

## SCHEDULE II

### PREMISES OF FACTORIES / INDUSTRIES (GROUP-A)

#### MEASURES SPECIFIED FOR DEALING WITH OUTBREAK OF FIRE UNDERRULE 9 OF CIVIL DEFENCE (SPECIAL POWERS) RULES 1951 AS MODIFIED

##### GENERAL

These measures are specified for dealing with outbreak of Fire in the premises of Textile, Spinning, Weaving, Dying, Finishing, Printing, Sizing, Garments, Hosiery, Polyester, Jute, Woolen, Leather Products, Tobacco, Cigarettes, Plywood, Tea blending & packing factories, Board, Packages & Paper cone factories, Pulp & Paper, Fabric, Packing factories, Carpet / Synthetic manufacturing, Leather Products, Cement, Steel Mills, Mechanical & Auto-Parts Industries, Ceramic and Pottery/ Sanitary Fitting Manufacturing factories, Glass, Poultry Feed, Agro Chemicals, Soap, Pharmaceuticals, Match factories, Sugar, Mills, Automobile Manufacturing & Assembling, Electrical / Electronic Appliances Manufacturing Industries, Vegetable & Fruits product manufacturing / dehydrating / drying factories, Juice & Beverages factories / Industries, Fertilizer Industry, Industrial Gases Manufacturing / Processing / Filling / Refilling Plants, Food Processing / Biscuit / Bread factories, Milk Pasteurizing / Dairy plants under the provision of rule 9 of Civil Defence (special powers) rules 1951 and shall be complied with by all concerned. Any contravention of these provisions is punishable with imprisonment up to six months or with fine or with both.

##### WARNING SYSTEM

1- A suitable Automatic Fire Detection System should be provided in sensitive / high fire risk areas.

2- A centrally controlled electrical siren system for Fire alarm shall be installed with at least one siren of 5 H.P capacity (double impeller). In addition one hand operated siren of Civil Defence specification shall be made available in each major risk area of the industry for local Fire alarm, but a minimum of two such sirens shall be provided in each industry. These hand operated sirens may also be used for general warning in case of electrical failure / break down.

## WATER SUPPLY SYSTEM

### a) Fire Hydrants

1) These shall be of standard size  $2 \frac{1}{2}$ " outlet preferably pillar type wheel operated and installed throughout the premises at suitable distances, but not exceeding 100 meters, however, all major Fire risk areas i.e. stacks of raw material and other combustible materials both in door and out door, waste areas, blow rooms, or other such hazardous processing sections etc. shall have hydrants at a distance not exceeding 25 meters (Hose Box) from each other. If any risk area is less than 25 meters, at least one such hydrant should be provided. It should, however, be ensured that hydrants are not blocked by any type of storage.

2) Each hydrant should be capable of giving a discharge of at least 250-500 G.P.M. of water at 50-80 P.S.I. and shall have the following equipment in good working condition along with it or installed nearby on the wall in a Hose Box painted red:

- ✓(i) Hose 75 ft or 100 ft long,  $2 \frac{1}{2}$ " Diameter (Nylon Top, Rubber Lined) with Brass Couplings One length.
- ✓(ii) Branch pipe with nozzle of appropriate size ( $1/2$ " or  $3/4$ " )- One
- ✓(iii) Fireman Axe - One

### b) Water Storage

A minimum of 20,000 gallons of water should be available at the premises all the time in the shape of surface tank or over head water tank with arrangements to boost up the pressure up to 80 P.S.I and continuous replenishment of water. However textile, polyester, rayon and jute mills having more than 12,500 spindles of installed capacity and other industries involving major Fire risks in the shape of combustible material like, paper, board, packages etc. should have storage of water ranging between 50,000 to 1, 00,000 of gallons. All overhead water tanks should be fitted with water gauges.

### Alternative Means of Power Supply

In case of electrical failure / shut downs, which are quite common during Fires, alternative sources of power i.e. Diesel Generator / Diesel Driven Pump etc should be provided to maintain water supply.

**PROTECTION AGAINST SOLID AND ORDINARY FIRES (CLASS 'A' FIRES)**

Every processing department, warehouse, store, both indoor and outdoor, waste area and block of buildings of all mills and factories should be provided with the following fire fighting equipment for tackling the fire quickly at incipient stages:

- ✓ a) **Water Type Fire Extinguishers** (Stored pressure) capacity 10 liters. One Water Type fire extinguisher (stored pressure) of 10 liters capacity for each 210 m<sup>2</sup> area or part thereof with maximum distance of 75 feet between each other provided not less than two fire extinguishers on each floor.
- b) **Fire point**

Comprising of the following:		One per each section, to be established at a central place.
Fire buckets (18 liters)	-4	The buckets shall be painted red. Kept permanently on stand and filled with water / sand.
Shovel	-1	
Fireman axe	-1	
Safety Helmets (red)	-4	

**PROTECTION AGAINST OIL / LIQUID FIRES (CLASS 'B' FIRES)**

All industries manufacturing combustible liquids / items / products shall have one AFFF type Fire Extinguisher 10 liters capacity or Dry Chemical Powder type Fire Extinguishers having 6 kg capacity in good working condition with maximum distance of 30 feet between each other provided not less than two fire extinguishers in each of their processing department, oil tank, raw material storage area warehouse etc.

In addition to the above, these factories must have one trolley mounted dry chemical Fire Extinguisher 50 kg capacity (Controlled type) and one AFFF Trolley Mounted Fire Extinguisher of 100-150 liters capacity in good working condition as back up appliance. These Extinguishers should be placed in the vicinity of most important oil Fire risk area within the factory at least 5-10 meters away from the actual material of fire.

All other industries having storage capacity 6,000 liter at their POL Stores shall have a minimum of two Dry Chemical Powder Fire Extinguishers 6 kg (Stored pressure type) and six AFFF Fire Extinguishers 10 liters capacity in good working condition. If the quantity exceeds 6,000 liters at one place, then two Fire Extinguishers of AFFF or two Dry Chemical

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- |  |    |   |
|--|----|---|
| ✓ a) <b>Water Type Fire Extinguishers</b><br>(Stored pressure) capacity 10 liters. |    | One Water Type fire extinguisher (stored pressure) of <u>10</u> liters capacity for each <u>210</u> m <sup>2</sup> area or part thereof with maximum distance of <u>75</u> feet between each other provided not less than two fire extinguishers on each floor. |
| b) <b>Fire point</b><br>Comprising of the following:                               |    | One per each section, to be established at a central place.   |
| Fire buckets (18 liters)   | -4 | The buckets shall be painted red. Kept permanently on stand and filled with water / sand.   |
| Shovel   | -1 |   |
| Fireman axe  | -1 |   |
| Safety Helmets (red)   | -4 |   |

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All industries manufacturing combustible liquids / items / products shall have one AFFF type Fire Extinguisher 10 liters capacity or Dry Chemical Powder type Fire Extinguishers having 6 kg capacity in good working condition with maximum distance of 30 feet between each other provided not less than two fire extinguishers in each of their processing department, oil tank, raw material storage area warehouse etc.

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### TRAINING IN FIRE FIGHTING AND MAINTENANCE OF FIRE EQUIPMENT

a. A qualified Fire Officer must be appointed in the factory. He shall be made responsible for training of personnel, maintenance and operation of fire equipment installed in the factory. Weekly Fire practices and inspections of all Fire appliances shall be carried and record in this regard should properly be maintained.

b. A minimum crew of four persons fully trained in fire fighting shall be available in the factory premises during each shift for the operation of fire hydrants, hoses, pumps and other specialized equipment for fighting the fire effectively. These persons may be specially recruited as firemen. In addition Security staff should also be trained in the use of Fire Hydrants / appliances.

c. Two persons from each shift and in each processing department shall be specifically trained and made available for the use of Fire Extinguishers installed within the department and the equipment provided at the fire point for tackling the fire immediately at the incipient stages. Operators manning the electric control room, pump room etc shall also be trained in the use of Fire Extinguishers installed therein.

d. Proper nominal rolls of the persons as required in Para B and C above should be maintained by the Fire officer and a copy pasted on the noticed board for information of all concerned.

e. It shall be ensured that the hydrants, hoses, Extinguishers and all other fire appliances provided in the factory premises are in good working condition.

### FIRST AID

Each processing department of the industry shall have one first aid box consisting of the essential items for rendering first aid at the spot. Two persons per department and for each shift must be specifically trained and made available in the provision of first aid to their co-workers. These arrangements shall be in addition to the arrangements made centrally by the management.

### PREVENTIVE MEASURES

- ✓ 1) Work Permit System should be introduced for maximum

- v) Smoking should be prohibited in work area. Matches and pocket lighters should be prohibited in the plant.
- vi) Adequate spacing should be maintained for the storage of raw material and finished goods.
- vii) Stock of all flammable liquids used in this industry should be reduced to minimum in the work room and stored in a safe place when not in use.
- viii) Good exhaust ventilation may be adopted.

**NOTES:**

1. Fire Plan of the factory should be prepared and provided to the District Civil Defence Authorities.
2. There will be a Written Emergency Action Plan or SOP (Standard Operating Procedure) covering all aspects of Fire Fighting and Evacuation of employees in case of any fire emergency. This plan must be available for employee review.
- \* 3. All the fire extinguishers should be installed on the walls at the height of 4 feet from the floor, conspicuously located where they should readily accessible preferably they should be located along normal path of travel, including exit from areas.
4. All fire extinguishers will be maintained in a fully charged and working condition all the time.
- ✓ 5. Fire / Evacuation drills will be carried out periodically. Record should be maintained in this regard.
6. A fire safety room equipped with all required Personal Protective Equipment (PPE) should be provided.
7. A fire safety check list is enclosed herewith for elimination of fire risk. Necessary actions should be taken accordingly.
8. Defaulters are punishable under this rule with imprisonment up to six month or fine or both.

### FIRE SAFETY "DO NOTs" and "DO NOTs"

- DO NOT smoke in "No Smoking" areas.  
DO observe "No Smoking" rule strictly in your premises.
  
- DO NOT use or operate dirty or greasy equipment / machinery.  
DO have the equipment / machinery cleaned and serviced regularly.
  
- DO NOT accumulate unwanted items at your workplace.  
DO dispose of unwanted items at regular intervals to ensure good housekeeping at your workplace.
  
- DO NOT use corridors, walkways, or passageways that form parts of the emergency escape route at your workplace for storage.  
DO keep corridors, walkways and passageways free of obstructions.
  
- DO NOT use fragile containers to store flammable liquids or keep flammable substances in places where large amounts of heat will build up or near an ignition source.  
DO store flammable liquids in proper, unbreakable containers and keep flammable substances in well-ventilated places and away from any ignition source.
  
- DO NOT leave electrical appliances or equipment continued to be energized when they are not in use, especially after office / working hours.  
DO switch off at the mains all electrical appliances or equipment that are not in use, especially after office / working hours.
  
- DO NOT put any liquid or thing that is flammable or combustible near an electrical switchboard or an enclosure containing electrical

- DO NOT overload the electrical circuit by drawing current from one power outlet to multiple electrical appliances or equipment simultaneously.

DO use one power outlet for one electrical appliance or equipment, wherever possible.

- DO NOT overload extension cords. Do not plug multiple extension cords into one another.

DO know the capacity of the extension cord. Make sure the amperage of the appliances being plugged in, do not exceed the rating. Best to use a circuit breaker protected multiple outlet strips.

- DO NOT touch or tamper with any electrical gear or conductor, unless you have made sure it is dead and earthed. High voltage apparatus may give leakage shock or flash over even without touching.

DO ensure that all the controlling switches are opened and locked or the fuse withdrawn before working on any circuit or apparatus.

- DO NOT test a circuit with bare fingers or hand or other make shift devices to determine whether or not it is alive.

DO treat circuit as alive until they are proved to be dead.

- DO NOT close or open a switch or fuse slowly or hesitatingly. Do it quickly, positively and firmly.

DO turn away your face whenever an arc or a flash is expected.

- DO NOT use fire extinguishers on electrical equipment unless it is clearly marked as suitable for that purpose.

DO choose right type of fire extinguishers on electrical equipment.

- DO NOT wedge open any fire door.

DO ensure that fire doors are kept closed but unlocked at all times.