methyl Hydrazine
388. Methyl Isobutyl ketone
389. Methyl Isovyanate
390. Methyl Isothiocyanate
391. Methyl mercuric dicyanamide
392. Methyl Mercaptan
393. Methyl Methacerylate
394. Methyl phencapton
395. Methyl phosphonic dichloride
396. Methyl Thiocyanate
397. Methyl Trichlorosilane
398. Methyl vinyl ketone
399. Methylene bis (2-chloroaniline)
400. Methylene Chloride
401. Methylenebis-4 4(2-Chloroaniline)
402. Metolcarb

403. Mevinphos
404. Mezacarbate
405. Mitomycin C
406. Molybdenum power
407. Monocrotophos
408. Morphoine
409. Muscinol
410. Mustard gas
411. N-Butyl Acetate
412. N-Butyl Alcohol
413. N-Hexane
414. N-Methyl-N, 2, 4, 6 Tetranitroaniline
415. Naphtha
416. Naphtha solvent
417. Naphthalene
418. Napthyl amine
419. Nickel carbonyl/nickel tetracarbonyl
420. Nickel powder
421. Nicotine
422. Nicotine Sulphate
423. Nitric Acid
424. Nitric Oxide
425. Nitrobenzene
426. Nitrocellulose (dry)
427. Nitrochlorobenzene
428. Nitrocyclohexane
429. Nitrogen
430. Nitrogen dioxide
431. Nitrogen Oxide
432. Nitrogen Trifluouide
433. Nitroglycerine
434. Nitropropane-I
435. Nitropropane-II
436. Nitroso dimethyl amine
437. Nonane

438. Norbormide
439. O-Cresol
440. O-Nitro Toluence
441. O-Toludine
442. O-Xylene
443. O/P Nitroaniline
444. Oleum
445. OO-Diethyl-S ethyl suph. Methylphos
446. OO-Diethyl-S propythio methyl phosdithioate
447. OO-Diethyl-S ethylsulphinylmethylphosphorothioat
448. OO-Diethyl-S ethylsulphonylmethylphosphorothioate
449. OO-Diethyl-S ethyithiomethylphosphorothioate
450. Organo rhodium complex
451. Orotic Acid
452. Osmium Tetroxide
453. Oxabain
454. Oxamyl
455. Ometane, 3, 3,-bis(chloromethyl)
456. Oxidiphenoxarsine
457. Oxy disulfoton
458. Oxygen (liquid)
459. Oxygen difluoride
460. Ozone
461. P-nitrophenol
462. Paraffin
463. Paraoxon (Diethyl 4 Nitropheynl Phosphate)
464. Pfaraquat
465. Paraquat methosuolophate
466. Parathion
467. Parathion methyl
468. Paris green
469. Penta borane
470. Penta Chloro ethane
471. Penta Chloro phenol
472. Pentabromophenol

473. Pentachloro Naphthalene
474. Pentadecyl Amine
475. Pentaerythritol Tetritrate
476. Pentane
477. Pentanone
478. Perchloric Acid
479. Perchloroethylene
480. Peroxyacetic Acid
481. Phenol
482. Phenol, 2, 2-Thiobis (4, 6-Dichloro)
483. Phenol, 2 , 2-Thiobis (4 Chloro 6 methyl phenol)
484. Phenol, 3-(I-methyl ethyl)-methylcarbamate
485. Phenyl hydrazine hydrochloride
486. Phenyl mercury acetate
487. Phenyl silatrane
488. Phenyl thiourea
489. Phenylene P-diamine
490. Phorate
491. Phosazetin
492. Phosfolan
493. Phosgene
494. Phosmet
495. Phosphamidon
496. Phosphine
497. Phosphoric Acid
498. Phosphoric Acid dimethyl (4-methyl thio)
499. Phosphoric Acid dimethyl S(2-Bis) Ester
500. Phosphorothioic Acid methyl (ester)
501. Phosphorothioic Acid, OO Dimethyl S-(2-methyl)
502. Phosphorothioic, methyl-ethyl ester
503. Phosphorous
504. Phosphorous Oxychloride
505. Phosphorous pentoxide
506. Phosphorous Trichloride
507. Phosphorous penta chloride

- 508. Phthalic Anhydride
- 509. Phylloquinone
- 510. Physostigmine
- 511. Physotignine salicylate (1:1)
- 512. Picric Acid (2, 4, 6-trinitrophenol)
- 513. Picrotoxin
- 514. Piperdine
- 515. Piprotal
- 516. Pirinifos-ethyl
- 517. Platinous Chloride
- 518. Platinum Tetrachloride
- 519. Potassium Arsenite
- 520. Potassium Chlorate
- 521. Potassium Cyanide
- 522. Potassium Hydroxide
- 523. Potassium Nitride
- 524. Potassium Nitrite
- 525. Potassium peroxide
- 526. Potassium silver cyanide
- 527. Powdered metals and mixtures
- 528. Promecarb
- 529. Promurit
- 530. Propanesultone
- 531. Propargyl Alcohol
- 532. Propargyl bromide
- 533. Propen-2-Chloro-1,3,-dioudiacetate
- 534. Propiolactone beta
- 535. Propionitrile
- 536. Propionitrile,3-Chloro
- 537. Propiophenone, 4-amino
- 538. Propyl Chloroformate
- 539. Propylene dichloride
- 540. Propylene glycol, allylether
- 541. Propylene imine
- 542. Propylene ixide

543. Prothoate
544. Pseudosumene
545. Pyrazoxon
546. Pyrene
547. Pyridine
548. Pyridine, 2-methyl-3-vinyl
549. Pyridine, 4-Nitro-1-Oxide
550. Pyridine, 4-Nitro-1-Oxide
551. Pyriminil
552. Quinaliphos
553. Quinone
554. Rhodium Trichloride
555. Salcomine
556. Sarin
557. Selenious Acid
558. Selenium Hexafluoride
559. Selenium Oxychloride
560. Semicarbazide Hydrochloride
561. Silane (4-amino butyl) diethoxymeth
562. Sodium
563. Sodium anthrax-quinone-1-sulphonate
564. Sodium arsenate
565. Sodium arsenite
566. Sodium azide
567. Sodium Cacodylate
568. Sodium Chlorate
569. Sodium Cyanide
570. Sodium fluoro-acetate
571. Sodium Hydroxide
572. Sodium pentachloro-phenate
573. Sodium picramate
574. Sodium selenate
575. Sodium selenite
576. Sodium sulphide
577. Sodium Tellorite

578. Stannane acetoxy triphenyl
579. Stibine (Antimiony hydride)
580. Strychnine
581. Strychnine Sulphate
582. Styphnic Acid (2, 4, 6-trinitoresorcinol)
583. Styrene
584. Sulphotec
585. Sulphoxide, 3-Chloropropy octyl
586. Sulphur dichloride 23
587. Sulphur dioxide
588. Sulphur monochloride
589. Sulphur Tetrafluoride
590. Sulphur Trioxide
591. Sulphur Acid
592. Tellurium (Powder)
593. Tellurium Hexafluoride
594. TEPP (Tetraethyl pyrophosphate)
595. Terbufos
596. Tert-Butyl Alcohol
597. Tert-Butyl peroxy cabonate
598. Tert-Butyl peroxy isopropyl
599. Tert-Butyl peroxyacetate (Concentration >-70%)
600. Tert-Butyl peroxypivalate (Concentration >-77%)
601. Tert-Butyperoxyiso-butyrate
602. Tetra hydrofuran
603. Tetra methyl lead
604. Tetra nitromethane
605. Tetra-chlorodebenzo-p-dioxin, 1,2,3,7,8 (TCDD)
606. Tetraethyl lead
607. Tetrafluoriethyne
608. Tetramethylene disulphotetramine
609. Thallic Oxide
610. Thallium Carbonate
611. Thallium Sulphate
612. Thallous Chloride

- 613. Thallous malonate
- 614. Thallous Sulphate
- 615. Thicarbazide
- 616. Thiocynamicacid, 2 (Benzothiazolyethio) methyl
- 617. Thiofamox
- 618. Thiometon
- 619. Thionazin
- 620. Thionyl Chloride
- 621. Thiophenol
- 622. Thiosemicarbazide
- 623. Thiourea (2-Chloro-phenyl)
- 624. Thiourea (2-methyl-phenyl)
- 625. Triplate (2,4-dimethyl-1, 3-dithiolane)
- 626. Titanium powder
- 627. Titanium Tetra-Chloride
- 628. Toluene
- 629. Toluene 2,4-di isocyanate
- 630. Toluene, 2, 6-di isocyanate
- 631. Trans-1, 4-di Chloro-butene
- 632. Tri Nitro anisole
- 633. Tri (Cyclohexyl) methylstanny 1,2,4, Triazole
- 634. Tri (Cyclohexyl) stannyl-1H-1, 2,3-Triazole
- 635. Triaminotrinitrobenzene
- 636. Triamphos
- 637. Triazophos
- 638. Tribromophenol 2,4,6
- 639. Trichloro Naphthalene
- 640. Trichloro Chloromethyl Silane
- 641. Trichloroacetyl Chloride
- 642. Trichlorodichlorphenylsilane
- 643. Trichloroethyl Cilane
- 644. Trichloroethylene
- 645. Trichloromethane Sulphenyl Chloride
- 646. Trichloronate
- 647. Trichlorophenol 2,3,6

648. Trichlorophenol 2,4,5
649. Trichlorophenyl Silane
650. Trichlorophon
651. Triethoxy Silane
652. Triethylamine
653. Triethylene melamine
654. Trimethyl Chlorosilane
655. Trimethyl propane phosphite
656. Trimethyl tin Chloride
657. Trinitro aniline
658. Trinitro benzene
659. Trinitro benzoic acid
660. Trinitro phenetole
661. Trinitro-m-cresol
662. Trinitrotoluene
663. Tri orthocresyl phosphate
664. Triphenyl tin Chloride
665. Tris (2-Chloroethyl) amine
666. Trupentine
667. Uranium and its compounds
668. Valino mycin
669. Vanadium pentaoxide
670. Vinyl acetate monomer
671. Vinyl bromide
672. Vinyl Chloride
673. Vinyl Cyclohexane dioxide
674. Vinyl floride
675. Vinyl Norbornene
676. Vinyl Toluene
677. Vinyledene Chloride
678. Warfarin
679. Warfarin Sodium
680. Xylene dichloride
681. Xyldine
682. Zinc dichloropentanitrile

683. Zinc phosphide
684. Zirconium and compounds

SCHEDULE 2

[See rules 2(a) (ii), 2(c), 5(1) (b), 7 (b), 8 (1)]

**ISOLATED STORAGE AT INSTALLATION OTHER THAN THOSE
COVERED BY SCHEDULE 4**

- (a) The threshold quantities set out below relate to such installation or group of installations belonging to the same occupier where the distance between installations is not sufficient to avoid, in foreseeable circumstances, any aggravation of major accident hazards. These threshold quantities apply in any case to each group of installations belonging to the same occupier where the distance between the installations is less than 500 meters.
- (b) For the purpose of determining the threshold quantity of a hazardous chemical at an isolated storage, account shall also be taken of any hazardous chemical which is:-
 - (i) In that part of any pipeline under the control of the occupier having control of the site, which is within 500 meters of that site and connected to it;
 - (ii) at any other site under the control of the same occupier any part of the boundary of which is within 500 meters of the said site; and
 - (iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within 500 meters of it;

but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft used for transporting it.

Serial Number	Chemicals	Threshold Quantities (Tones)	
		For application of rules 5, 6, 8, 9, 13 and 14	For application of rules 10 to 12

1.	Acrylonitrile	3,50	5,000
2.	Ammonia	60	600
3.	Ammonium Nitrate (a)	350	2,500
4.	Ammonium Nitrate Fertilizers (b)	1,250	10,000
5.	Chlorine	10	
6.	Flammable gases as defined in Schedule 1. paragraph (b)(i)	50	3,00
7.	Highly flammable liquids as defined in Schedule 1, paragraph (b)(ii)	5000	50,000
8.	Liquid Oxygen	200	2,000
9.	Sodium Chlorate	25	250
10.	Sulphur Dioxide	20	500
11.	Sulphur Trioxide	15	100
12.	Carbonyl Chloride	0.750	0.750
13.	Hydrogen Sulphide	5	50
14.	Hydrogen Fluoride	4	50
15.	Hydrogen Cyanide	5	50
16.	Carbon Disulphide	20	200
17.	Bromine	50	500
18.	Ehtylene Oxide	5	501
19.	Propylene Oxide	5	50
20.	2-Propenal (Acrolein)	20	200
21.	Bromomethane (Methyl bromide)	20	200
22.	Methyl Isoncyanate	0.150	0.150
23.	Tetraethyl lead or Tetramethyl lead	5	50
24.	1, 2 Dibromoethane (Ethylene dibromide)	5	50
25.	Hydrogen Chloride (liquefied gas)	25	250
26.	Diphenyl Methane (di-isocyanate (HDI))	20	200
27.	Toluene di-isocyanate TDI)	10	100
28.	Very Highly flammable liquids as defined	7,000	7,000

	in Schedule 1, paragraph b(iii)		
29	Highly flammable liquids as defined in Schedule 1, paragraph b(iv)	10,000	10,000
30	Flammable liquids as defined in Schedule 1, paragraph b(v)	15,000	1,00,000

- (a) This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is greater than 20 per cent by weight and to aqueous solutions of ammonium nitrate where the Concentration of ammonium nitrate is greater than 90 percent by weight.
- (b) This applies to straight ammonium nitrate fertilizer and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is greater than 28 per cent by weight is (a compound-fertilizer contains ammonium nitrate together with phosphate and/or potash).

SCHEDULE 3

[See rules 2(a)(iii), 7(a), 8 (1)]

LIST OF HAZARDOUS CHEMICALS FOR APPLICATION OF RULES 6 AND 8 TO 14

- (a) The quantities set-out-below relate to each installation or group of installations belonging to the same occupier where the distance between the installations is not sufficient to avoid, in foreseeable circumstances, any aggravation of major-accident hazards. These quantities apply in any case to each group of installations belonging to the same occupier where the distance between the installations to less than 500 meters.
- (b) For the purpose of determining the threshold quantity of a hazardous chemical in an industrial installation, account shall also be taken of any hazardous chemicals which is:-
- (i) In that part of any pipeline under the control of the occupier having control of the site, which is within 500 meters of that site and connected to it;
 - (ii) at any other site under the control of the same occupier any part of the boundary of which is within 500 metres of the said site; and
 - (iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within 500 metres of it;
- but no account shall be taken of any hazardous chemical, which is in a vehicle, vessel, aircraft or hovercraft used for transporting it.

PART I
NAMED CHEMICALS

Serial Number	Chemical	Threshold Quantity		Chemical Abstracts Service Number
		For application of rules 6, 8, 9, 13 and 14	For application of rules 10 to 12	
1	2	3	4	5
GROUP 1-TOXIC CHEMICALS				
1.	Aldicarb	100 Kilogram		116-06-3
2.	4-Aminodiphenyl	1 Kilogram		92-67-1
3.	Amiton	1 Kilogram		78-53-5
4.	Anabasine	100 Kilogram		494-52-0
5.	Arsenic Pentoxide, Arsenic(V)acid and salts	500 Kilogram		
6.	Arsenic Trioxide, Arsenious (III) acid and salts	100 Kilogram		
7.	Arsine (Arsenic Hydride)	10 Kilogram		7784-42-1
8.	Azinphos-ethyl	100 Kilogram		2642-71-9
9.	Azinphos-methyl	100 Kilogram		86-50-0
10.	Benzidine	1 Kilogram		92-87-5
11.	Benzidine salts	1 Kilogram		
12.	Beryllium(Powders, Compounds)	10 Kilogram		
13.	Bis (2-Chloroethyl) Sulphide	1 Kilogram		505-60-2
14.	Bis (Chloromethyl) ether	1 Kilogram		542-88-1
15.	Carbofuran	100 Kilogram		1563-66-2
16.	Carbophenothion	100 Kilogram		786-19-6

17.	Chlorfenvinphos	100 Kilogram		470-90-6
18.	4-(Chloroformyl) Morpholine	1 Kilogram		15159-40-7
19.	Chloromethyl Methyl ether	1 Kilogram		107-30-2
20.	Cobalt Metal Oxide Carbonates, Sulphides, as powders	1 Ton		
21.	Crimidine	100 Kilogram		535-89-7
22.	Cynthoate	100 Kilogram		3734-95-0
23.	Cycloheximide	100 Kilogram		66-81-9
24.	Demeton	100 Kilogram		8065-48-3
25.	Dialifos	100 Kilogram		10311-84-9
26.	Co-Diethyl S-ethyl Sulphanyl methyl phosphorothioate	100 Kilogram		2588-05-8
27.	00-Diethyl S-ethylsulphonyl methyl Phosphorthioate	100 Kilogram		2588-06-9
28.	00-Diethyl S-ethylthiomethyl Phosphorodithioate	100 Kilogram		2600-69-3
29.	00-Diethyl S-isopropylthio-methyl Phosphorodithioate	100 Kilogram		78-52-4
30.	00-Diethyl S-propylthiomethyl Phosphorothioate	100 Kilogram		3309-68-0
31.	Dimefox	100 Kilogram		115-26-4
32.	Dimethylcarbamoyl	1 Kilogram		79-44-7

	Chloride			
33.	Dimethylnitrosamine	1 Kilogram		62-75-9
34.	Dimethyl Phosphoramidocyanidic Acid	1 ton		63917-41-9
35.	Diphacinone	100 Kilogram		82-66-6
36.	Disulfoton	100 Kilogram		298-04-4
37.	EPN	100 Kilogram		2104-64-5
38.	Ethion	100 Kilogram		563-12-2
39.	Fensufothion	100 Kilogram		115-90-2
40.	Fluenetil	100 Kilogram		4301-50-2
41.	Fluoroacetic Acid	1 Kilogram		144-49-0
42.	Fluoroacetic Acid, Salts	1 Kilogram		
43.	Fluoroacetic Acid, esters	1 Kilogram		
44.	Fluoroacetic Acid, amides	1 Kilogram		
45.	4-Fluorobutyric Acid	1 Kilogram		462-23-7
46.	4-Fluorobutyric Acid, Salts	1 Kilogram		
47.	4-Fluorobutyrie Acid, esters	1 Kilogram		
48.	4-Fluorobutylc Acid, amides	1 Kilogram		
49.	4-Fluorocrotonic Acid	1 Kilogram		37759-72-1
50.	4-Fluorocrotonic Acid, salts	1 Kilogram		
51.	4-Fluorocrotonic Acid, esters	1 Kilogram		
52.	4-Fluorocrotonic Acid, amides	1 Kilogram		
53.	4- Fluoro-2-Hydroxy-butyric acid	1 Kilogram		
54.	4- Fluoro-2-Hydroxy-butyric acid, salts	1 Kilogram		
55.	4- Fluoro-2-Hydroxy-butyric acid	1 Kilogram		

	acid, esters			
56.	4- Fluoro-2-Hydroxy-butyric acid, amides	1 Kilogram		
57.	Glycolonitrile (Hydroxyacetonitrile)	100 Kilogram		107-16-4
58.	1,2,3,7,8,9- Hexachlorodibenzo-p-dioxin	100 Kilogram		19408-74-3
59.	Hexamethylphosphoram-ide	1 Kilogram		680-31-9
60.	Hydrogen Selenide	10 Kilogram		7783-07-5
61.	Isobenzan	100 Kilogram		297-78-9
62.	Isodrin	100 Kilogram		465-73-6
63.	Juglone (5-Hydroxynaphthalene-1,4-dione)	100 Kilogram		481-39-0
64.	4,4- Methylenebis (2-Chloroaniline)	10 Kilogram		101-14-4
65.	Methyl iscyanate	150 Kilogram	150 Kilogram	624-83-9
66.	Mevinphos	100 Kilogram		7786-34-7
67.	2- Naphthylamine	1 Kilogram		91-59-8
68.	Nickle metal, Oxides, Carbonates, Sulphide, as powders	1 ton		
69.	Nickle Tetracarbonyl	10 Kilogram		13463-39-3
70.	Oxydisulfoton	100 Kilogram		2497-07-6
71.	Oxygen difluoride	10 Kilogram		7783-41-7
72.	Paraoxon (dirthyl 4-nitrophenyl Phosphate)	100 Kilogram		311-45-5
73.	Parathion	100 Kilogram		56-38-2

74.	Parathion-Methyl	100 Kilogram		298-00-0
75.	Pentaborane	100 Kilogram		19624-22-7
76.	Phorate	100 Kilogram	100 Kilogram	298-02-2
77.	Phosacetim	100 Kilogram		4104-14-7
78.	Phosgene (Carbonyl Chloride)	750 Kilogram	750 Kilogram	75-44-5
79.	Phosphamidon	100 Kilogram		13171-21-6
80.	Phosphine (Hydrogen phosphide)	100 Kilogram		7803-51-2
81.	Promurit (1-3,4-Dichlorophenyl)-3-Triazenethio Carboxamide)	100 Kilogram		5836-73-7
82.	1,3-Propanesultone	1 Kilogram		1120-71-4
83.	1-Propen-2-chlore-1-3 diacetate	10 Kilogram		10118-72-6
84.	Pyrazoxon	100 Kilogram		108-34-9
85.	Selenium hexafluoride	10 Kilogram		7383-79-1
86.	Sodium selenite	100 Kilogram		10102-18-8
87.	Stibine (Antimony hydride)	100 Kilogram		7803-52-3
88.	Sulfotop	100 Kilogram		3689-24-5
89.	Sulphur Dichloride	1 ton		10545-99-0
90.	Tellurium Hexafluoride	100 Kilogram		7783-80-4
91.	TEPP	100 Kilogram		107-49-3
92.	2,3,7,8- Tetrachlorodibenzo	1 Kilogram		1746-01-6

	p-dioxin (TCDD)			
93.	Tetrmilethylenedisulpho-Tetramine	1 Kilogram		80-12-6
94.	Thionazin	100 Kilogram		297-97-2
95.	Tirplate(2,4-Dimethyl-1, 3-dithiolane-2-Carboxaldehyde,O-methylcarbomoy, loxime)	100 Kilogram		26419-73-8
96.	Trichloromethane-sulphenyl chloride	100 Kilogram		594-42-3
97.	1-Tri(cyclohexyl) stannyl-1H-1,2,4-Triazole	100 Kilogram		41083-11-8
98.	Triethylenemelamine	10 Kilogram		51-18-3
99.	Warfarin	100 Kilogram		81-81-2

GROUP 2-TOXIC CHEMICALS

100.	Acetone cyanohydrin (2-Cyanopropan-2-o 1	200 ton		75-86-5
101.	Acrolein (2-Propenal)	20 ton		107-02-8
102.	Acrylonitrile	20 ton	200 ton	107-13-1
103.	Allyl alcohol (2-Prpenal)	200 ton		107-18-6
104.	Allylamine	200 ton		107-11-9
105.	Ammonia	50 ton	500 ton	7664-41-7
106.	Bromine	40 ton		7726-95-6
107.	Carbon disulphide	20 ton	200 ton	75-15-0
108.	Chlorine	10 ton	25 ton	7782-50-5
109.	Diphenyl methane di-isocyanate (MDI)	20 ton		101-68-8
110.	Ethylene dibromide (1,2-Dibromomethane)	5 ton		106-93-4
111.	Ethyleneimine	50 ton		151-56-4
112.	Formaldehyde (Concentration>=90%)	5 ton		50-00-0

113.	Hydrogen Chloride, (liquefied gas)	25 ton	250 ton	7647-01-0
114.	Hydrogen Cyanide	5 ton	20 ton	74-90-8
115.	Hydrogen Fluoride	5 ton	50 ton	7664-39-3
116.	Hydrogen Sulphide	5 ton	50 ton	7783-06-4
117.	Methyl bromide (Bromomethane)	20 ton		74-83-9
118.	Nitrogen Oxides	50 ton		11104-93-1
119.	Propyleneimine	50 ton		75-55-8
120.	Sulphur Dioxide	20 ton	250 ton	7446-09-5
121.	Sulphur Trioxide	15 ton	75 ton	7446-11-9
122.	Tetraethyl lead	5 ton		78-00-2
123.	Tetramethyl lead	5 ton		75-74-1
124.	Toluene di-isocyanate (TDI)	10 ton		584-84-9

GROUP 3- HIGHLY REACTIVE CHEMICALS

125.	Acetylene (ethyne)	5 ton		74-86-2
126.	a. Ammonium Nitrate (1) b. Ammonium Nitrate in the form of fertiliser (2)	350 ton 1250 ton		6484-52-2
127.	2,2 Bis (tert-butyl-peroxy) butane (Concentration>=70%)	5 ton		2167-23-9
128.	1-1-Bis(tert-butyl-peroxy)cyclohexane (Concentration >= 80%)	5 ton		3006-86-8
129.	Tert-Butyl peroxyacetate (Concentration>=70%)	5 ton		107-71-1
130.	Tert-Butyl peroxyisobutyrate (Concentration>=80%)	5 ton		109-13-7
131.	Tert-Butyl peroxyisopropyl carbonate (Concentration>=80%)	5 ton		2372-21-6
132.	Tert-Butyl peroxymaleate (Concentration>=80%)	5 ton		1931-62-0
133.	Tert-Butyl peroxy pivalate	50 ton		927-07-1

	(Concentration>=77%)			
134.	Dibenzyl peroxydicarbonate (Concentration>=90%)	5 ton		2144-45-8
135.	Di-sec-butyl peroxydicarbonate (Concentration>=80%)	5 ton		19910-65-7
136.	Diethyl peroxydicarbonate (Concentration>=30%)	50 ton		14666-78-5
137.	2,2-Dihydroperoxypropane (Concentration>=30%)	5 ton		2614-76-8
138.	Di-isobutyl peroxide (Concentration>=90%)	50 ton		3437-84-1
139.	Di-n-propyl peroxydicarbonate (Concentration>=80%)	5 ton		16066-38-9
140.	Ethylene Oxide	5 ton	50 ton	75-21-8
141.	Ethyl Nitrate	50 ton		625-58-1
142.	3,3,6,6,9,9,- Hexamethyl – 1,2,4,5- Tetroxacyclonane (Concentration>=75%)	50 ton	50 ton	22397-33-7
143.	Hydrogen	2 ton	50 ton	1333-74-0
144.	Liquid Oxygen	200 ton		7782-44-7
145.	Methyl ethyl ketone peroxide (Concentration>=60%)	5 ton	5 ton	1338-23-4
146.	Methyl isobutyl ketone peroxide (Concentration >= 60%)	50 ton		37206-20-5
147.	Peracetic Acid (Concentration >= 60%)	50 ton		79-21-0
148.	Propylene Oxide	5 ton	5 ton	75-56-9
149.	Sodium Chlorate	25 ton		7775-09-9
GROUP 4 – EXPLOSIVE CHEMICALS				
150.	Barium Azide	50 ton		18810-58-7
151.	Bis (2,4,6-Trinitrophenyl)amine	50 ton		131-73-7
152.	Chlorotrinitrobenzene	50 ton		28260-61-9
153.	Cellulose Nitrate (containing >	50 ton		9004-70-0

	12.6% Nitrogen)			
154.	Cyclotetramethylene Tetranitramine	50 ton		2691-41-0
155.	Cyclotrimethylene Trinitroamine	50 ton		121-82-4
156.	Diazodinitrophenol	10 ton		7008-81-3
157.	Diethylene glycol dinitrate	10 ton		693-21-0
158.	Dinitrophenol, Salts	50 ton		
159.	Ethylene glycol dinitrate	10 ton		628-96-6
160.	1-Guanyl-4- Nitrosaminoguanyl-1-Tetrazene	10 ton		109-27-3
161.	2,2',4,4',6,6'-Hexanitrostilbene	50 ton		20062-22-0
162.	Hydrazine Nitrate	50 ton		13464-97-6
163.	Lead Azide	50 ton		13424-46-9
164.	Lead Styphnate (lead 2,4,6- Trinitro-resorcinoxide)	50 ton		15245-44-0
165.	Mercury Fulminate	10 ton		628-86-4
166.	N-Methyl-N,2,4,6- Tetranitroaniline	50 ton		479-45-8
167.	Nitroglycerine	10 ton	10 t	55-63-0
168.	Pentaerythritol Tetranitrate	50 ton		78-11-5
169.	Picric acid (2,4,6 – Trinitrophenol)	50 ton		88-89-1
170.	Sodium picramate	50 ton		831-52-7
171.	Styphnic acid (2,4,6 – Trinitroresorcinol)	50 ton		82-71-3
172.	1,3,5 – Triamino-2,4,6- Trinitrobenzene	50 ton		3058-38-6
173.	Trinitroaniline	50 ton		26952-42-1
174.	2,4,6 – Trinitroanisole	50 ton		606-35-9
175.	Trinitrobenzene	50 ton		25377-32-6
176.	Trinitrobenzoic Acid	50 ton		35860-50-5
177.	Trinitrocresol	50 ton		28905-71-7
178.	2,4,6- Trinitrophenetole	50 ton		4732-14-3

179.	2,4,6- Trinitrotoluene	50 ton	50 ton	118-96-7
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PART II
CLASSES OF SUBSTANCES AS DEFINED IN PART I, SCHEDULE -1 AND NOT
SPECIFICALLY NAMED IN PART-I OF THIS SCHEDULE

Serial Number	Classes of Chemicals	Threshold Quantity	
		For application of rules 6, 8, 9, 13 and 14	For application of rules 10 to 12
1	2	3	4
GROUP-5-FLAMMABLE SUBSTANCES			
1.	Flammables Gases	15 Ton	200 Ton
2.	Extremely flammable liquids	1,000 Ton	5,000 Ton
3.	Very Highly flammable liquids	1,500 Ton	10,000 Ton
4.	Highly flammable liquids which remains liquid under pressure	25 Ton	200 Ton
5.	Highly Flammable liquids	2,500 Ton	20,000 Ton
6.	Flammable liquids	5,000 Ton	50,000 Ton

- (1) This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is greater than 28% by weight and aqueous solutions of ammonium nitrate where the Concentration of ammonium nitrate is greater than 90% by weight.
- (2) This applies to straight ammonium nitrate fertilizers and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is greater than 28% by weight (a compound fertilizer contains ammonium nitrate together with phosphate and/or potash).

A CAS Number (Chemical Abstracts Service Number) means the number assigned to the chemical by the Chemical Abstracts Service.

SCHEDULE 4**[See rule 2 (b) (c)]**

1. Factories involving in production, processing or treatment of organic or inorganic chemicals using for this purpose, among others:
 - (a) alkylation
 - (b) amination by ammonolysis
 - (c) carbonylation
 - (d) condensation
 - (e) dehydrogenation
 - (f) esterification
 - (g) halogenation & manufacture of halogens
 - (h) hydrogenation
 - (i) hydrolysis
 - (j) oxidation
 - (k) polymerization
 - (l) sulphonation
 - (m) desulphurization, manufacture and transformation of sulphur-containing compounds.
 - (n) nitration and manufacture of nitrogen-containing compounds
 - (o) manufacture of phosphorous-containing compounds
 - (p) formulation of pesticides and of pharmaceutical products
 - (q) distillation
 - (r) extraction
 - (s) solvation
 - (t) mixing
2. Factories involving in distillation, refining or other processing of petroleum or petroleum products.
3. Factories involving in total or partial disposal of solid or liquid substances by incineration or chemical decomposition.
4. Factories involving in production, processing, use or treatment of energy gases, for example, LPG LNG, SNG.
5. Factories involving in dry distillation of coal or lignite.

6. Factories involving in production of metals or non-metals by a wet process or by means of electrical energy.

SCHEDULE 5**[See rule 3 (2) (3)]****Safety Data Sheet**

1. IDENTITY OF MATERIAL			
Product Name		Chemical Designation	
Trade Name		Synonyms	
Formula	Label: Category	Chemical Abstracts Service Number	UN Number
Regulated Identification	Shipping Name Codes/Label	HAZCHEM CODE	
	Hazardous Waste Identification Number		
Hazardous Ingredients		Chemical Abstracts Service Number	
1.			
2.			
3.			
4.			
2. PHYSICAL AND CHEMICAL PROPERTIES			
Physical State: (Gas-, Liquid-, Solid-)	Boiling Point in degree C	Vapour Pressure at 35 degree C- mm Hg	
Appearance	Melting/Freezing Point in degree C	Evaporation rate at 30 degree C	
Odour	Vapour Density (air=1)	Solubility in water at 30 degree C	
Others (corrosivity etc.)	Specific Gravity (Water=1)	PH	

3. FIRE AND EXPLOSIVE HAZARDS DATA

Explosion/Flammability	Flash Point (deg.) C	Lower Explosive Limit %	Autoignition Temp. degree C
	Flash Point (deg.) C	Upper Explosive Limit %	Transport Dangerous Goods Flammability (Classification)

4. REACTIVE HAZARDS

Stability to	Impact	(Hazardous Combustion Products)
	Static Discharge	(Hazardous Decomposition products)
	Reactivity	(Conditions to avoid)
Hazardous Polymerisation	May/May not occur	(Condition to avoid)
Incompatibility	(Materials to avoid)	

5. HEALTH HAZARD DATA

Routes of Entry: (Inhalation, skin, mucuous membranes and eye contact and ingestion)

Effect of Exposure/Symptoms:

Lethal dose 50 (in rat) (Orally or percutaneous absorption) (mg/Kilogram body weight)	Lethal Concentration 50 (in rat) (mg/l)/4 hour.
Permissible Exposure	ppm mg/cu. m
Threshold Limit Value (TLV) of ACGIH	ppm mg/cu. m

Emergency Treatment

6. HAZARD SPECIFICATION

NFPA Hazard signal	Health	Flammability	Stability	Special
Known Hazards				
Combustible Liquid		Water Reactive Material	Irritant	
Flammable Material		Oxidiser	Sensitizer	

Pyrophoric Material	Organic Peroxide	Carcinogen
Explosive Material	Corrosive Material	Mutagen
Unstable Material	Compressed Gas	Others (specify)

7. SAFE USAGE DATA

Ventilation	General/Mechanical
	Local Exhaust
Protective Equipment Required	Eyes (specify)
	Respiratory (specify)
	Gloves (specify)
	Clothing (specify)
	Others (specify)
Precautions	Handling & Storage
	Others (specify)

8. EMERGENCY RESPONSE DATA

Fire	Fire Extinguishing Media
	Special Procedures
	Unusual Hazards
Exposure (inhalation, skin and eye contact, ingestion)	First Aid Mezasures
Spills	Steps to be taken
	Waste Disposal Method

9. ADDITIONAL INFORMATION

10. SOURCES USED

Reference to books, journals, etc.

11. MANUFACTURER/SUPPLIER DATA

Firm's Name	Standard packing
Mailing Address	
Telephone Number	
Telex Number	Other
Telegraphic Address	Other
Contact Person In Emergency	Emergency Tel In Transit Areas
Acronyms and Glossary of terms:	
CAS: Chemical Abstracts Service	
UN Number: United Nations Number	
HAZCHEM Code: Emergency Action Code (EAC), allocated by the Joint committee of Fire Brigade Operations, UK.	
TDG Flammability: Transport of Dangerous Goods – Flammability Classification by United Nations	
NFPA: National Fire Protection Association, USA	
Lethal dose 50 and Lethal Concentration 50 represent the dose in mg/Kilogram of body weight and the Concentration I mg/1 for 4 hours having lethal effect on 50 of the animals (rats) treated	
PEL: Permissible Exposure Limit as laid down in the statutes	
TLV: Threshold Limit Value as laid down by the American Conference of Governmental Industrial Hygienists, (ACGIH), USA	
STEL: Short Term Exposure Limit as laid down in the statutes or by the ACGIH	
GUIDELINES:	
All efforts should be made to fill in all the columns. No column should be left blank. In case any significant information regarding hazard of a chemical is available, it shall be added to the Safety Data Sheet as specified in Schedule 5 as soon as practicable.	

SCHEDULE 6**[(See rule 6 (1)]****INFORMATION TO BE FURNISHED REGARDING NOTIFICATION OF A
MAJOR ACCIDENT**

Report Number of Particular Accident

1. General data			
(a)	Name of the site		
(b)	Name and address of the occupier (Also state the telephone/telex number)		
(c)	(i)	Registration number	
	(ii)	Licence number (As may have been allotted under any statute applicable to the site, e.g. the Factories Act)	
(d)	(i)	Nature of industrial activity (Mention what is actually manufactured stored etc.)	
	(ii)	National Industrial Classification 1987 at the four digit level.	
2. Type of major accident			
Explosion		Fire	Emission of hazardous chemical
3. Description of the major accident			
(a)	Date, Shift and hour of the accident		
(b)	Department/Section and exact place where the accident took place.		
(c)	The process/operation under taken in the Department/Section where the accident took place. (Attach a flow chart if necessary).		

(d)	The circumstances of the accident and the hazardous chemical involved	
4.	Emergency measures taken and measures envisaged to be taken to alleviate short-term effects of the accident	
5.	Causes of the major accident known (to be specified) Not known Information will be supplied as soon as possible.	
6.	Nature and extent of damage	
(a)	Within the establishment casualties	Killed Injured Poisoned
(i)	- persons exposed to the major accident	
(ii)	- material damage	
(iii)	- damage is still present	
(iv)	- danger no longer exists	
(b)	Outside the establishment	
(i)	- Casualties	Killed Injured Poisoned
(ii)	- persons exposed to the major accident	

(iii)	- material damage	
(iv)	- damage to environment	
(v)	- damage is still present	
(vi)	- danger no longer exists	
7.	Data available for assessing the effects of the accident on persons and environment	
8.	Steps already taken or envisaged	
	(a) To alleviate medium or long term effects of the accident.	
	(b) To prevent recurrence of similar major accident.	
	(c) Any other relevant information.	

SCHEDULE 7

[See rule 8(1)]

INFORMATION TO BE FURNISHED FOR THE NOTIFICATION OF SITES

Information to be furnished for the Notification of Site.

Particulars to be included in a notification of site.

1. The name and address of the occupier making the notification.
2. The full postal address of the site where the notifiable industrial activity will be carried out.
3. The area of the site covered by the notification and of any adjacent site, which is required to be taken into account by virtue of Schedule 2(b) and Schedule 3(b).
4. The date on which it is anticipated that the notifiable industrial activity will commence or if it has already commenced a statement to that effect.
5. The name and maximum quantity liable to be on the site of each hazardous chemical for which notification is being made.
6. Organisation structure, namely, organisation diagram for the proposed industrial activity and set up for ensuring safety and health.
7. Information relating to the potential for major accidents, namely;
 - (a) Identification of major accident hazards.
 - (b) The condition of events, which could be significant in bringing one about.
 - (c) A brief description of the measures taken.
8. Information relating to the site namely; -
 - (a) A map of the site and its surrounding area to a scale large enough to show any features that may be significant in the assessment of the hazard or risk associated with the site:
 - (i) area likely to be affected by the major accident
 - (ii) population distribution in the vicinity.
 - (b) A scale plan of the site showing the location quantity of all significant inventories of the hazardous chemicals;
 - (c) A description of the processes or storages involving the hazardous chemicals, the maximum amount of such a hazardous chemical in the

given process or storage and an indication of the conditions under which it is normally held;

(d) The maximum number of persons likely to be present on site.

9. The arrangement for training of workers and equipment necessary to ensure safety of such workers.

SCHEDULE 8**[See rule 10 (1)]****Information to be furnished in a Safety Report**

1. The name and address of the person furnishing the information.
2. Description of the industrial activity, namely:
 - (a) Site,
 - (b) Construction design,
 - (c) Protection zones (explosion protection, separation distances)
 - (d) Accessibility of plant.
 - (e) Maximum number of persons working on the site and particularly of those persons exposed to the hazard
3. Description of the processes, namely;
 - (a) Technical purpose of the industrial activity,
 - (b) Basic principles of the technological process,
 - (c) Process and safety related data for the individual process stages,
 - (d) Process description,
 - (e) Safety –related types of utilities.
4. Description of the hazardous chemicals, namely-
 - (a) Chemicals (quantities, substance data on physical and chemical properties, safety-related data on explosive limits, flash-point, thermal stability, toxicological data and threshold limit values, lethal Concentrations),
 - (b) The form in which the chemicals may occur or into which they may be transformed in the event of abnormal conditions,
 - (c) The degree of purity of the hazardous chemical.
5. Information on the Preliminary Hazard Analysis, namely;
 - (a) Type of accident,
 - (b) System elements or foreseen events that can lead to a major accident,
 - (c) Hazards.
 - (d) Safety relevant components.

6. Description of safety relevant units, among others;
 - (a) Special design criteria,
 - (b) Controls and alarms,
 - (c) Pressure relief systems,
 - (d) Quick-acting valves,
 - (e) Collecting tanks/dump tanks,
 - (f) Sprinkler systems,
 - (g) Fire protection.
7. Information on the hazard assessment, namely
 - (a) Identification of hazards,
 - (b) The causes of major accidents
 - (c) Assessment of hazards according to their occurrence frequency,
 - (d) Assessment of accident consequences,
 - (e) Safety systems,
 - (f) Known accident history.
7. Description of information on organisational systems used to carry on industrial activity safety, namely-
 - (a) Maintenance and inspection schedules,
 - (b) Guidelines for the training of personnel,
 - (c) Allocation and delegation of responsibility for plant safety
 - (d) Implementation of safety procedures.
9. Information on assessment of the consequences of major accidents, namely;
 - (a) Assessment of the possible release of hazardous chemicals or of energy,
 - (b) Possible dispersion of released chemicals,
 - (c) Assessment of the effects of the releases (Size of the affected area, health effects, property damage),
10. Information on the mitigation of major accidents, namely;
 - (a) Fire brigade;
 - (b) Alarm systems;
 - (c) Emergency plan containing system of organisation used to fight the emergency, the alarm and the communication routes,
 - (d) Coordination with the District Collector or the District Emergency Authority and its off-site emergency plan,

- (e) Notification of the nature and scope of the hazard in the event of an accident.
- (f) Antidotes in the event of a release of a hazardous chemical.

SCHEDULE 9**[See rule 13(1)]****DETAILS TO BE FURNISHED IN THE ON-SITE EMERGENCY PLAN**

- 1.** Name and address of the person furnishing the information.
- 2.** Key personnel of the organisation and responsibilities assigned to them in case of an emergency
- 3.** Outside organisations if involved in assisting during on-site emergency.
 - (a) Type of accidents.
 - (b) Responsibility assigned.
- 4.** Details of liaison arrangement between the organisations.
- 5.** Information on the preliminary hazard analysis.
 - (a) Type of accidents.
 - (b) System elements or events that can lead to a major accident.
 - (c) Hazards.
 - (d) Safety relevant components.
- 6.** Details about the site:
 - (a) Location of dangerous substances.
 - (b) Seat of key personnel.
 - (c) Emergency control room
- 7.** Description of hazardous chemicals at plant site:
 - (a) Chemicals (Quantities and toxicological data).
 - (b) Transformation if any, which could occur.
 - (c) Purity of hazardous chemicals.
- 8.** Likely dangers to the plant.
- 9.** Enumerate effects of;
 - (i) Stress and strain caused during normal operation;
 - (ii) Fire and explosion inside the plant and effect if any, of fire and explosion out side.
- 10.** Details regarding.
 - (i) warning, alarm and safety and security systems.

- (ii) alarm and hazard control plans in line with disaster control and hazard control planning, ensuring the necessary technical and organizational precautions;
 - (iii) Reliable measuring instruments, control units and servicing of such equipments.
 - (iv) Precautions in designing of the foundation and load bearing parts of the building.
 - (i) continuous surveillance of operations.
 - (ii) maintenance and repair work according to the generally recognised rules of good engineering practices;
- 11.** Details of communication facilities available during emergency and those required for an off-site emergency.
- 12.** Details of fire fighting and other facilities available and those required for an off-site emergency.
- 13.** Details of first aid and hospital services available and its adequacy.

RAJ KUMAR
Financial Commissioner and Principal Secretary to
Government, Haryana, Labour Department.

Endst No: 11/35/2004 -4 Lab. Dated: 24.08.2009

A copy is forwarded to the Controller, Printing and Stationery Department, Haryana, Chandigarh with the request that the above notification may be published in Haryana Government (Extra Ordinary) Gazette positively and 250 printed copies thereof may be supplied to this Department.

2. This draft of notification has been got vetted from Legal Remembrancer and Secretary to Government, Haryana, Law and Legislative Department vide their U.O. No. 587.Leg.II(21)B/2009/273, dated 25.02.2009.

SOL-
Superintendent Labour

for Financial Commissioner and Principal Secretary to
Government, Haryana, Labour Departments.

Endst No: 11/35/2004 -4 Lab. Dated: 24.08.2009

A copy is forwarded to the Labour Commissioner-cum-Chief Inspector of Factories, Haryana, Chandigarh for information and necessary action.

R. D. Lal
Superintendent, Labour

for Financial Commissioner and Principal Secretary to
Government, Haryana, Labour Departments.