THE CHEMICAL ACCIDENTS (EMERGENCY PLANNING, PREPAREDNESS,

AND RESPONSE) RULES, 1996

MINISTRY OF ENVIRONMENT & FORESTS

NOTIFICATION

(New Delhi, the 1st August, 1996)

RULES ON EMERGENCY PLANNING, PREPAREDNESS AND RESPONSE

FOR CHEMICAL ACCIDENTS

***G.S.R.347(E):-** In exercise of the power 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 Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996.

(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. "chemical accident" means an accident involving a fortuitous, or Sudden or unintended occurrence while handling any hazardous chemicals resulting in continuous, intermittent or repeated exposure to death, or injury to, any person or damage to any property but does not include an accident by reason only of war or radio-activity;

(b) "hazardous chemical" means,-

i. any chemical which satisfies any of the criteria laid down in Part I of Schedule 1 or is listed in Part 2 of the said schedule;

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

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

(c) "industrial activity" includes an operation or process,-

i. carried out in an industrial installation referred to in Schedule -4 involving or likely to involve one or more hazardous chemicals;

i. on-site storage or on-site transport which is associated with that operation or process as the case may be;

(iii) isolated storage;

(iv) pipeline;

d. "industrial pocket" means any industrial zone ear-marked by the Industrial Development Corporation of the State Government or by the State Government;
e. "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 at least the quantities of that chemical set out in **Schedule-2;**
f. "major chemical 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 industrial activity or transportation 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 environment;
g. "Major Accident Hazards (MAH) Installations".- means, isolated storage and industrial activity at a site, handling (including transport through carrier or pipeline) of hazardous chemicals equal to or, in excess of the threshold quantities specified in column 3 of **Schedule 2 and 3** respectively;
h. "Manufacture, Storage and Import of Hazardous Chemical, Rules" means, - the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, published in the notification of Government of India in the Ministry of Environment & Forests No. S.0.966 (E), dated 27 1h November, 1989;
i. "off-site emergency plan" means,- the off-site emergency plan prepared under rule 14 of the Manufacture, Storage and Import of Hazardous Chemicals Rules;
j. "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 11 of Schedule 1, at a pressure of less than 8 bars absolute;

k. "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;
l. "transport" means.- movement of hazardous chemicals by any means over land, water or air.

3. Constitution of Central Crisis Group.- (1) The Central Government shall constitute a Central Crisis Group for management of chemical accidents and set up a Crisis Alert System in accordance with the provisions of Rule-4 within thirty days from the date of the commencement of these rules.

(2) The composition of the Central Crisis Group shall be as specified in Schedule 5.

(3) The Central Crisis Group shall meet at least once in six months and follow such procedure for transaction of business as it deems fit.

(4) Notwithstanding anything contained in sub-rule (2), the Central Crisis Group may co opt any person whose assistance or advice is considered useful in performing any of its functions to participate in the deliberations of any of its meetings.

4. Constitution of Crisis Alert System:- The Central Government shall,-

(a) set up a functional control room at such place as it deems fit;

a. set up an information net working system with the State and district control rooms;

(c) appoint adequate staff and experts to man the functional control room;

(d) publish a list of Major Accident Hazard installations;

(e) publish a list of major chemical accidents in chronological order;

(f) publish a list of members of the Central, State and District Crisis Groups;

g. take measures to create awareness amongst the public with a view to preventing chemical accidents.

5. Functions of the Central Crisis Group: (1) The Central Crisis Group shall be tile apex body to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents.

(2) Without prejudice to the functions specified under sub-rule (1), the Central Crisis Group shall,-

a. continuously monitor the post accident situation arising out of a major chemical accident and suggest measures for prevention and to check recurrence of such accidents;

a. conduct post-accident analysis of such major chemical accidents and evaluate responses;
b. review district off-site emergency plans with a view to examine its adequacy in accordance with the Manufacture, Storage and Import of Hazardous Chemicals, Rules, and suggest measures to reduce risks in the Industrial pockets;

(d) review the progress reports submitted by the State Crisis Groups;

c. respond to queries addressed to it by the State Crisis Groups and the District Crisis Groups;
d. publish a State-wise list of experts and officials who are concerne" with the handling of chemical accidents;
e. render, in the event of a chemical accident in a State, all financial and infra-structural help as may be necessary.

6. Constitution of State Crisis Group.- (1) The State Government shall constitute a State Crisis Group for management of chemical accidents within thirty days from the date of the commencement of these rules.

(2) The composition of the State Crisis Group shall be as specified in **Schedule 6.**

(3) The State Crisis Group shall meet at least once in three months and follow such procedure for transaction of business as it deems fit.

(4) Notwithstanding anything contained in sub-rule (2), the State Crisis Group may co-opt any person whose assistance or advice is considered useful in performing any of its functions, to participate in the deliberation of any of its meetings.

7. **Functions of the State Crisis Group.- (1)** The State Crisis Group shall be the apex body in the State to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents.

(2) Without prejudice to the functions specified under sub-rule (1), the State Crisis Group shall,-

a. review all district off-site emergency plans in the State with a view to examine its adequacy in accordance with the Manufacture, Storage and Import of Hazardous Chemicals, Rules and forward a report to the Central Crisis Group once in three months;

(b) assist the State Government in managing chemical accidents at a site;

b. assist the State Government in the planning, preparedness and mitigation of major chemical accidents at a site in the State;
c. continuously monitor the post accident situation arising out of a major chemical accident in the State and forward a report to the Central Crisis group;

(e) review the progress report submitted by the District Crisis groups;

(f) respond to queries addressed to it by the District Crisis groups;

a. publish a list of experts and officials in the State who are concerned with the management of chemical accidents.

8. Constitution of the District and Local Crisis Group.- (1) The State Government shall cause to be constituted within thirty days from the date of commencement of these rules,-

a. District Crisis Groups;
b. Local Crisis Groups;

(2) The composition of the District Crisis Groups and the Local Crisis Groups shall be as specified in **Schedule 7 and 8** respectively.

(3) The District Crisis Group shall me et every forty five days and send a report to the State Crisis Group;

(4) The Local Crisis Group shall meet every month and forward a copy of the proceedings to the District Crisis Group.

9. **Functions of the District Crisis Group.-(1)** The District Crisis Group shall be the apex body in the district to deal with major chemical accidents and to provide expert guidance for handling chemical accidents;

(2) Without prejudice to the functions specified under sub-rule (1). the District Crisis Group shall,-

(a) assist in the preparation of the district off-site emergency plan;

c. review all the on-site emergency plans prepared by the occupier of Major Accident Hazards installation for the preparation of the district off-site emergency plan;

(c) assist the district administration in the management of chemical;

(d) continuously monitor every chemical accident;

d. ensure continuous information flow from the district to the Central and State Crisis Group regarding accident situation and mitigation efforts;
e. forward a report of the chemical accident within fifteen days to the State Crisis Group;
f. conduct at least one full scale mock-drill of a chemical accident at a site each year and forward a report of the strength and the weakness of the plan to the State Crisis Group.

10. **Functions of the Local Crisis Group.-(1)** The Local Crisis Group shall be the body in the industrial pocket to deal with chemical accidents and coordinate efforts in planning, preparedness and mitigation of a chemical accident;

(2) Without prejudice to the functions specified under sub-rule (1), the Local Crisis Group shall,

(a) prepare local emergency plan for the industrial pocket;

a. ensure dovetailing of the local emergency plan with the district off-site emergency plan;

(c) train personnel involved in chemical accident management;

b. educate the population likely to be affected in a chemical accident about the remedies and existing preparedness in the area;
c. conduct at least one full scale mock-drill of a chemical accident at a site every six months forward a report to the District Crisis Group;

(f) respond to all public inquiries on the subject.

11. **Powers of the Members of the Central, State and District Crisis Groups.-**

1. the Members of the Central Crisis Group, State Crisis Groups and District Crisis Groups shall be deemed to be persons empowered by the Central Government in this behalf under sub-section (1) of section 10 of the Environment (Protection) Act, 1986.

12. **Aid and Assistance for the functioning of the District and Local Crisis Groups.-**

(1) The Major Accident Hazard installations in the industrial pockets in the district shall aid, assist and facilitate functioning of the District Crisis Group;

(2) The Major Accident Hazard installations in the industrial pockets shall also aid, assist and facilitate the functioning of the Local Crisis Group.

13. **Information to the Public**.- (1) the Central Crisis Groups shall provide information on request regarding chemical accident prevention, preparedness and mitigation in the country;

(2) The State Crisis Group shall provide information on request regarding chemical accident prevention, preparedness and mitigation to the public in the State;

(3) The Local Crisis Group shall provide information regarding possible chemical accident at a site in the industrial pocket and related -information to the public on request;

(4) The Local Crisis Group shall assist the Major Accident Hazard installations in the industrial pocket in taking appropriate steps to inform persons likely to be affected by a chemical accident.

SCHEDULES

Schedule 1

[see rule 2(b) & 2(j)]

Part - 1

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

Sr. No.	Degree of Toxicity	Oral Toxicity LD50 (mg/kg)	Dermal Toxicity (Dermal LD50) (mg/kg)	Inhalation toxicity by dust & mists (mg/l)

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 20T or below;

(ii) Highly Flammable liquids: Chemicals which have a flash point lower than 23°C and the boiling point of which a normal pressure is above 20° C;

(iii) Flammable liquids: chemicals which have a flash point lower than 65°C and which remains 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 dinitro-benzene.

Notes:

* As published in Gazette of India, Part 11 Section 3 (i) Extraordinary S.NO. 241, dated 2/8/1996.

PART II

List of Hazardous and Toxic Chemicals

Sr. No.	Name of the Chemical
	Acetone
	Acetone Cynohydride
	Acetyle Chloride
	Acetylene (Ethyne)

	Acrolein (2-Propenal)
	Acrylonitrile
	Aldicarb
	Aldrin
	Alkyl Phthalate
	Allyl Alcohol
	Allylamine
	Alpha Naphthyl Thiourea (Antu)
	Aminodiphenyl-4
	Aminophenol-2
	Amiton
	Ammonia
	Ammonium Nitrate
	Ammonium Nitrates in fertilizers

	Ammonium Sulfamate
	Anabasine
	Aniline
	Anisidine-p
	Antimony and Compounds
	Antimony Hydride (Stibine)
	Arsenic Hydride (Arsine)
	Arsenic Pentoxide, Arsenic (v) Acid, and Salts
	Arsenic Trioxide, Alsenious (iii) Acids and Salts
	Asbestos
	Azinophos-Ethyl
	Azinphos-Methyl
	Banum Azide
	Benzene

	Benzidine
	Benzidine Salts
	Benzoquinone
	Benzoyl Chloride
	Benzoyl Peroxide
	Benzyl Chloride
	Benzyl Cynide
	Beryllium (Powders Compound)
	Biphenyl
	Bis (2-Clzloromethyl) Ketone
	Bis (2, 4, 6-Trinitrophynile) Amine
	Bis (2, Chloroethyle sulphide)
	Bis (Chloromethyl) ether
	Bis (tert-Butyl peroxy) Butane-2, 2

	Bis (tert-Butyl peroxy) Cyclohexane-11
	Bis-1, 2 Tribromophenoxy Ethane
	Bis phenol
	Boron and Compounds
	Bromine
	Bromine Pentafluoride
	Bromoform
	Butoadine
	Butane
	Butanethiol
	Butanone-2
	Butoxy Ethanol
	Butyl Glycidal Ether
	Butyl Peroxy acetate, tert

	BUtyL Peroxyisobutyrate, tert
	Butyl Peroxyisopropyl Carbonate, tert
	Butyl Peroxymaleate, tert
	Butyl Peroxypivalate, tcrt
	Butyl Vinyl Ether
	Buty-n-Mercaptan
	Butylamine
	C-9, Aromatic Hydrocarbon Fraction
	Cadmium and Compounds
	Cadmium Oxide (fumes)
	Calcium Cynicde
	Captan
	Captofol
	Carbaryl (Sevin)

	Carbofuran
	Carbon Disulphide
	Carbon Monoxide
	Carbon Tetrachloride
	Carbophenothion
	Cellulose Nitrate
	Chlorats (used in explosives)
	Chlordane
	Chlorfenvinphos
	Chlorinated Benzenes
	Chlorine
	Chlorine Di Oxide
	Chlorine Oxide
	Chlorine Trifluoride

	Chloromequal Chloride
	Chloroacetalchloride
	Chloroacetaldehyde
	Chloroanilin-2
	Chloroaniline4
	Chlorobenzene
	Chlorodiphenyl
	Chloropoxypropane
	Chloroethanol
	Chloroethyl
	Chloroformate
	Chorolfluorocarbons
	Chloroform
	Chloroformyl-4, Merpholine

	Chloromethane
	Chloromethyl Ether
	Chloromethyl Methyl Ether
	Chloronitrobenzene
	Chloroprene
	Chlorosulphonic Acid
	Chlorotrinitro benzene
	Chloroxuron
	Chromium and Compounds
	Cobalt and Compounds
	Copper and Compounds
	Coumafuryl
	Coumaphos
	Coumateralyl

	Cresols
	Cumidine
	Cumene
	Cynophos
	Cynothoate
	Cyanuric Fluoride
	Cyclohexane
	Cyclohexanol
	Cyclohexane
	Cycloheximide
	Cyclopentadinene
	Cyclopentane
	Cyclotetramethylenetrinitramine
	Cyclotriethylene Trinitramine

	DDT
	Dicarbomodiphenyl Oxide
	Demeton
	Di-Isobutyl Peroxide
	Di n-Propyl Peroxydicarbonate
	Di-sec-Butyl Peroxydicarbonate
	Dalifos Mazodinitrophewl
	Diszomethane
	Dibenzyl Peroxydicarbonate
	Diehloroaeetylene
	Diehlorobenzene-0
	Dichlorobenzene-2
	Di-chloroethane
	Dichlorethyl Ether

	Dichlorophenol-2, 4
	Dichlorophenol-2, 6
	Dichlorophenoxy Acetic Acid, -2,4 (2,4-D)
	Dichloropropane-1, 2
	Diehlorosalicylic Acid, -3,5
	Dichlorovos (DDVP)
	Dicrotophos
	Dieldrin
	Diepoxybutane
	Diethyl Peroxydicarbonate
	Diethyl Glycol Dinitrate
	Diethylene Triarnine
	Diehyleneglycol Butyl Ether/Diethyleteglycol Butyl Acetate
	Diethylenetriarnine (DETA)

	Diglycidyl Ether
	Dihydroperoxypropane, -2,2
	Diisobutyryl Peroxide
	Dimethoate
	Dimethyl Phosphoramidocynidic Acid
	Dimelhyl Phthalate
	Dimethylcarbonyl
	Dimethylnitrosamine
	Dinitrophenol, Salts
	Dinitroluene
	Dinitro-o-Cresol
	Dioxane
	Dioxathion
	Dioxalane

	Diphacinone
	Diphosphoramide Octamethyl
	Dipropylene Glycolmethylether
	Disulfoton
	Endosulfan
	Endrin
	Epiehlorohydrine
	EPN
	Epoxypropane, 1, 2
	Ehion
	Ethyl Carbarnate f
	Ethyl ether
	Ethyl Hexanol, -2
	Ethyl Mercaptan

	Ethyl Methacrylate
	Ethyl Nitrate
	Ethylamine
	Ethylene
	Ethylene Chlorohydrine
	Ethylene Diamine
	Ethylene Dibromide
	Ethylene Dichloride
	Ethylene Glycol Dinitrate
	Ethylene Oxide
	Ethyleneimine
	Ethylthiocynate
	Fensulphothion
	Fluenetil

	Fluoro, -4,2-Hydroxybutyric Acid and Salts, Esters, Amides
	Fluoroacetic Acid and Salts, Esters, Amides
	Fluorobutyric Acid, -4, and Salts, Esters, Amides
	Fluorocrotonic Acid, -4, and Salts, Esters, Amides
	Formaldehyde
	Glyconitrite (Hydroxyacetonitrite)
	Guanyl, -1, 4 Nitrosaminoguanyl-1-Tetrazenc
	Heptachlor
	Haxachloro Cyclopentadiene
	Hexachlorocyclohexane
	Hexachlorocy cloamethane
	Hexachlorodibenzo-p-Dioxin, -1, 2, 3, 7, 8, 9
	Hexafluoropropene
	Hexamethylphosphoramide

	Hexamethyl, -3, 3, 6, 6, 9, 9, -1, 2, 4, 5-Tetroxacyclononane
	Hexamethylenediamine
	Hexane
	Hexanitrosstibene, -2, 2, 4, 4, 6, 6,
	Hexavalent Chromium
	Hydrazine
	Hyrazine Nitrate Hydrochloric Acid
	Hydrogen
	Hydrogen Bromide (Hydrobromic Acid)
	Hydrogen Chloride (Liquified Gas)
	Hydrogen Cynide
	Hydrogen Fluoride
	Hydrogen Selenide
	Hydrogen Sulphide

	Hydroquinone
	Iodine
	Isobenzan
	Isodrin
	Isophorone Diisocynate
	Isopropyl Ether
	Juglone (5-Hydroxynaphthalene-1, 4-Dione)
	Lead (inorganic fumes & dusts)
	Lead 2, 4, 6 -Trinitroresorcinoxide (Lead Styphnate)
	Lead Azide
	Leptophos
	Lindane
	Liquified Petroleum Gas (LPG)
	Maleic Anhydride

	Manganese & Compounds
	Mercapto Benzothiawle
	Mercury Alkyl
	Mercury Fulminate
	Mercury Methyl
	Methacrylic Anhydride
	Methacrylonitrite
	Methacryloyl Chloride
	Methamidophos
	Methanesuphonyl Fluoride
	Methanethiol
	Methoxy Ethanol (2-Methyl Cellosive)
	Methoxy ethyl mercuric Acetate
	Methyl Acrylate

	Melhyl Alcohol
	Methyl Amylketone
	Methyl Bromide (Bromomethane)
	Methyl Chloride
	Methyl Chloroform
	Methyl Cyclohexene
	Methyl Ethyl Ketone Peroxide
	Methyl Hydrazine
	Methyl Isobutyl Ketone
	Methy Isobutyl Ketone Peroxide
	Mthyl Isocycnate
	Methyl Isothiocynate
	Methyl Mercaptian
	Methyl Methacrylate

	Methyl Parathion
	Methyl Phosphonic Dichloride
	Methyl-N, 2, 4, 6,-Trinitroaniline
	Methylene Chloride
	Methylenebis, -4, 4, (2-Chloroaniline)
	Methyltrichlcrosilane
	Mevinphos
	Molybdenum & Compounds
	N-Methyl-N, 2, 4, 6-N-Tetranitroanilin
	Naptha (Coal Tar)
	Naphthylamine, 2
	Nickel & Compounds
	Nickel Tetracarbonyl
	Noitroaniline-O

	Nitroaniline-P
	Nitrobenzene
	Nitrochloroberizene-P
	Nitrocyclohexane
	Nitriothage
	Nitrogen.Dioxide
	Nitrogen Oxide
	Nitrogen Trifluoride
	Nitroglycerine
	Nitrophenol-P
	Nitropropane-1
	Nitropropane-2
	Nitrosodirnethylarnine
	Nitrotolune

	Octabrornophenyl Oxide
	Oleurn
	Oleylarnine
	OO-Diethyl-SethyIsulphonyImethyl phosbhorothioate
	OO-Diethyl-S-Ethylthiornethyl Phosphorothioate
	OO-Diethyl S-Ethiomethyl Phosphorathioate
	OO-Diethyl-S-1sopropyliniornethyl Phosphorolithioate
	OO-diethyl-S-Propylthiornethyl Phosphorodithioate
	Oxyarnyl
	Oxydisulioton
	Oxygen (Liquid)
	Oxygen Difluoride
	Ozone
	Paraoxon (Diethyl 4-Nitrophenyl Phosphate)

	Paraquat
	Parathion
	Parathion Methyl
	Paris green (Bis Aceto Hexametaatsinito Tetracopper)
	Pentaborane
	Pentabromodiphenyl Oxide
	Pentabromophenol
	Pentachloro Naphthalene
	Pentachloroethane
	Petachlorophenol
	Pentacrythritol Tetranitrate
	Pentane
	Peracetic Acid
	Perchloroethylene

	Perchlorornethyl Mercaptan
	Pentanone, 2,4-Methyl
	Phenol
	Phenyl Glycidal Ether
	Phenylene p-Diarnine
	Phenylmercury Acetate
	Phorate
	Phosacetim
	Phosalone
	Phosfolan
	Phosgene (Carbonyl Chloride)
	Phosmet
	Phospamidon
	Phosphine (Hydrogen Phosphide)

	Phosphoric Acid and Esters
	Phosphoric Acid, Bromethyl Bromo (2,2-dimethylpropyl) Bromoethyl Ester
	Phosphoric Acid, Bromoethyl Bromo (2,2-Dimethylpropyl) Chlorethyethyl Ester
	Phosphoric Acid, Chlorocthyl Bromo (2,2-Dimethoxylpropyl) Chloroethyl Ester
	Phosporous & Compounds
	Phostalan Pircic Acid (2,4,6-Trinitrophenol)
	Polybrominaled Biphenyl
	Potassium Arsenite
	Potassium Chlorate
	Promurit(1-(3,4-Dichlorophenyl)-3-Triazenethiocarboxamide)
	Propanesultone-1, 3
	Propen,-1, 2-Chloro-1,3-Diol-Diacetate
	Propylene Dichloride
	Propylene Oxide

	Propyleneimine
	Pyrazoxon
	Selenium Hexafluoride
	Semicarbazide Hydrochloride
	Sodium Arsenite
	Sodium Azide
	Sodium Chlorate
	Sodium Cynide
	Sodium Picramate
	Sodium Selenite
	Styrene, 1, 1, 2, 2-Tetrachloroethane
	Sulfotep
	Sulphur Dichloride
	Sulphur Dioxide

	Sulphur Trioxide
	Sulphuric Acid
	Sulphoxide, 3-Chloropropyloctyl
	Tellurium
	Tellurium Hexafluoride
	Tepp
	Terbufos
	Tetrabromobisphenol-A
	Tetrachloro, 2, 2, 5, 6, 2, 5-Cyclohexadiene-1, 4-Dione
	Tetrachlorodibenzo-p Dioxin, 2, 3, 7, 8 (TCDD)
	Tetraethyl Lead
	Tetrafluoroethane
	Tetramethylenedisulphotetramine
	Tetramethyl Lead

	Tetramnitromethane
	Thalium & Compounds
	Thionzin
	Thionyl Chloride
	Tirpate
	Toluene
	Toluidien-2, 4 Diisocynate
	Toluidiene-O
	Toluene 2, 6-Diisocynate
	Trans-1, 4-Chlorobutene
	Tri, -1 (Cyclohexyl) Stannyl-1H, 1, 2, 4-Trazole
	Triamino, -1, 3, 5, 2, 4, 6-Trinitrobenzene
	Tribromophenol, 2, 4, 6
	Trichloro Acetyl Chloride

	Trichloro Ethane
	Trichloro Naphthalene
	Ttichloro (chloromethyl) Silane
	Trichlorodichlorophenylsilane
	Triochloroethane, l, l, l
	Trichloroethyl Silane
	Trichloroethylene
	Trichloromethanesulphenyl Chloride
	Trichlorophenol, 2, 2, 6
	Trichlorophenol, 2, 4, 5
	Triethylamine
	Triethylenemelamine
	Trimethyl Chlorosilane
	Trimethylopropane Phosphite

	Trinitroaniline
	Trinitroanisole, 2, 2, 4, 6
	Trinolrobenzene
	Trinitrobenzoic Acid
	Trinitrocresol
	Trinitrophenetole, 2, 4, 6
	Trinitroesorcinol, 2, 4, 6 (Styphnic Acid)
	Trinitrotoluene
	Triorthocressyl Phosphate
	Triphenylin Chloride
	Turpenline Uranium & Compounds
	Vanadium & Compounds
	Vinyl Chloride
	Vinyl Fluoride

	Warfarin
	Xylene
	Xylidine
	Zinc & Compounds
	Zirconium & Compounds

SCHEDULE 2

Schedule 2

[(See rule 2(b), 2(e) 2(g)]

S.No.	**Chemicals**	**Threshold Quantities (tonnes)**	
		For application of Rules 4, 5 and 7-9	**For application of Rules 10 to 15**
1	Acrylonitrile	350	5,000
2	Ammonia	60	600
3	Ammonium nitrate (a)	350	2500
4	Ammonium nitrate fertilizers (b)	1250	10000

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)	10000	10000
8	Liquid oxygen	200	2000
9	Sodium chlorate	25	250
10	Sulphur dioxide	20	500
11	Sulphur trioxide	15	100

Note:

(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.

(c) 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

(d) 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).

SCHEUDLE 3

Schedule 3

[see rule 2(b), 2(b), 2(e), 2(g)]

Named Chemicals

Sr. No.	**Chemical**	**Threshold Quantity**		**CAS Number**
		for appln. of Rules, 5, 7-9 and**13-15**	**for appln. of Rules 10-12**	
1	**2**	**3**	**4**	**5**
	GROUP 1-TOXIC SUBSTANCES			
	Aldicarb	100 kg		116-06-3

	4-Aminodiphenyl	1 kg		96-67-1
	Amiton	1 kg		78-53-5
	Anabasine	100 kg		494-52-0
	Arseinc pentoxide, Arsenic (V) acid & salts	500 kg		
	Arsenic trioxide, Arseius (III) acid & salts	100 kg		
	Arsine (Arsenic hydride)	10 kg		7784-42-1
	Azinphos-ethyl	100 kg		2642-71-9
	Azinphos-melhyl	100 kg		86-50-0
	Benzidine	1 kg		92-87-5
	Benzidine salts	1 kg		10 kg
	Beryllium (powders, compounds}			
	Bis (2-chloroethyl) sulphide	1 kg		505-60-2
	Bis (chloromethyl) ether	1 kg		542-88-1

	Carbophuran	100 kg		1563-66-2
	Carbophenothion	100 kg		786-19-6
	Chlorefenvinphos	100 kg		470-90-6
	4-(Chloroformyl) morpholine	1 kg		15159-40-7
	Chloromethyl methyl ether	1 kg		107-30-2
	Cobalt (metal, oxides, carbonates, sulphides, as powders)	1 000kg		
	Crimidine	100 kg		535-89-7
	Cynthoate	100 kg		3734-95-0
	Cycloheximide	100 kg		66-81-9
	Demeton	100 kg		8065-48-3
	Dialifos	100 kg		10311-84-9
	OO-Diethyl S-ethylsulphinylmethyl phosphorothiate	100 kg		2588-05-8

	OO-Diethyl S-ethylsulphonylmethyl phosphorothioate	100 kg		2588-06-9
	OO-Dielhyl S-ethyllhiomethyl Phosphorothioate	100 kg		2600-69-3
	OO-Diethyl S-isopropylthiomethyl phosphorodithioate	100kg		78-52-4
	OO-Diethyl S-propylthiomethyl phosphorodithioate	100 kg		3309-68-0
	Dimefox	100 kg		115-26-4
	Dimethylcarbamoyl chloride	1 kg		79-44-7
	Dimethylnitrosamine	1 kg		62-75-9
	Dimethyl phosphoramidocynicidic acid	1 t		63917-41-9
	Diphacinone	100 kg		82-66-6
	Disulfoton	100 kg		298-04-4
	EPN	100 kg		2104-64-5
	Ethion	100 kg		563-12-2

	Fensulfothion	100 kg		115-90-2
	Fluenetil	100 kg		4301-50-2
	Fluroacetic acid	1 kg		144-49-0
	Fluoroacetic acid, salts	1 kg		
	Fluoroacetic acid, salts ester	1 kg		
	Fluoroacetic acid, amides	1 kg		
	4-Fluorobutyric acid	1 kg		462-23-7
	4-Fluorobutyric acid, salts	1 kg		
	4-Fluorobutyric acid, esters	1 kg		
	4-Fluorobutyric acid, amides	1 kg		
	4-Florocrotonic acid	1 kg		37759-72-1
	4-Fluorocrotonic acid, salts	1 kg		
	4-Fluorocrotonic acid, esters	1 kg		
	4-Fluorocrotonic acid, amides	1 kg		

	4-Fluoro-2-hydroxybutyric acid, amides	1 kg		
	4-Fluoro-2-hydroxybutyric acid, salts	1 kg		
	4-Fluoro-2-hydroxybutyric acid, esters	1 kg		
	4-Fluoro-2-hydroxybutyric acid, amides	1 kg		
	Glycolonitrile (Hydroxyacetonitrile)	00 kg		1 107-16-4
	1, 2, 3, 7, 8, 9-Hexachlorodibenzo-p-dioxin	100 g		194-8-74-3
	Hexamethylphosphoramide	1 kg		680-31-9
	Hydrogen sclenide	10 kg		7783-07-5
	Isobenzan	100 kg		297-78-9
	Isodrin	100 kg		465-73-6
	Juglone (5-Hydroxynaphithalene 1, 4 dione)	100 kg		481-39-0
	4, 4-Methylenebis (2-chloroniline)	10 kg		101-14-4

	Methyl isocynate	150 kg	150 kg	624-83-9
	Mevinphos	100 kg		7786-34-7
	2-Naphlhylamine	1 kg		91 -59-8
	2-Nickcl (metal, oxides, carbonates, sulphides, as powders)	1 t		
	Nickel tetracarbonyl	10 kg		13463-39-3
	Oxygendisulfoton	100 kg		2497-07-6
	Oxygen difuoride	10 kg		7783-41-7
	Paraxon (Diethyl 4-nitsphenyl phosphate)	100 kg		311 -45-5
	Parathion	100 kg		56-38-2
	Parathion-methyl	100 kg		298-00-0
	Pentaborane	100 kg		19624-22-7
	Phorate	100 kg		298-02-2

	Phosacetim	100 kg		4104-14-7
	Phosgene (carbonyl chloride)	750 kg		75-44-5
	Phosphamidon	100 kg		13171-41-6
	Posphine (Hydrogen phosphide)	100 kg		7803-51-2
	Promurit (1-(3, 4-dichlorophenyl)-3 triazenethiocarboxamide)	100 kg		5836-73-7
	1, 3-Propanesultone	1 kg		1120-7t-4
	1 -Propen-2-chloro- 1, 3-diol diacetate	10 kg		10118-72-6
	Pyrazoxon	100 kg		108-34-9
	Selenium hexafluoride	10 kg		7783-79-1
	Sodium selenite	100 kg		10102-18-8
	Stibine (Antimony hydride)	100 kg		7803-52-3
	Sulfotep	100 kg		3689-24-

				5
	Sulphur dichloride	1 t		10545-99-0
	Tellurium hexanuroride	100 kg		7783-80-4
	TEPP	100 kg		107-49-3
	2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin(TCDD)	1 kg		1746-01-6
	Tetramethylenedisulphotetramine	1 kg		80-12-6
	Thionazin	100 kg		97-97-22
	Tirpate (2, 4-Dimethyl-l, 3-dilhiolane-2-carboxaldehyde O-methylcarbarnoyloxime)	100 kg		26419-8
	Trichloromethanesulphenyl chloride	100 kg		594-42-3
	1-Tri (cyclohexyl) stannyl-l H-1, 2,. 4-triazole	100 kg		41083-11-8
	Triethylenemelamine	10 kg		51-18-3
	Warfarin	100 kg		81-81-2

	GROUP 2-TOXIC SUBSTANCES			
	Acetonecyanohydrin (2-Cyanopropan-2-01)	200 t		75-86-5
	Acrolein (2-Propenal)	20 t		107-02-8
	Acrylonitrile	20 t	200 t	107-13-1
	Allyl alcohol (Propen-1-01)	200 t		107-18-6
	Alylamine	200 t		107-11-9
	Ammonia	50 t	500 t	7664-41-7
	Bromine	40 t		7726-95-6
	Carbon disulphide	20 t	200 t	75-15-0
	Chlorine	10 t	25 t	7782-fO 5
	Dipneyl ethane di-isocynate (MDI)	20 t		101-68-8
	Ethylene dibromide (1, 2-Dibromoethane)	5 t		106-93-4
	Ethyleneimine	50 t		151-56-4

	Formaldehyde (concentration £90%)	5 t		50-00 0
	Hydrogen chloride (liquified gas)	250 t	25t	7647-01-0
	Hydrogen cynide	5 t	20 t	74-90-8
	Hydrogen fluoride	5 t	50 t	7664-39-3
	Hydrogen sulphide	5 t	50 t	7783-06-4
	Methyl bromide (Bromomethane)	20 t		74-83-9
	Nitrogen oxides	50 t		11104-93-1
	Propylineimine	50 t		75-55-8
	Sulphur dioxide	20 t	250 t	7446-09-5
	Sulphur trioxide	15 t	75 t	7446-11-9
	Tetraethyl lead	5 t		78-00-2
	Tetramethyl lead	5 t		75-74-1

	Toluene di-isocvnate (TDI)	10 t		584-84-975-01-4
	GROUP 3-- HIGHLY REACTIVE SUBSTANCES			
	Acetylene (ethyne)	5 t		74-86-2
	a. Ammonium nitrate (1)	350 t	2500 t	6484-52-2
	b. Ammonium nitrate in form of fertiliser (2)	1250 t		
	2 2-Bis (tert-butylperoxy) butane) (eoncentration ³ 70%)	5 t		2167-23-9
	1 l-Bis (tert-butylperoxy) cyclohexane (concentration ³ 80%)	5 t		3006-86-8
	tert-Butyl proxyacetate (concentration £ 70%)	5 t		107-71-1
	Tert-Butyl peroxyisobutyrate (concentration ³ 80%)	5t		109-13-7
	tert-Butyl peroxy isopropyl carbonate (concentration ³ 80%)	5 t		2372-21-6
	tert-Butyl peroxymaleate(concentration-³ 80%)	5 t		1931-62-0

	Tert-Butyl peroxypivalate (concentration ³ 77%)	50 t		927-07-1
	Dibenzyl peroxydicarbonate (concentration ³ 90%)	5 t		2144-45-8
	Di-sec-butyl peroxydicarbonate (concentration ³ 80%)	5 t		19910-65-7
	Diethyl peroxydicarbonate (concentration ³ 30%)	50 t		14666-78-5
	2, 2-dihydroperoxypropane (concentration ³ 30%)	5 t		2614-76-08
	Di-isobutyryl peroxide concentration ³ 50%)	50 t		437-84-13
	Di-n-propyl peroxydicarbonate(concentration ³ 80%)	5 t		16066-38-9
	Ethylene oxide	5 t	50 t	75-21-8
	Ethyl nitrate	50 t		625-58-1
	3, 3, 6, 6, 9, 9Hexamcthyl-1, 2, 4, 5-tert oxacyclononane (concentration ³ 75%)	50 t		22397-38-7
	Hydrogen	2 t	50 t	1333-74-0

	Liquid Oxygen	200 t		7782-41-7
	Methyl ethyl ketone peroxide (concentration ³ 60%)	50t		1338-23-4
	Melhyl isobutyl ketone peroxide(concentration ³ 60%)	50 t		37206-20-5
	Peracelic acid (concentration ³ 60%)	50 t		79-21-0
	Propylene oxide	50 t		75-56-9
	Sodium chlorate	25 t		7775-09-9
	GROUP 4-EXPLOSIVE SUBSTANCES			
	Barium azide	50 t		18810-58-7
	Bis (2,4, 6-trinilrophenyl) amine	50 t		131-073-7
	Chlorotrinitro benzene	50 t		28260-61-9
	Cellulose nitrate (containing 12.6% Nitrogen)	50 t		9004-70-0

	Cyclotetramethyleneteranitramine	50 t		2691-41-0
	Cyclotrimetylenetiranitramine	50 t		121-82-1
	Diazodinitrophenol	10 t		7008-81-3
	Diethylene glycol dinitrate	10 t		693-21-0
	Dinitrophenol, salts	50 t		
	Ethylene glycol dinitrate	10 t		628-96-6
	1-Gyanyl-4-nitrosaminoguanyl-1-tetrazene	10 t		109-27-3
	2, 2', 4, 4,' 6, 6'-Hexanirostilbene	50 t		20062-22-0
	Hydrazine nitrate	50 t		13464-97-6
	Lead azide	50 t		13424-46-9
	Lead styphnate (Lead 2, 4, 6-trinitroresorcinoxide)	50 t		15245 44-0
	Mercury fuliminate	10 t		20820-45-5

	N-Methyl-N, 2, 4 6-tetranitroaniline	50t		479-45-8
	Nitroglycerine	10t	10 t	55-63-0
	Pentacrythritol tetranitrate	50t		78-11-5
	Picric acid (2, 3, 6-Tr.nitrophenol)	10 t		88-89-1
	Sodium picramate	50 t		831-52-7
	Styphnic acid (2, 4, 6-Trinitroresorcinol)	50 t		82-71-3
	1, 3, 5-Triamino-2, 4, 6-trinitrobenzene	50 t		3058-38-6
	Trinitroaniline-	50 t		2695242-1
	2, 4, 6-Trinitroanisole	50 t		606-35-9
	Trinitrobenzene	50 t		25377-32-6
	Trinitrobenzoic acid	50 t		2890S-71-7
	2,4, 6-Trinitrophenitolc	50 t		47324-3
	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
	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

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.

c. 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 thc concentration of ammonium nitrate is greater than 90% by weight.

(d) 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

Schedule 4

[See rule 2(c) 2(e)]

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

Schedule 5

[see rule -3)(2)]

Composition of the Central Crisis Group

i. Secretary, Chairperson

Govt. of India,

Ministry of Environment & Forests

ii. Joint Secretary/Adviser (Environment & Forests) Member Secretary
iii. Joint Secretary (labour) Member
iv. Joint Secretary/ Adviser "

(Chemical & Pharmaceuticals)

v. Director General, Civil Defence "
vi. Fire Advisor, Directorate General Civil Defence "
vii. Chief Controller of Explosive "
viii. Joint Secreiary, (Deptt. of Industries) "
ix. Director General, Indian Council of Medical Research "
x. Joint Secretary (Health) "
xi. Chairman, Central Pollution Control Board "
xii. Director General, Indian Council of Agriculture Research "
xiii. Director General, Council of scientific & Industrial Research "
xiv. 4 Experts (Industrial Safety and Health) "
xv. Joint Secretary(Fertilizers) "
xvi. Director General(Telecom) "
xvii. 2 Representatives of Industries to "

be nominated by the Central Govt.

xviii. Joint Secretary (Surface Transport) "
xix. General Manager (Rail safety) "
xx. Adviser, Centre for environment and "

Explosive safety

xxi. One Representative of Indian Chemical "

Manufacturers Association to be nominated by the Central Govt.

SCHEDULE 6

Schedule 6

[See rule 6(2)]

Composition of the State Crisis Group

i. Chief Secretary Chairperson
ii. Secretary (Labour) Member Secy.
iii. Secretary (Environment) Member
iv. Secretary (Health) "

v. Secretary (Industries) "
vi. Secretary (Public Health Engg.) "
vii. Chairman, State Pollution Control Board "

viii 4-Experts (Industrial Safety & Health) "

to be nominated by the State Government

viii. Secretary/Commissioner(Transport) "
ix. Director(Industrial Safety)/Chief "
x. Inspector of Factories "
xi. Fire Chief "
xii. Commissioner of Police "
xiii. One Representative from the Industry "

to be nominated by the State Govt.

SCHEDULE 7

Schedule 7

[See rule 8]

Composition of the District Crisis Group

i. District Collector Chair person
ii. Inspector of Factories Member Secy.
iii. District Energy Officer Member
iv. Chief Fire Officer Member
v. District Information Officer "
vi. Controller of Explosives "
vii. Chief, Civil Defence "
viii. One Representative of Trade Unions "

to be nominated by the District Collector

ix. Deputy Superintendent of Police "
x. District Health Officer/Chief Medical Officer "
xi. Commissioner, Municipal Corporations "
xii. Representative of the Department "

of Public Health Engineering

xiii. 4 Experts (Industrial Safety & Health) "

to be nominated by the District Collector

xiv. Commissioner (Transport) "
xv. One Representative of Industry "

to be nominated by the District Collector

xvi. Chair-person/Member-Secretary "

of Local Crisis Groups

SCHEDULE 8

Schedule 8

[See rule 8)]

Composition of the Local Crisis Groups

i. Sub-divisional Magistrate / District Chair person

Emergency Authority

ii. Inspector of Factories Member Secy.
iii. Industries in the District/ Member

Industrial area/ industrial pocket

iv. Transporters of Hazardous Chemicals(2 Numbers) "
v. Fire Officer "
vi. Station House Officer (Police) "
vii. Block Development Officer "
viii. One Representative of Civil Defence "
ix. Primary Health Officer "
x. Editor of local News paper "
xi. Community leader/Sarpanch/Village "
xii. Pradhan nominated by Chair-person "
xiii. One Representative of Non-Government "
xiv. Organisation to be nominated by the Chair-person "
xv. Two Doctors eminent in the Local area, to be "

nominated by Chair-person

xvi. Two Social Workers to be nominated by the Chair-person "