Punjab Control of Industrial Major Accident Hazards (Amendment) Rules, 2002

RULES

0. **Short title and commencement**-

   i) These rules may be called the Punjab Control of Industrial Major Accident Hazards (Amendment) Rules, 2002
   ii) They shall come into force on and with effect from the date of their publication in the official Gazette.

1. **Definition-** In these rules unless the context otherwise requires.

) "Authority" means an authority or person appointed & designated by the State Government as District Emergency Authority.

   b) Omitted

   c) "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 this Schedule; or

      (ii) any chemical listed in Column 2 of Schedule 2;

      (iii) any chemical listed in Column 2 of Schedule 3;

   d) "industrial activity" means-

      (i) 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; or

      (ii) isolated storage; or

      (iii) a pipe line;

   e) " isolated storage" means a storage where no manufacturing process other than pumping of hazardous chemical is carried out and that storage involves at least a quantity of that chemical set out in Schedule 2, but does not include storage associated with in factory specified in Schedule 4 on the same site.

   f) "major accident" means an incident involving loss of life inside or outside the site or ten or more injuries inside and / 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 equipments leading to stoppage of process or adverse effect to the environment;

g) "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;

h) "Schedule" means Schedule appended to these rules;

i) "Site" means any location where hazardous chemicals are manufactured or processed, stored, handled, used or disposed off and includes the whole of an area under the control of an occupier ;

j) Words and expressions not defined in these rules but defined or used in the Factories Act, 1948 and in any other rules made thereunder have the same meaning, as assigned therein.

2. **Collection, Development and Dissemination of Information.** (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 and is listed in Column 2 of Part II of this 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 a detailed information specified on hazardous chemicals in the form of a material safety data sheet as indicated in Schedule 5 and the information so obtained shall be accessible to workers upon request for reference purpose.

(3) The occupier, while obtaining or developing a safety data sheet as specified in sub-rule (2) shall ensure that the information is recorded accurately and reflects the scientific evidence used in making the hazards determination and 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 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.

3-A Duties of Inspector: - 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 Institutes and Ministry of Labour, Government of India;

(c) enforce direction and procedures in respect of industrial activities or isolated storage covered under Factories Act, 1948 and in respect of pipelines up to a distance of 500 meters from the outside of perimeter of the factory, regarding-

( ) Notification of major accidents as per sub rule (1) and (2) of rule 5;
(i) Notification of sites as per rules 7 and 8;
(ii) Safety Reports and Safety Audits as per rules 10 to 12; and
(iii) Preparation of on-site emergency plans as per rule 13 and involvement in preparation of off-site plans in consultation with District Collector or District Emergency Authority.

3. **General responsibility of the occupier;-(**1) This rule shall apply to,-

(a) an industrial activity, in which a hazardous chemical, is or may be involved; and

(b) isolated storage in which a threshold quantity of a hazardous chemical listed in Column 2 of schedule 2 which is equal to or more than the threshold quantity specified for that chemical in Column 3 of the said schedule , is involved.

(2) An occupier in term of Sub-rule (I) 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 o limit their consequences to persons and the environment; and

(ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safely and health.

4. **Notification of Major accidents.;-**(1) Where a major accident occurs on a site, the occupier shall forthwith notify the Inspector and the Chief Inspector of the accident, and furnish thereafter to the Inspector and Chief Inspector a report relating to the accident in instalments, if necessary, in the form specified in Schedule 6.

(2) The Inspector and the 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 the steps taken to avoid any repetition of such occurrence on a site.

(4) The Inspector and the Chief Inspector shall compile information regarding the major accidents and make available 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 needs to be rectified to avoid major accidents.

5. **Industrial activities or isolated storage to which rules 7,8,10 to 13 and 15 shall apply:-**
(a) the provisions of rules 7,8,13 and 15 shall apply to an industrial activity, other than isolated storage in which there is chemical listed in column 2 of Schedule 3, which is equal to or more than the threshold quantity specified in the entry for that chemical in column 3;.

(b) the provisions of rules 10,11 and 12 shall apply to an industrial activity, other than isolated storage, in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 3 which is equal to or more than the threshold quantity specified for that chemical in Column 4 of said Schedule;

(c) the provisions of rules 7and 8 shall apply to an isolated storage in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 3 which is equal to or more than the

threshold quantity specified for that chemical in Column 3 of said Schedule; and

( ) the provisions of rules 10,11,12,13 and15 shall apply to an 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 for that chemical in Column 4 of the said Schedule.

2) sub rule (2) shall be omitted.

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

(2) The Chief Inspector within sixty days from the date of receipt of the report in accordance with this sub-rule(1) 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.

8 Updating of the site notification :- Where an activity has been reported in accordance with sub-rule (1) of rule 7 and the occupier makes a change in it (including an increase or decrease in the maximum quantity of a hazardous chemical to which this rule applies which is or is liable to be at the site or in the pipeline or at the cessation of the activity) which effects 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.

9 In the said rule 9 shall be omitted.

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

(2) After commencement of these rules, the occupiers of both the new and existing industrial activities or isolated storage shall arrange to carry out safety audit by competent agency to be accredited by an accreditation board to be constituted by the Ministry of Labour, Government of India 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; and

(c) in the year when external audit is carried out, internal audit need not be carried out.

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

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

(2) Where an occupier has made a report in accordance with sub-rule (1) and rule 10 and that industrial activity or isolated storage is continuing the occupier shall within a period of three years from the date of the last such report make a further report which shall regard in particular to new technical knowledge which has affected the particulars in the previous report relating to safely and hazard assessment, and shall within a period of thirty 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.

12 Requirement for further information to be sent to Inspector and the Chief Inspector;- (1) Where in accordance with rule 10 and 11, an occupier has sent a safety report and safety report relating to an industrial activity or isolated storage to the Inspector and the Chief Inspector, the Inspector and the Chief Inspector may, by a notice served on the occupier, require him to provide such additional information as is specified in the notice and the occupier shall send that information to the Inspector and the Chief Inspector within ninety days.

13 Preparation of on-site emergency plan by the occupier;- (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 8-A 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), 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);

(a) before the commencement of industrial activity or isolated storage; and

(b) with in ninety days of coming into operation of these rules in case of an existing industrial activity or isolated storage.

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

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

14. Preparation of off-site emergency plan by the authority; Omitted

15 Information to be given to persons liable to be affected by a major accidents;

(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 hazards; and

(b) the safety measures and the "Do's' and 'Don'ts" which should be adopted in the event of a major accident

(2) The occupier shall take the steps required under sub-rule (i) to inform persons about an industrial activity or isolated storage before that activity is commenced, except that in the respect of an existing industrial activity or isolated storage , the occupier shall comply with the requirements of sub- rule (I) within ninety days of coming into operation of these rules.

16 Disclosure of information; Where for the purpose of evaluating information notified under rule 5 or 7,8,10 to13 and 15, the Inspector and the Chief Inspector discloses that information to some other person that other person shall not use that information for any purpose except for the purpose of the Inspector or the Chief Inspector disclosing 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.

17 Improvement Notice ;- Omitted

SCHEDULE I

[See rule 2(c)(i), 4(1)(a), 4(2), 17 and 18]
Indicative Criteria and List of Chemicals
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 accidents hazards.

S.No.	Degree of Toxicity	Medium lethal dose by the oral route (oral toxicity) LD50 (mg/kg) body weight of test animals	Medium lethal dose by the dermal route (dermal toxicity) LD 50 (mg/kg) body weight of test animals	Medium lethal concentration by inhalation route (four hours) LC 50 (mg/l) inhalation on test animals
1	Extremely toxic	1 - 50	1 - 200	0.1 - 0.5
2	Highly toxic	51 - 500	201 - 2000	0.5 - 2.0

(b) Flammable chemicals:

(i) Flammable gases; chemicals 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;

(ii) highly flammable liquids: chemicals which have a flash point lower than 23°C and the boiling point of which at normal pressure is above 20° C;

(iii) flammable liquids: chemicals which have a flash point lower than 65°C- and which remain liquids under pressure, where particular processing conditions, such as high pressure and high temperature, may create major accident hazards.

(c) Explosives:

Chemicals which may explode under the effect of flame, heat or photo-chemical conditions or which are more sensitive to shocks or friction than dinitrobenzene.

PART II
LIST OF HAZARDOUS AND TOXIC CHEMICALS

Sl. No.	Name of the Chemical
1	Acetone
2	Acetone Cynohydride
3	Acetyle Chloride
4	Acetylene (Ethyne)
5	Acrolein (2-Propenal)
6	Acrylonitrile
7	Aldicarb
8	Aldrin
9	Alkyl Phthalate
10	Allyl Alcohol
11	Allylamine
12	Alpha Naphthyl Thiourea (Antu)
13	Aminodiphenyl-4
14	Aminophenol-2
15	Amiton
16	Ammonia
17	Ammonium Nitrate
18	Ammonium Nitrates in fertilizers
19	Ammonium Sulfamate
20	Anabasine
21	Aniline
22	Anisidine-p
23	Antimony and Compounds
24	Antimony Hydride (Stibine)
25	Arsenic Hydride (Arsine)
26	Arsenic Pentoxide, Arsenic (v) Acid, and Salts
27	Arsenic Trioxide, Alsenious (iii) Acids and Salts
28	Asbestos
29	azinophos-Ethyl
30	Azinphos-Methyl
31	Banum Azide
32	Benzene
33	Benzidine
34	Benzidine Salts

35 Benzoquinone
36 Benzoyl Chloride
37 Benzoyl Peroxide
38 Benzyl Chloride
39 Benzyl Cynide
40 Beryllium (Powders Compound)
41 Biphenyl
42 Bis (2-Clzloromethyl) Ketone
43 Bis (2, 4, 6-Trinitrophynile) Amine
44 Bis (2, Chloroethyle sulphide)
45 Bis (Chloromethyl) ether
46 Bis (tert-Butyl peroxy) Butane-2, 2
47 Bis (tert-Butyl peroxy) Cyclohexane-11
48 Bis-1, 2 Tribromophenoxy Ethane
49 Bis phenol
50 Boron and Compounds
51 Bromine
52 Bromine Pentafluoride
53 Bromoform
54 Butoadine
55 Butane
56 Butanethiol
57 Butanone-2
58 Butoxy Ethanol
59 Butyl Glycidal Ether
60 Butyl Peroxy acetate, tert
61 BUtyL Peroxyisobutyrate, tert
62 Butyl Peroxyisopropyl Carbonate, tert
63 Butyl Peroxymaleate, tert
64 Butyl Peroxypivalate, tcrt
65 Butyl Vinyl Ether
66 Buty-n-Mercaptan
67 Butylamine
68 C-9, Aromatic Hydrocarbon Fraction
69 Cadmium and Compounds
70 Cadmium Oxide (fumes)
71 Calcium Cynicde
72 Captan
73 Captofol
74 Carbaryl (Sevin)

75 Carbofuran
76 Carbon Disulphide
77 Carbon Monoxide
78 Carbon Tetrachloride
79 Carbophenothion
80 Cellulose Nitrate
81 Chlorats (used in explosives)
82 Chlordane
83 Chlorfenvinphos
84 Chlorinated Benzenes
85 Chlorine
86 Chlorine Di Oxide
87 Chlorine Oxide
88 Chlorine Trifluoride
89 Chloromequal Chloride
90 Chloroacetalchloride
91 Chloroacetaldehyde
92 Chloroanilin-2
93 Chloroaniline4
94 Chlorobenzene
95 Chlorodiphenyl
96 Chloropoxypropane
97 Chloroethanol
98 Chloroethyl
99 Chloroformate
100 Chorolfluorocarbons
101 Chloroform
102 Chloroformyl-4, Merpholine
103 Chloromethane
104 Chloromethyl Ether
105 Chloromethyl Methyl Ether
106 Chloronitrobenzene
107 Chloroprene
108 Chlorosulphonic Acid
109 Chlorotrinitro benzene
110 Chloroxuron
111 Chromium and Compounds
112 Cobalt and Compounds
113 Copper and Compounds
114 Coumafuryl

115 Coumaphos
116 Coumateralyl
117 Cresols
118 Cumidine
119 Cumene
120 Cynophos
121 Cynothoate
122 Cyanuric Fluoride
123 Cyclohexane
124 Cyclohexanol
125 Cyclohexane
126 Cycloheximide
127 Cyclopentadinene
128 Cyclopentane
129 Cyclotetramethylenetrinitramine
130 Cyclotriethylene Trinitramine
131 DDT
132 Dicarbomodiphenyl Oxide
133 Demeton
134 Di-Isobutyl Peroxide
135 Di n-Propyl Peroxydicarbonate
136 Di-sec-Butyl Peroxydicarbonate
137 Dalifos Mazodinitrophewl
138 Diszomethane
139 Dibenzyl Peroxydicarbonate
140 Diehloroaeetylene
141 Diehlorobenzene-0
142 Dichlorobenzene-2
143 Di-chloroethane
144 Dichlorethyl Ether
145 Dichlorophenol-2, 4
146 Dichlorophenol-2, 6
147 Dichlorophenoxy Acetic Acid, -2,4 (2,4-D)
148 Dichloropropane-1, 2
149 Diehlorosalicylic Acid, -3,5
150 Dichlorovos (DDVP)
151 Dicrotophos
152 Dieldrin
153 Diepoxybutane
154 Diethyl Peroxydicarbonate

155 Diethyl Glycol Dinitrate
156 Diethylene Triarnine
157 Diehyleneglycol Butyl Ether/Diethyleteglycol Butyl Acetate
158 Diethylenetriarnine (DETA)
159 Diglycidyl Ether
160 Dihydroperoxypropane, -2,2
161 Diisobutyryl Peroxide
162 Dimethoate
163 Dimethyl Phosphoramidocynidic Acid
164 Dimelhyl Phthalate
165 Dimethylcarbonyl
166 Dimethylnitrosamine
167 Dinitrophenol, Salts
168 Dinitroluene
169 Dinitro-o-Cresol
170 Dioxane
171 Dioxathion
172 Dioxalane
173 Diphacinone
174 Diphosphoramide Octamethyl
175 Dipropylene Glycolmethylether
176 Disulfoton
177 Endosulfan
178 Endrin
179 Epiehlorohydrine
180 EPN
181 Epoxypropane, 1, 2
182 Ehion
183 Ethyl Carbarnate f
184 Ethyl ether
185 Ethyl Hexanol, -2
186 Ethyl Mercaptan
187 Ethyl Methacrylate
188 Ethyl Nitrate
189 Ethylamine
190 Ethylene
191 Ethylene Chlorohydrine
192 Ethylene Diamine
193 Ethylene Dibromide
194 Ethylene Dichloride

195 Ethylene Glycol Dinitrate
196 Ethylene Oxide
197 Ethyleneimine
198 Ethylthiocynate
199 Fensulphothion
200 Fluenetil
201 Fluoro, -4,2-Hydroxybutyric Acid and Salts, Esters, Amides
202 Fluoroacetic Acid and Salts, Esters, Amides
203 Fluorobutyric Acid, -4, and Salts, Esters, Amides
204 Fluorocrotonic Acid, -4, and Salts, Esters, Amides
205 Formaldehyde
206 Glyconitrite (Hydroxyacetonitrite)
207 Guanyl, -1, 4 Nitrosaminoguanyl-1-Tetrazenc
208 Heptachlor
209 Haxachloro Cyclopentadiene
210 Hexachlorocyclohexane
211 Hexachlorocy cloamethane
212 Hexachlorodibenzo-p-Dioxin, -1, 2, 3, 7, 8, 9
213 Hexafluoropropene
214 Hexamethylphosphoramide
215 Hexamethyl, -3, 3, 6, 6, 9, 9, -1, 2, 4, 5-Tetroxacyclononane
216 Hexamethylenediamine
217 Hexane
218 Hexanitrosstibene, -2, 2, 4, 4, 6, 6,
219 Hexavalent Chromium
220 Hydrazine
221 Hyrazine Nitrate Hydrochloric Acid
222 Hydrogen
223 Hydrogen Bromide (Hydrobromic Acid)
224 Hydrogen Chloride (Liquified Gas)
225 Hydrogen Cynide
226 Hydrogen Fluoride
227 Hydrogen Selenide
228 Hydrogen Sulphide
229 Hydroquinone
230 Iodine
231 Isobenzan
232 Isodrin
233 Isophorone Diisocynate
234 Isopropyl Ether

235 Juglone (5-Hydroxynaphthalene-1, 4-Dione)
236 Lead (inorganic fumes & dusts)
237 Lead 2, 4, 6 -Trinitroresorcinoxide (Lead Styphnate)
238 Lead Azide
239 Leptophos
240 Lindane
241 Liquified Petroleum Gas (LPG)
242 Maleic Anhydride
243 Manganese & Compounds
244 Mercapto Benzothiawle
245 Mercury Alkyl
246 Mercury Fulminate
247 Mercury Methyl
248 Methacrylic Anhydride
249 Methacrylonitrite
250 Methacryloyl Chloride
251 Methamidophos
252 Methanesuphonyl Fluoride
253 Methanethiol
254 Methoxy Ethanol (2-Methyl Cellosive)
255 Methoxy ethyl mercuric Acetate
256 Methyl Acrylate
257 Melhyl Alcohol
258 Methyl Amylketone
259 Methyl Bromide (Bromomethane)
260 Methyl Chloride
261 Methyl Chloroform
262 Methyl Cyclohexene
263 Methyl Ethyl Ketone Peroxide
264 Methyl Hydrazine
265 Methyl Isobutyl Ketone
266 Methy Isobutyl Ketone Peroxide
267 Mthyl Isocycnate
268 Methyl Isothiocynate
269 Methyl Mercaptian
270 Methyl Methacrylate
271 Methyl Parathion
272 Methyl Phosphonic Dichloride
273 Methyl-N, 2, 4, 6,-Trinitroaniline
274 Methylene Chloride

275 Methylenebis, -4, 4, (2-Chloroaniline)
276 Methyltrichlcrosilane
277 Mevinphos
278 Molybdenum & Compounds
279 N-Methyl-N, 2, 4, 6-N-Tetranitroanilin
280 Naptha (Coal Tar)
281 Naphthylamine, 2
282 Nickel & Compounds
283 Nickel Tetracarbonyl
284 Noitroaniline-O
285 Nitroaniline-P
286 Nitrobenzene
287 Nitrochloroberizene-P
288 Nitrocyclohexane
289 Nitriothage
290 Nitrogen.Dioxide
291 Nitrogen Oxide
292 Nitrogen Trifluoride
293 Nitroglycerine
294 Nitrophenol-P
295 Nitropropane-1
296 Nitropropane-2
297 Nitrosodirnethylarnine
298 Nitrotolune
299 Octabrornophenyl Oxide
300 Oleurn
301 Oleylarnine
302 OO-Diethyl S-EthyIsulphonyImethyl phosbhorothioate
303 OO-Diethyl S-Ethylthiornethyl Phosphorothioate
304 OO-Diethyl S-Ethiomethyl'Phosphorathioate
305 OO-Diethyl S-1sopropyliniornethyl Phosphorolithioate
306 OO-diethyl S-Propylthiornethyl Phosphorodithioate
307 Oxyarnyl
308 Oxydisulioton
309 Oxygen (Liquid)
310 Oxygen Difluoride
311 Ozone
312 Paraoxon (Diethyl 4-Nitrophenyl Phosphate)
313 Paraquat
314 Parathion

315 Parathion Methyl
316 Paris green (Bis Aceto Hexametaatsinito Tetracopper)
317 Pentaborane
318 Pentabromodiphenyl Oxide
319 Pentabromophenol
320 Pentachloro Naphthalene
321 Pentachloroethane
322 Petachlorophenol
323 Pentacrythritol Tetranitrate
324 Pentane
325 Peracetic Acid
326 Perchloroethylene
327 Perchlorornethyl Mercaptan
328 Pentanone, 2,4-Methyl
329 Phenol
330 Phenyl Glycidal Ether
331 Phenylene p-Diarnine
332 Phenylmercury Acetate
333 Phorate
334 Phosacetim
335 Phosalone
336 Phosfolan
337 Phosgene (Carbonyl Chloride)
338 Phosmet
339 Phospamidon
340 Phosphine (Hydrogen Phosphide)
341 Phosphoric Acid and Esters
342 Phosphoric Acid, Bromethyl Bromo (2,2-dimethylpropyl) Bromoethyl Ester
343 Phosphoric Acid, Bromoethyl Bromo (2,2-Dimethylpropyl) Chlorethyethyl Ester
344 Phosphoric Acid, Chlorocthyl Bromo (2,2-Dimethoxylpropyl) Chloroethyl Ester
345 Phosporous & Compounds
346 Phostalan Pircic Acid (2,4,6-Trinitrophenol)
347 Polybrominaled Biphenyl
348 Potassium Arsenite
349 Potassium Chlorate
350 Promurit (1-(3, 4-Dichlorophenyl)-3-Triazenethiocarboxamide)
351 Propanesultone-1, 3

352 Propen,-1, 2-Chloro-1,3-Diol-Diacetate
353 Propylene Dichloride
354 Propylene Oxide
355 Propyleneimine
356 Pyrazoxon
357 Selenium Hexafluoride
358 Semicarbazide Hydrochloride
359 Sodium Arsenite
360 Sodium Azide
361 Sodium Chlorate
362 Sodium Cynide
363 Sodium Picramate
364 Sodium Selenite
365 Styrene, 1, 1, 2, 2-Tetrachloroethane
366 Sulfotep
367 Sulphur Dichloride
368 Sulphur Dioxide
369 Sulphur Trioxide
370 Sulphuric Acid
371 Sulphoxide, 3-Chloropropyloctyl
372 Tellurium
373 Tellurium Hexafluoride
374 Tepp
375 Terbufos
376 Tetrabromobisphenol-A
377 Tetrachloro, 2, 2, 5, 6, 2, 5-Cyclohexadiene-1, 4-Dione
378 Tetrachlorodibenzo-p Dioxin, 2, 3, 7, 8 (TCDD)
379 Tetraethyl Lead
380 Tetrafluoroethane
381 Tetramethylenedisulphotetramine
382 Tetramethyl Lead
383 Tetramnitromethane
384 Thalium & Compounds
385 Thionzin
386 Thionyl Chloride
387 Tirpate
388 Toluene
389 Toluidien-2, 4 Diisocynate
390 Toluidiene-O
391 Toluene 2, 6-Diisocynate

392 Trans-1, 4-Chlorobutene
393 Tri, -1 (Cyclohexyl) Stannyl-1H, 1, 2, 4-Trazole
394 Triamino, -1, 3, 5, 2, 4, 6-Trinitrobenzene
395 Tribromophenol, 2, 4, 6
396 Trichloro Acetyl Chloride
397 Trichloro Ethane
398 Trichloro Naphthalene
399 Ttichloro (chloromethyl) Silane
400 Trichlorodichlorophenylsilane
401 Triochloroethane, l, l, l
402 Trichloroethyl Silane
403 Trichloroethylene
404 Trichloromethanesulphenyl Chloride
405 Trichlorophenol, 2, 2, 6
406 Trichlorophenol, 2, 4, 5
407 Triethylamine
408 Triethylenemelamine
409 Trimethyl Chlorosilane
410 Trimethylopropane Phosphite
411 Trinitroaniline
412 Trinitroanisole, 2, 2, 4, 6
413 Trinolrobenzene
414 Trinitrobenzoic Acid
415 Trinitrocresol
416 Trinitrophenetole, 2, 4, 6
417 Trinitroesorcinol, 2, 4, 6 (Styphnic Acid)
418 Trinitrotoluene
419 Triorthocressyl Phosphate
420 Triphenylin Chloride
421 Turpenline Uranium & Compounds
422 Vanadium & Compounds
423 Vinyl Chloride
424 Vinyl Fluoride
425 Warfarin
426 Xylene
427 Xylidine
428 Zinc & Compounds
429 Zirconium & Compounds

SCHEDULE 2

[(See rule 2(e)(ii), 4(1)(b), 4(2) (1) and 6(1)(b)]
Isolated storage at Installations other than those covered by Schedule 4

(a) The threshold quantities set out below relate to each installation or group of installations belonging to the same occupier where the distance between installation 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 metres.

(b) For the purpose of determining the threshold quantity of 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 wh.ch is within 500 metres 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 a hovercraft used for transporting it.

Sl. No.	Chemicals	Threshold Quantities (tonnes)	
		For application of Rules 4, 5 and 7-9	For application of Rules 10 to 15
1	2	3	4
1	Acrylonitrile	350	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	25
6	Flammable gases as defined in Schedule 1, paragraph (b) (i)	50	300
7	Highly flammable liquids as defined in Schedule 1, paragraph (b) (ii)	10,000	100,000
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	5	50
15	Hydrogen Cynide	5	50
16	Carbon Disulphide	5	50
17	Uromine	50	500
18	Ethylene Oxide	5	501
19	Propylene Oxide	5	50
20	Z-Propenel(acrolein)	20	200
21	Bromo methane(Methyl Bromide)	20	200
22	Methyl isocynate	0.150	0.150
23	Tetra Ethyl Lead or Tetra methyl Lead	5	50
24	1-2, Dibromomethane(Ethylene di bromide)	5	50
25	Hydrogen Chloride	25	250
26	Diphenyl Methane Di-Isocynate (MDI)	20	200
27	Toluene Di-Isocynate (TDI)	10	100

(a) This applies to ammonium nitrate and mixtures of ammonium nitrates where the nitrogen content derived from the ammonium nitrate is grater than 28 per cent by weight and to aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater then 90 per cent by weight

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

SCHEDULE 3

[See rule 2(e) (iii), 5 and 6(1) (a)]

List of Hazardous Chemicals for Application of Rules 5 and 7 to 15

(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 is less than 500 metres.

(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 have control of the site, which is within 500 metres off 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

S.No.	Chemical	Threshold Quantity		CAS Number
		for application of Rules, 5, 7-9 and 13-15	for application of Rules 10-12	
1	2	3	4	5
GROUP 1-TOXIC SUBSTANCES				
1	Aldicarb	100 kg		116-06-3
2	4-Aminodiphenyl	1 kg		96-67-1
3	Amiton	1 kg		78-53-5
4	Anabasine	100 kg		494-52-0
5	Arseinc pentoxide, Arsenic (V) acid & salts	500 kg		
6	Arsenic trioxide, Arseius (III) acid & salts	100 kg		
7	Arsine (Arsenic hydride)	10 kg		7784-42-1
8	Azinphos-ethyl	100 kg		2642-71-9
9	Azinphos-melhyl	100 kg		86-50-0
10	Benzidine	1 kg		92-87-5

11	Benzidine salts	1 kg		
12	Beryllium (powders, compounds}	10 kg		
13	Bis (2-chloroethyl) sulphide	1 kg		505-60-2
14	Bis (chloromethyl) ether	1 kg		542-88-1
15	Carbophuran	100 kg		1563-66-2
16	Carbophenothion	100 kg		786-19-6
17	Chlorefenvinphos	100 kg		470-90-6
18	4-(Chloroformyl) morpholine	1 kg		15159-40-7
19	Chloromethyl methyl ether	1 kg		107-30-2
20	Cobalt (metal, oxides, carbonates, sulphides, as powders)	1 t		
21	Crimidine	100 kg		535-89-7
22	Cynthoate	100 kg		3734-95-0
23	Cycloheximide	100 kg		66-81-9
24	Demeton	100 kg		8065-48-3
25	Dialifos	100 kg		10311-84-9
26	OO-Diethyl S-ethylsulphinylmethyl phosphorothiate	100 kg		2588-05-8
27	OO-Diethyl S-ethylsulphonylmethyl phosphorothioate	100 kg		2588-06-9
28	OO-Dielhyl S-ethyllhiomethyl Phosphorothioate	100 kg		2600-69-3
29	OO-Diethyl S-isopropylthiomethyl phosphorodithioate	100 kg		78-52-4
30	OO-Diethyl S-propylthiomethyl phosphorodithioate	100 kg		3309-68-0
31	Dimefox	100 kg		115-26-4
32	Dimethylcarbamoyl chloride	1 kg		79-44-7
33	Dimethylnitrosamine	1 kg		62-75-9
34	Dimethyl phosphoramidocynicidic acid	1 t		63917-41-9
35	Diphacinone	100 kg		82-66-6
36	Disulfoton	100 kg		298-04-4
37	EPN	100 kg		2104-64-5
38	Ethion	100 kg		563-12-2
39	Fensulfothion	100 kg		115-90-2
40	Fluenetil	100 kg		4301-50-2

41	Fluroacetic acid	1 kg		144-49-0
42	Fluoroacetic acid, salts	1 kg		
43	Fluoroacelic acid, esters	1 kg		
44	Fluoroacetic acid, amides	1 kg		
45	4-Fluorobutyric acid	1 kg		462-23-7
46	4-FIuorobutyric acid, salts	1 kg		
47	4-Fluorobutyric acid, esters	1 kg		
48	4-Fluorobutyric acid, amides	1 kg		
49	4-Florocrotonic acid	1 kg		37759-72-1
50	4-Fluorocrotonic acid, salts	1 kg		
51	4-Fluorocrotonic acid, esters	1 kg		
52	4-Fluorocrotonic acid, amides	1 kg		
53	4-Fluoro-2-hydroxybutyric acid, amides	1 kg		
54	4-Fluoro-2-hydroxybutyric acid, salts	1 kg		
55	4-Fluoro-2-hydroxybutyric acid, esters	1 kg		
56	4-Fluoro-2-hydroxybutyric acid, amides	1 kg		
57	Glycolonitrile (Hydroxyacetonitrile)	100 kg		107-16-4
58	1, 2, 3, 7, 8, 9-Hexachlorodibenzo-p-dioxin	100 g		194-8-74-3
59	Hexamethylphosphoramide	1 kg		680-31-9
60	Hydrogen sclenide	10 kg		7783-07-5
61	Isobenzan	100 kg		297-78-9
62	Isodrin	100 kg		465-73-6
63	Juglone (5-Hydroxynaphithalene 1, 4 dione)	100 kg		481-39-0
64	4, 4-Methylenebis (2-chloroniline)	10 kg		101-14-4
65	Methyl isocynate	150 kg	150 kg	624-83-9
66	Mevinphos	100 kg		7786-34-7
67	2-Naphlhylamine	1 kg		91 -59-8
68	2-Nickcl (metal, oxides, carbonates, sulphides, as powders)	1 t		
69	Nickel tetracarbonyl	10 kg		13463-39-3
70	Oxygendisulfoton	100 kg		2497-07-6
71	Oxygen difuoride	10 kg		7783-41-7

72	Paraxon (Diethyl 4-nitsphenyl phosphate)	100 kg		311 -45-5
73	Parathion	100 kg		56-38-2
74	Parathion-methyl	100 kg		298-00-0
75	Pentaborane	100 kg		19624-22-7
76	Phorate	100 kg		298-02-2
77	Phosacetim	100 kg		4104-14-7
78	Phosgene (carbonyl chloride)	750 kg	750 kg	75-44-5
79	Phosphamidon	100 kg		13171-41-6
80	Posphine (Hydrogen phosphide)	100 kg		7803-51 -2
81	Promurit (1-(3, 4-dichlorophenyl)-3 triazenethiocarboxamide)	100 kg		5836-73-7
82	1, 3-Propanesultone	1 kg		1120-7t-4
83	1 -Propen-2-chloro- 1, 3-diol diacetate	10 kg		10118-72-6
84	Pyrazoxon	100 kg		108-34-9
85	Selenium hexafluoride	10 kg		7783-79-1
86	Sodium selenite	100 kg		10102-18-8
87	Stibine (Antimony hydride)	100 kg		7803-52-3
88	Sulfotep	100 kg		3689-24-5
89	Sulphur dichloride	1 t		10545-99-0
90	Tellurium hexanuroride	100 kg		7783-80-4
91	TEPP	100 kg		107-49-3
92	2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin (TCDD)	1 kg		1746-01 -6
93	Tetramethylenedisulphotetramine	1 kg		80-12-6
94	Thionazin	100 kg		297-97-2
95	Tirpate (2, 4-Dimethyl-l, 3-dilhiolane-2-carboxaldehyde O-methylcarbarnoyloxime)	100 kg		26419-8
96	Trichloromethanesulphenyl chloride	100 kg		594-42-3
97	1-Tri (cyclohexyl) stannyl-l H-1, 2,. 4-triazole	100 kg		41083-11-8
98	Triethylenemelamine	10 kg		51-18-3
99	Warfarin	100 kg		81-81-2
GROUP 2-TOXIC SUBSTANCES				
100	Acetonecyanohydrin (2-Cyanopropan-2-01)	200 t		75-86-5

101	Acrolein (2-Propenal)	20 t		107-02-8
102	Acrylonitrile	20 t	200 t	107-13-1
103	Allyl alcohol (Propen-1-01)	200 t		107-18-6
104	Alylamine	200 t		107-11-9
105	Ammonia	50 t	500 t	7664-41-7
106	Bromine	40 t		7726-95-6
107	Carbon disulphide	20 t	200 t	75-15-0
108	Chlorine	10 t	25 t	7782-fO 5
109	Dipneyl ethane di-isocynate (MDI)	20 t		101-68-8
110	Ethylene dibromide (1, 2-Dibromoethane)	5 t		106-93-4
111	Ethyleneimine	50 t		151-56-4
112	Formaldehyde (concentration 90%)	5 t		50-00 0
113	Hydrogen chloride (liquified gas)	25 t	250 t	7647-01-0
114	Hydrogen cynide	5 t	20 t	74-90-8
115	Hydrogen fluoride	5 t	50 t	7664-39-3
116	Hydrogen sulphide	5 t	50 t	7783-06-4
117	Methyl bromide (Bromomethane)	20 t		74-83-9
118	Nitrogen oxides	50 t		11104-93-1
119	Propylineimine	50 t		75-55-8
120	Sulphur dioxide	20 t	250 t	7446-09-5
121	Sulphur trioxide	15 t	75 t	7446-11-9
122	Tetraethyl lead	5 t		78-00-2
123	Tetramethyl lead	5 t		75-74-1
124	Toluene di-isocvnate (TDI)	10 t		584-84-9
				75-01-4
GROUP 3--HIGHLY REACTIVE SUBSTANCES				
125	Acetylene (ethyne)	5 t		74-86-2
126	a. Ammonium nitrate (1)	350 t	2500 t	6484-52-2
	b. Ammonium nitrate in form of fertiliser (2)	1250 t		
127	2 2-Bis (tert-butylperoxy) butane) (eoncentration 70%)	5 t		2167-23-9
128	1 I-Bis (tert-butylperoxy) cyclohexane (concentration 80%)	5 t		3006-86-8
129	tert-Butyl proxyacetate (concentration 70%)	5 t		107-71-1

130	Tert-Butyl peroxyisobutyrate (concentration-- 80%)	5 t		109-13-7
131	tert-Butyl peroxy isopropyl carbonate (concentration- 80%)	5 t		2372-21-6
132	tert-Butyl peroxymaleate (concentration- 80%)	5 t		1931-62-0
133	Tert-Butyl peroxypivalate (concentration 77%)	50 t		927-07-1
134	Dibenzyl peroxydicarbonate (concentration 90%)	5 t		2144-45-8
135	Di-sec-butyl peroxydicarbonate (concentration 80%)	5 t		19910-65-7
136	Diethyl peroxydicarbonate (concentration 30%)	50 t		14666-78-5
137	2, 2-dihydroperoxypropane (concentration 30%)	5 t		2614-76-08
138	Di-isobutyryl peroxide concentration 50%)	50 t		3437-84-1
139	Di-n-propyl peroxydicarbonate (concentration 80%)	5 t		16066-38-9
140	Ethylene oxide	5 t	50 t	75-21-8
141	Ethyl nitrate	50 t		625-58-1
142	3, 3, 6, 6, 9, 9Hexamcthyl-1, 2, 4, 5-tert oxacyclononane (concentration 75%)	50 t		22397-38-7
143	Hydrogen	2 t	50 t	1333-74-0
144	Liquid Oxygen	200 t		7782-41-7
145	Methyl ethyl ketone peroxide (concentration 60%)	50t		1338-23-4
146	Melhyl isobutyl ketone peroxide (concentration 60%)	50 t		37206-20-5
147	Peracelic acid (concentration 60%)	50 t		79-21-0
148	Propylene oxide	50 t		75-56-9
149	Sodium chlorate	25 t		7775-09-9
GROUP 4-EXPLOSIVE SUBSTANCES				
150	Barium azide	50 t		18810-58-7
151	Bis (2,4, 6-trinilrophenyl) amine	50 t		131-073-7
152	Chlorotrinitro benzene	50 t		28260-61-9
153	Cellulose nitrate (containing 12.6% Nitrogen)	50 t		9004-70-0

154	Cyclotetramethyleneteranitramine	50 t		2691-41-0
155	Cyclotrimetylenetiranitramine	50 t		121-82-1
156	Diazodinitrophenol	10 t		7008-81-3
157	Diethylene glycol dinitrate	10 t		693-21-0
158	Dinitrophenol, salts	50 t		
159	Ethylene glycol dinitrate	10 t		628-96-6
160	1-Gyanyl-4-nitrosaminoguanyl-1-tetrazene	10 t		109-27-3
161	2, 2', 4, 4,' 6, 6'-Hexanirostilbene	50 t		20062-22-0
162	Hydrazine nitrate	50 t		13464-97-6
163	Lead azide	50 t		13424-46-9
164	Lead styphnate (Lead 2, 4, 6-trinitroresorcinoxide)	50 t		15245 44-0
165	Mercury fuliminate	10 t		20820-45-5
				628-86-4
166	N-Methyl-N, 2, 4, 6-tetranitroaniline	50 t		479-45-8
167	Nitroglycerine	10 t	10 t	55-63-0
168	Pentacrythritol tetranitrate	50 t		78-11-5
169	Picric acid (2, 3, 6-Tr.nitrophenol)	10 t		88-89-1
170	Sodium picramate	50 t		831-52-7
171	Styphnic acid (2, 4, 6-Trinitroresorcinol)	50 t		82-71-3
172	1, 3, 5-Triamino-2, 4, 6-trinitrobenzene	50 t		3058-38-6
173	Trinitroaniline-	50 t		2695242-1
174	2, 4, 6-Trinitroanisole	50 t		606-35-9
175	Trinitrobenzene	50 t		25377-32-6
176	Trinitrobenzoic acid	50 t		35860-50-5
				129-66-8
177	Trinitrocresol	50 t		2890S-71-7
178	2,4, 6-Trinitrophenitolc	50 t		47324-3
179	2,4, 6-Trinitrotulene	50 t	50 t	118-96-7

PART-II
Classes of chemicals not specifically named in Part-I

1	2	3	4	5
GROUP 5-FLAMMABLE CHEMICALS				
1	Flammable gases: Substances which in the gaseous state normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20°C or below;	15 t	200 t	
2	Highly flammable liquids: Substances which have a flash point lower than 23°C and the boiling point Of which at normal pressure is above 20°C;	1000 t	50,000 t	
3	Flammable liquids: Substances which have a Rash point lower than 65ø C and which remain liquid under pressure, where particular processing conditions, such as high pressure and high temperature, may create major accident hazards.	25 t	200 t	

(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).

SCHEDULE 4

(See rule 2(d) (i)]

1. Installations for the production, processing or treatment of organic or inorganic chemicals using for this purpose, among others:

(a) alkylation

(b) Amination by ammonolysis

(c) carbonylatin

(d) condensation

(e) dehydrogenation

(f) esterfication

(g) halogenation and 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 phosphorons-containing compounds

(p) formulation of pesticides and of pharmaceutical products

(q) distillation

(r) extraction

(s) solvation

(t) mixing

2. Installations for distillation, refining or other processing of petroleum or petroleum products.

3. Installations for the total or partial disposal of solid or liquid substances by incineration or chemical decomposition.

4. Installations for production, processing or treatment of energy gases, for example, LPG, LNG, SNG.

5. Installations for the dry distillation of coal or lignite.

6. Installations for the production of metals or non-metals by a wet process or by means of electrical energy.

SCHEDULE 5

[See rule 3 (2) and (3)]

SAFETY DATA SHEET

1. CHEMICAL IDENTITY

Chemical Name Chemical Classification

Synonyms Trade Name

Formula C.A.S. No. U.N.No. :

Regulated Identification Shipping Name Codes/Label Hazchem No. :

Hazardous Waste I.D.No. :

Hazardous Ingredients	C.A.S. No.	Hazardous Ingredients	C.A.S.No.
1.		3.	
2.		4.	

2. PHYSICAL AND CHEMICAL DATA

Boiling Range/Point `C Physical State Appearance

Melting/Freezing Point `C Vapour Pressure @ 35`C mm/Hg Odour

Vapour Density (Air = 1) Solubility in water @30`C Others

Specific Gravity Water = 1 pH

---

3. FIRE AND EXPLOISON HAZARD DATA

Flammability Yes/No LEL %Flash Point `C Autoignition `C Temperature

TDG Flammability UEL % Flash Point `C

---Hazardous
Explosion Sensitivity to Explosion Sensitivity Combustion
Impact to State Electricity Products

Hazardous Polymerisation

Combustible Liquid Explosive Corrosive
Material Material

Flammable Material Oxidiser Others

Pyrophoric Material Organic Peroxide
---

4. REACTIVITY DATA

Chemical
Stability

Incompatibility
with other Material

Reactivity

Hazardous Reaction
Products
---

5. HEALTH HAZARD DATA

Routs of
Entry

Effects of
Exposure/Symptoms

Emergency
Treatment

TLV (ACG1H) ppm mg/m3 STEL ppm mg/m3

Permissible
Exposure Limit ppm mg/m3 Odour Threshold ppm mg/m3
LD50

NEPA Hazard Health Flammability Stability Special
Signals
---

6. PREVENTIVE MEASURES

Personnel
Protective
Equipment

Handling and
Storage
Precautions

---

7. EMERGENCY AND FIRST AID MEASURE

FIRE FIRE EXTINGUISHING
Media

Special procedures
FIRE ---
Unusual Hazards

First Aid Measures
EXPOSURE ---
Antidotes/Dosages

Steps to be taken
SPILLS ---
Waste Disposal Method

---

8. ADDITIONAL INFORMATION/REFERENCES

---

9. MANUFACTURER/SUPPLIERS DATA

Xontact Person

Name of Film in Emergency
Mailing Address ----------
Telephone/Telex Nos. Local Bodes
Telegraphic Address involved

Standard
Packing

Tremcard
Details/Ref

Others

---

10. DISCLAIMER

Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is upto the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured/ handled or sold by him as the case may be. The Government makes no warranties expressed or implied in respect of the adcquacy of this document for any particular purpose.

SCHEDULE 6

[See rule 5(1)]

INFORMATION TO BE FURNISHED REGARDING NOTIFICATION OF A MAJOR ACCIDENT

Report number.....
of a particular accident.

1. General data

(a) Name of the site
(b) Name and address of the manufacturer
((Also state telephone/telex number)
(c) (i) Registration number
(ii)Licence number
(As may have been allotted under any status 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 dangerous Substance

Substance(s) Emmited.....

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 undertaken in the Department/ Section where the accident took place.
(Attach a flow chart if necessary)
(d) The circumstances of the accident of the dangerous substance involved.

4. Emergency Measures taken and measures envisaged to be taken to be taken to alleviate short term effects of the accident.

5. Cause of the major accident. .....
Known(to be specified)

6. Not known .....

Information will be supplied as ..... soon as possible.

6. Nature and extent of damage
(a) Within the establishment - casualties

.....Killed

.....Injured

.....Poisoned

Persons exposed to the major accident .....

material damaged .....

danger is still present .....

(b) Outside the establishment casualties

.....Killed

.....Injured

.....Poisoned

Persons exposed to the major accident .....

material damaged .....

damage to environment .....

the danger is still present .....

the 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 7, 9, 10 (3)]
INFORMATION TO BE FURNISHED FOR THF NOTIFICATION OF SITES

PART-I

Particulars to be included in a notification of a site.

0. The name and address of the employer making the notification.
1. The full postal address of the site where the notifiable industrial activity will be carried on.
2. 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 b(ii) of Schedule 2 and 3.
3. 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.
4. The name and maximum quantity liable to be on the site of each dangerous substance for which notification is being made.
5. Organisation structure namely organisation diagram for the proposed industrial activity and set up for ensuring safety and health.
6. Information relating to the potential for major accidents, namely-

    (a) identification of major accident hazards;

    (b) the conditions or the events which could be significant in bringing one about;

    (c) a brief description of the measures taken.

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 and quantities of all significant inventories of the hazardous chemicals;

(c) a description of the process or storage involving the hazardous chemicals 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 INA 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 be 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, safety-related data, toxicological data and threshold values).

    (b) the form in which the chemical may occur on 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) types of accident

(b) system elements or 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) special relief systems,

(d) quick-acting valves,

(e) collecting tanks/dump tank,

(f) sprinkler system.

(g) fire-fighting etc.

7. Information on the hazard assessment, namely--

(a) identification of hazards,

(b) the cause of major accidents,

(c) assessment of hazards according to their occurrence frequency,

(d) assessment of accident consequences,

(e) safety systems,

(f) known accident history.

8. Description of information on organisational systems used to carry on the 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) 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 rules, guidelines for fighting the emergency, information about hazardous chemicals, examples of possible accident sequences,

(d) coordination with 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 8-A

[See rule13 (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 organization and responsibility assigned to them in case of emergency

3 outside organizations, if involved, in assisting during on-emergency;

( ) Types of accidents
( ) Responsibility assigned

4 Details of liaison arrangements between the organization

5 Information of preliminary hazards analysis
( ) types of accidents

( ) system elements or events that can lead to a major accident.
( ) Hazards
( ) Safety relevant components

6 Details about the site
( ) location of dangerous substances
( ) seat of key personnel
( ) Emergency control room

7 Description of hazardous chemicals at plant site
(a) chemicals quantities and toxicological data
( ) transformation, if any which could occur
(c) purity of hazardous chemicals

8 Likely danger in the plant

9 Enumerate effects of:

(i) Stress and strain caused during normal operation;
(ii) Fire and explosion in side the plant and effects, if any fire and explosion outside

10 Details regarding:
. warning alarm and safety and security system
. alarm and hazard control plan in line with disaster control planning, ensuring the necessary technical and organizational precautions;
. reliable measuring instruments, control units and serving of such equipments;
. precautions in designing of the foundation and load bearing parts of the building;
. continuous surveillance of operations;
. maintenance and repair work according to the generally recognized rules of good engineering practices.

11 Details of communication facilities available during emergency and those required for an off-site emergency;

0 Details of fire fighting and other facilities available and those required for an off-site emergency

1 Details of first-aid and hospital services available and its adequacy.