

MANUFACTURE, STORAGE AND IMPORT OF HAZARDOUS CHEMICAL RULES, 1989

MINISTRY OF ENVIRONMENT AND FORESTS

(Department of Environment, Forest and Wildlife)

NOTIFICATION

New Delhi, the 27th November, 1989

S.O. 966(E).-In exercise of the powers conferred by Section 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules, namely :-

1. Short title and commencement.

- (1) These rules may be called the Manufacture, Storage and import of Hazardous Chemical Rules, 1989.
- (2) They shall come into force on the date of their publication in the official Gazette.

2. Definitions.

In these rules, unless the context otherwise requires.-

- (a) "Act" means the Environment (Protection) Act, 1986 (29 of 1986);
- (b) "Authority" means an authority mentioned in Column 2 of Schedule 5;
- (c) "export" with its grammatical variations and cognate expression, means taking out of India to a place outside India;
- (d) "exporter" means any person under the jurisdiction of the exporting country and includes the exporting country who exports hazardous chemical;
- (e) "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;
 - (ii) any chemical listed in Column 2 of Schedule 2;
 - (iii) any chemical listed in Column 2 of Schedule 3;
- (f) "import" with its grammatical variations and cognate expression, means bringing into India from a place outside India;
- (g) "importer" means an occupier or any person who imports hazardous chemicals;
- (h) "industrial activity" means-

(i) an operation of process carried out in an industrial installation 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) pipeline;

(i) "isolated storage" means storage of a hazardous chemical, other than storage associated with an installation on the same site specified in Schedule 4 where that storage involves atleast the quantities of that chemical set out in Schedule 2;

(j) "major accident" means an occurrence including any particular major emission, fire or explosion involving one or more hazardous chemicals and resulting from uncontrolled developments in the course of an industrial activity or due to natural events leading to serious effects both immediate or delayed, inside or outside the installation likely to cause substantial loss of life and property including adverse effects on the environments;

(k) "pipeline" means a pipe (together with any apparatus and works associated therewith) or system of pipes (together with any apparatus and work 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: the pipeline also includes inter-state pipe

(l) "Schedule" means Schedule appended to these rules;

(m) "site" means any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not;

(n) "Threshold quantity" means,-

(i) in the case of a hazardous chemical specified in Column 2 of Schedule 2, the quantity of that chemical specified in the corresponding entry in Columns 3 & 4;

(ii) in the case of hazardous chemical specified in Column 2 of Part I of Schedule 3, the quantity of that chemical specified in the corresponding entry in Columns 3 & 4 of that part;

(iii) in the case of substances of a class specified in Column 2 of Part 11 of Schedule 3, the total quantity of all substances of that class specified in the corresponding entry in Column 3 & 4 of that part

3. Duties of authorities.

Subject to the other provisions of these rules, the authority shall perform duties as specified in Column 3 of Schedule 5.

4. General responsibility of the occupier during industrial activity.

(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 and is listed in Column 2 of Part II of this Schedule is or may be involved; and

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

(2) An occupier who has control of an industrial activity in term of sub-rule (I) shall provide evidence 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;

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

5. Notification of Major accident.

(1) Where a major accident occurs on a site or in a pipe line, the occupier shall forthwith notify the concerned authority as identified in Schedule S of that accident, and furnish thereafter to the concerned authority a report relating to the accidents in installments, if necessary, in Schedule 6.

(2) The concerned authority shall on receipt of the report in accordance with sub-rule I of this rule shall undertake a full analysis of the major accident and send the requisite information to the Ministry of Environment and Forests through appropriate channel.

(3) Where an occupier has notified a major accident to the concerned authority under respective legislation, he shall be deemed to have complied with the requirements as per sub-rule I of this rule.

6. Industrial activity to which rules 7 to 15 apply.

(1) Rules 7 to 15 shall apply to,-

(a) an industrial activity in which there is involved a quantity of hazardous chemical listed in Column 2 of Schedule 3 which is equal to or more than the

quantity specified in the entry for that chemical in Columns 3 & 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 Column 1

(2) For the purposes of rules 7 to 15, or

(a) "new industrial activity" means an industrial activity which-

(i) commences after the date of coming into operation of these rules; or

(ii) if commenced before that date is an industrial activity in which a modification has been made which is likely to cover major accident hazards and that activity shall be deemed to have commenced on the date on which the modification was made;

(b) an "existing industrial activity" means an industrial activity which is not a new industrial activity

7. Notification of sites.

(1) An occupier shall not undertake any industrial activity unless he has submitted A written report to the concerned authority containing the particulars specified in Schedule 7 at least 3 months before commencing that activity or before such shorter time as the concerned authority may agree and for the purpose of this paragraph an activity in which subsequently there is or is liable to be a threshold quantity or more of an additional hazardous chemical shall be deemed to be a different activity and shall be notified accordingly

(2) No report under sub-rule (1) need to be submitted by the occupier if he submits a report under rule 10(1)

8. Updating of the site notification following changes in the threshold quantity.

Where an activity has been reported in accordance with rule 7(1) and the occupier makes a change in it (including an increase or decrease in the maximum threshold 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 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 concerned authority.

9. Transitional provisions.

Where-

(a) at the date of coming into operation of these rules an occupier is in control of an existing industrial activity which is required to be reported under rule 7(1); or

(b) within 6 months after that date an occupier commence any such new industrial activity; it shall be a sufficient compliance with that rule if he reports to the concerned authority as per the particulars in Schedule 7 within 3 months after the date of coming into operation of these rules or within such longer time as the concerned authority may agree in writing.

10. Safety reports.

(1) Subjects to the following paragraphs of this rule, an occupier shall not undertake any industrial activity 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 concerned authority at least ninety days before commencing that activity.

(2) In the case of a new industrial activity which an occupier commences, or by virtue of sub-rule (2) (a) (ii) of rule 6 is deemed to commence, within 6 months after coming into operation of these rules, it shall be sufficient compliance with sub-rule (I) of this rule if the occupier sends to the concerned authority a copy of the report required in accordance with that sub-rule within ninety days after the date of coming into operation of these rules.

(3) In The case of an existing industrial activity, until five years from the date of coming into operation of these rules, it shall be a sufficient compliance with sub-rule (I) of this rule in the occupier on or before ninety days from The date of the coming into operation of these rules sends to the concerned authority in information specified in Schedule 7 relating to that activity.

11. Updating of 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 to which that safety 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 concerned authority at least 90 days before making those modifications.

(2) Where an occupier has made a report in accordance with rule 10 and sub-rule (1) of this rule and that industrial activity 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 concerned authority may agree in writing, send a copy of the report to the concerned authority

12. Requirements for further information to be sent to the authority.

(1) Where, in accordance with rule 10, an occupier has sent a safety report relating to an industrial activity to the concerned authority, the concerned authority may, by a notice served on the occupier, requires him to provide such additional information as is specified in the notice and the occupied shall send that information to the concerned

authority within such time as is specified in The notice or within such extended time as the authority may subsequently specify

13. Preparation of on-site emergency plan by the occupier.

(1) An occupier shall prepare and keep up-to-date an on-site emergency plan detailing how major accidents will be dealt with on the site on which the industrial activity 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 and that every person on the site who is affected by the plan-is informed of its relevant provisions.

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

(a) in the case of a new industrial activity before that activity is commenced;

(b) in the case of an existing industrial activity within 90 days of coming into operation of these rules.

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

(1) It shall be the duty of the concerned authority as identified in Column 2 of Schedule 5 to prepare and keep up-to-date an adequate off-site emergency plan detailing how emergencies relating to a possible major accident on that site will be dealt with and in preparing that plan the concerned authority shall consult the occupier, and such other persons as it may deem necessary.

(2) For the purpose of enabling The concerned authority to prepare the emergency plan required under sub-rule (1), the occupier shall provide the concerned authority with such information relating to the industrial activity under his control as the concerned authority may require, including the nature, extent and likely effects off-site of possible major accidents and the authority shall provide the occupier with any information from the off-site emergency plan which relates to his duties under rule 13.

(3) The concerned authority shall prepare its emergency plan required under sub-rule (1),-

(a) in the case of a new industrial activity, before that activity is commenced;

(b) in the case of an existing industrial activity, within six months of coming into operation Of these rules.

15. Information to be given to persons liable to be affected by a major accident.

(1) The occupier shall take appropriate steps to inform persons outside the site either directly or through District Emergency Authority 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 a major accident

(2) The occupier shall take the steps required under sub-rule (1) to inform persons about an industrial activity, before that activity is commenced, except, in the case of an existing industrial activity in which case the occupier shall comply with the requirements of sub-rule (1) within 90 days of coming into operation of these rules.

16. Disclosures of information.

(1) Where for the purpose of evaluating information notified under rule 5 or 7 to 15, the concerned authority discloses that information to some other person that other person shall not use that information for any purpose except for the purpose of the concerned authority disclosing it, and before disclosing the information the concerned authority shall inform that other person of his obligations under this paragraph.

17. Collection, Development and Dissemination of Information.

(1) This rule shall apply to an industrial activity 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, who has control of an industrial activity in term 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 9. The information shall be accessible upon request for reference.

(3) The occupier while obtaining or developing a safety data sheet as specified in Schedule 9 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 material safety data shet as specified in Schedule 9 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;

(c) the physical, chemical and toxicological data as per the criteria given at Part I of Schedule 1.

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

18. Import of hazardous chemicals.

(1) This rule shall apply to a 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.

(2) Any person responsible for importing hazardous chemicals in India shall provide at the time of import or within thirty days from the date of import to the concerned authorities as identified in Column 2 of Schedule 5 the information pertaining to-

(i) the name and address of the person receiving the consignment in India;

(ii) the port of entry in India;

(iii) mode of transport from the exporting country to India

(iv) The quantity of chemical(s) being imported; and

(v) complete product safety information.

(3) If the concerned authority at the State is satisfied that the chemical being imported is likely to cause major accident, it may direct the importer to take such steps including stoppage of such imports as the concerned authority at the State may deem it appropriate.

(4) The concerned authority at the State shall simultaneously inform the concerned Port Authority to take appropriate steps regarding safe handling and storage of hazardous chemicals while off-loading the consignment with the port premises.

(5) Any person importing hazardous chemicals shall maintain the records of the hazardous chemicals imported as specified in Schedule 10 and the records so maintained shall be open for inspection by the concerned authority at the State or the Ministry of Environment and Forests or any officer appointed by them in this behalf.

(6) The importer of the hazardous chemical of a person working on his behalf shall ensure that transport of hazardous chemicals from port of entry to the ultimate destination is in accordance with the Central Motor Vehicles Rules, 1989 framed under the provisions of the Motor Vehicles Act, 1988.

19. Improvement notices.

(1) If the concerned authority is of the opinion that a person has contravened the provisions of these rules, the concerned authority shall serve on him a notice (in this para referred to as "an improvement notice") requiring that person to remedy the contravention or, as the case may be, the matters occasioning it within such period as may be specified in the notice.

(2) A notice served under sub-rule (1) shall clearly specify the measures to be taken by the occupier in remedying said contraventions.

20. Power of the Central Government to modify the Schedule.

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

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, Arsenious (iii) Acids and Salts
- 28 Asbestos
- 29 Azinophos-Ethyl
- 30 Azinphos-Methyl
- 31 Azide
- 32 Benzene
- 33 Benzidine
- 34 Benzidine Salts
- 35 Benzoquinone
- 36 Benzoyl Chloride
- 37 Benzoyl Peroxide
- 38 Benzyl Chloride
- 39 Benzyl Cyanide
- 40 Beryllium (Powders Compound)
- 41 Biphenyl
- 42 Bis (2-Chloromethyl) Ketone
- 43 Bis (2, 4, 6-Trinitrophenyl) Amine
- 44 Bis (2, Chloroethyl 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, tert
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 Cyanide
- 72 Captan
- 73 Captofol
- 74 Carbaryl (Sevin)
- 75 Carbofuran
- 76 Carbon Disulphide
- 77 Carbon Monoxide
- 78 Carbon Tetrachloride
- 79 Carbophenothion
- 80 Cellulose Nitrate
- 81 Chlorates (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 Chlorofluorocarbons
- 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 Diehloroaeethylene
- 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 Diehylene glycol 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 Diphosphoramidate Octamethyl
- 175 Dipropylene Glycolmethylether
- 176 Disulfoton
- 177 Endosulfan
- 178 Endrin
- 179 Epichlorohydrine
- 180 EPN
- 181 Epoxypropane, 1, 2
- 182 Ehion
- 183 Ethyl Carbamate
- 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 Liquefied Petroleum Gas (LPG)
- 242 Maleic Anhydride
- 243 Manganese & Compounds
- 244 Mercapto Benzothiazole
- 245 Mercury Alkyl
- 246 Mercury Fulminate
- 247 Mercury Methyl
- 248 Methacrylic Anhydride
- 249 Methacrylonitrile
- 250 Methacryloyl Chloride
- 251 Methamidophos
- 252 Methanesulfonyl Fluoride
- 253 Methanethiol
- 254 Methoxy Ethanol (2-Methyl Cellosive)
- 255 Methoxy ethyl mercuric Acetate
- 256 Methyl Acrylate
- 257 Methyl 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 Methyl Isobutyl Ketone Peroxide
- 267 Methyl Isocyanate
- 268 Methyl Isothiocyanate
- 269 Methyl Mercaptan
- 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 Methyltrichlorosilane
- 277 Mevinphos
- 278 Molybdenum & Compounds
- 279 N-Methyl-N, 2, 4, 6-N-Tetranitroaniline
- 280 Naphtha (Coal Tar)
- 281 Naphthylamine, 2
- 282 Nickel & Compounds
- 283 Nickel Tetracarbonyl
- 284 Nitroaniline-O
- 285 Nitroaniline-P
- 286 Nitrobenzene

- 287 Nitrochlorobenzene-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 Nitrosodimethylamine
- 298 Nitrotoluene
- 299 Octabromophenyl Oxide
- 300 Oleum
- 301 Oleylamine
- 302 OO-Diethyl S-Ethylsulphonylmethyl phosphorothioate
- 303 OO-Diethyl S-Ethylthiomethyl Phosphorothioate
- 304 OO-Diethyl S-Ethiomethyl Phosphorathioate
- 305 OO-Diethyl S-Isopropylthiomethyl Phosphorolithioate
- 306 OO-diethyl S-Propylthiomethyl Phosphorodithioate
- 307 Oxyaryl
- 308 Oxydisulphur
- 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, Chloroethyl 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 Cyanide
- 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 Thallium & 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 Trichloro (chloromethyl) Silane
- 400 Trichlorodichlorophenylsilane
- 401 Trichloroethane, 1, 1, 1
- 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 Trinitroresorcinol, 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

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 which 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

(a) This applies to ammonium nitrate and mixtures of ammonium nitrates where the nitrogen content derived from the ammonium nitrate is greater than 28 per cent by weight and to aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater than 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-ethylhhiomethyl 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	Fluoroacetic acid, esters	1 kg		
44	Fluoroacetic acid, amides	1 kg		
45	4-Fluorobutyric acid	1 kg		462-23-7
46	4-Fluorobutyric acid, salts	1 kg		
47	4-Fluorobutyric acid, esters	1 kg		
48	4-Fluorobutyric acid, amides	1 kg		
49	4-Fluorocrotonic 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 selenide	10 kg		7783-07-5
61	Isobenzan	100 kg		297-78-9
62	Isodrin	100 kg		465-73-6
63	Juglone (5-Hydroxynaphthalene 1, 4 dione)	100 kg		481-39-0

64	4, 4-Methylenebis (2-chloroniline)	10 kg		101-14-4
65	Methyl isocyanate	150 kg	150 kg	624-83-9
66	Mevinphos	100 kg		7786-34-7
67	2-Naphthylamine	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 difluoride	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-1, 3-dilhiolane-2-carboxaldehyde O-methylcarbarnoyloxime)	100 kg		26419-8
96	Trichloromethanesulphenyl chloride	100 kg		594-42-3
97	1-Tri (cyclohexyl) stannyl-1 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 $\leq 90\%$)	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	Propyleneimine	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-isocyanate (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 (concentration $\geq 70\%$)	5 t		2167-23-9
128	1,1-Bis (tert-butylperoxy) cyclohexane (concentration $\geq 80\%$)	5 t		3006-86-8
129	tert-Butyl peroxyacetate (concentration $\leq 70\%$)	5 t		107-71-1
130	Tert-Butyl peroxyisobutyrate (concentration $\geq 80\%$)	5 t		109-13-7
131	tert-Butyl peroxy isopropyl carbonate (concentration $\geq 80\%$)	5 t		2372-21-6
132	tert-Butyl peroxy maleate (concentration $\geq 80\%$)	5 t		1931-62-0
133	Tert-Butyl peroxy pivalate (concentration $\geq 77\%$)	50 t		927-07-1
134	Dibenzyl peroxydicarbonate (concentration $\geq 90\%$)	5 t		2144-45-8
135	Di-sec-butyl peroxydicarbonate (concentration $\geq 80\%$)	5 t		19910-65-7
136	Diethyl peroxydicarbonate (concentration $\geq 30\%$)	50 t		14666-78-5

137	2, 2-dihydroperoxypropane (concentration $\geq 30\%$)	5 t		2614-76-08
138	Di-isobutyryl peroxide concentration $\geq 50\%$)	50 t		3437-84-1
139	Di-n-propyl peroxydicarbonate (concentration $\geq 80\%$)	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, 9Hexamethyl-1, 2, 4, 5-tert oxacyclononane (concentration $\geq 75\%$)	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 $\geq 60\%$)	50t		1338-23-4
146	Methyl isobutyl ketone peroxide (concentration $\geq 60\%$)	50 t		37206-20-5
147	Peracetic acid (concentration $\geq 60\%$)	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-trinitrophenyl) 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 fulminate	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-Trinitrophenitlc	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(h) (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) carbonylation
- (d) condensation
- (e) dehydrogenation
- (f) esterification
- (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 phosphorus-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 Rules 2(b) and 3]

S.No.	Authority (ies) with legal backing	Duties and corresponding Rule
1	Ministry of Environment and Forest under Environment (Protection) Act, 1986.	(1) Notification of hazardous chemical- as per Rules 2(e)(i), 2(e) (ii) & 2(e) (iii)
2	Chief Controller Imports & Exports under Import & Export (Control) Act, 1947.	Import of hazardous chemicals as per Rule 18.
3	Central Pollution Control Board or State Pollution Control Board under Environment (Protection) Act, 1986 as the case may be.	(1) Enforcement of directions and procedures in respect of isolated storage of hazardous chemicals, regarding, (i) Notification of major accidents as per Rules 5(1) and 5(2). (ii) Notification of sites as per Rules 7 to 9. (iii) Safety reports in respect of isolated storages as per Rule 10 to 12. (iv) Preparation of on-site emergency plans as per Rule 13. (2) Import of hazardous Chemicals and enforcement of directions and procedures on import of hazardous chemicals as per Rule 18.

- 4 Chief Inspector or Factories appointed under the Factories Act, 1948. Enforcement of directions and procedures in respect of industrial installations and isolated storages covered under the Factories Act, 1948, dealing with hazardous chemicals and pipelines including inter-state pipelines regarding,-
- (i) Notification of major accidents as per Rule 5(1) and 5(2).
 - (ii) Notification of sites as per Rules 7-9.
 - (iii) Safety reports as per Rules 10 to 12.
 - (iv) Preparation of on-site emergency plans as per Rule 13.
 - (v) Preparation of off-site emergency - plans in consultation with District Collector or District Emergency Authority as per Sr. No. 9 of this schedule.
- 5 Chief Inspector of Dock Safety appointed under the Dock Workers (Safety, Health and Welfare) Act, 1986. Enforcement of directions and procedures in respect of industrial installations and isolated storages dealing with hazardous chemicals and pipelines inside a port regarding,-
- (i) Notification of major accidents as per Rules 5(1) and 5(2).
 - (ii) Notification of sites as per Rules 7 to 9.
 - (ii) Safety reports as per Rules 10 to 12.
 - (iv) Preparation of on-site emergency plans as per Rule 13.
 - (v) Preparation of off-site emergency plans in consultation with District Collector or District Emergency Authority as per Sr. No. 9 of this schedule.

6	Chief Inspector of Mines appointed under Mines Act, 1952.	<p>Enforcement of directions and procedures in the respect of industrial installations and isolated storages dealing with hazardous chemicals and pipelines inside a port regarding,-</p> <p>(i) Notification of major accidents as per Rules 5(1) and 5(2).</p> <p>(ii) Notification of sites as per Rules 7 to 9.</p> <p>(iii) Safety reports as per Rules 10 to 12</p> <p>(iv) Preparation of on-site emergency plans as per Rule 13.</p> <p>(v) Preparation of off-site emergency plans in consultation with District Collector or District Emergency Authority as per Sr. No. 9 of this schedule.</p>
7	Atomic Energy Regulatory Board appointed under the Atomic Energy Act, 1972.	Enforcement of directions and procedures as per the provisions of the Atomic Energy Act, 1972.
8	Chief Controller of Explosives appointed under the Indian Explosives Act and Rules, 1983.	Enforcement of directions and procedures as per the provisions of the Indian explosives Act and Rules 1983.
9	District Collector or District Emergency Authority designated by the State Government.	Preparation of off-site emergency plans as per Rule 14.
10	Directorate Or Explosives Safety (DLS), Defence Research and Development of Organisation (DRDO). Department of defence Research & Development, Ministry of Defence.	Enforcement of directions and procedures in respect of laboratories industrial establishment and isolated storages dealing with hazardous chemicals in the Ministry of Defence.

SCHEDULE 7

[See rule 7(1)]

INFORMATION TO BE FURNISHED FOR THE NOTIFICATION OF SITES

PART-I

Particulars to be included in a notification of a site.

1. The name and address of the employer making the notification.
2. The full postal address of the site where the notifiable industrial activity will be carried on.
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 b(ii) of Schedule 2 and 3.
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 dangerous substance 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 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.

PART-II

Particulars to be included regarding pipeline-

1. The names and the address of the persons making the notification.
2. The full postal address of the place from which the pipeline activity is controlled addresses of the places where the pipeline starts and finishes and a map showing the pipeline route drawn to a scale of not less than 1: 400000
3. The date on which it is anticipated that the notifiable activity will commence, or if it is already commenced a statement to that effect.
4. The total length of the pipeline, its diameter and normal operating pressure and the name and maximum quantity liable to be in the pipeline of each hazardous chemical for which notification is being made.

SCHEDULE 8

[See rule 10(1)]

INFORMATION TO BE FINISHED 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 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 10

[See Rule 18(5)]

(Format for maintaining records of hazardous chemicals imported)

1. Name and address of the Importer:
 2. Date and reference number of issuance of permission to import hazardous chemicals:
 3. Description of hazardous chemicals:
 - (a) Physical form:
 - (b) Chemical form:
 - (c) Total volume and weight (in kilogrammes/tonnes)
 4. Description of purpose of import:
 5. Description of storage of hazardous chemicals:
 - (a) Date:
 - (b) Method of storage:
-

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