

**SELF APPRAISAL/CHECK LIST FOR CHEMICAL INDUSTRIES**  
**(RUBBER & PLASTIC) IS 11457(PART)1985**

- 1.Name and Address of the Industries :-
- 2.Name and address of the owner :-
- 3.Area of the Premises :-
- 4.Particulars of clearance from the licensing authorities :-

<b>S.No</b>	<b>Fire Safety Measures</b>	<b>Yes</b>	<b>No</b>	<b>Not Applicable</b>
*1	Weather the factory has enough open space around to minimize the possible damage to nearby property or community	Yes	No	--
*2	Whether no railway track is within 30M (10M if the rail track are serviced by diesel or electrical locomotive)	Yes	No	--
*3	Weather no public building/dwelling/house/workshop is within 30M from the factory	Yes	No	--
*4	Whether the industry has fencing/compound all around the plot	Yes	No	--
*5	Whether the plot is kept free of combustible material such as grass, woods, other vegetations, scrap paper, wood, saw dust etc.	Yes	No	--
*6	Weather minimum 6M wide road are there in between the blocks to allow free movement of fire engine and other rescue appliances	Yes	No	--
*7	Whether the main gate of the factory is 5M width and has hand room of 4.5M	Yes	No	--
8	Whether a minimum distance of preferable 15M and not less then 8M is maintained between ant two buildings (from wall to wall) used for manufacturing purpose using combustible and flammable materials.	Yes	No	Not Applicable
*9	Whether no transformer or electric generator or boiler are within 15M from manufacturing building	Yes	No	--
*10	Whether no residential or official building is within 20M from the nearest manufacturing building	Yes	No	--
*11	Whether separate building is there for raw materials and finished products	Yes	No	--
*12	Whether each building is divided into smaller	Yes	No	--

	compartments by compartment wall. (the communicating doors in between compartments should have 2 hours fire resistance)			
*13	Whether compartment walls are of non-combustible material walls of the main building	Yes	No	--
*14	Whether no permanent opening are provided in separating walls of the main building	Yes	No	--
*15	Whether buildings used for manufacturing purpose have fire resistance equivalent to that of type I construction, as specified in IS 1642-1986	Yes	No	--
*16	Whether buildings used for godowns have fire resistance equivalent to that of type II construction, as specified in IS 1642-1986	Yes	No	--
17	Whether buildings used for Utility have fire resistance equivalent to that of type III construction, as specified in IS 1642-1986	Yes	No	Not Applicable
*18	Whether the height of manufacturing buildings is less than 10M (it is advisable to have a single story building for manufacturing purpose) buildings used for godowns have fire resistance equivalent to that of type II construction, as specified in IS 1642-1986	Yes	No	--
*19	Whether no wooden floor is provided	Yes	No	--
*20	Whether adequate means of escape are provided as per IS 1642-1986 and NBC(Part IV) for safe evacuation of all inmates during emergency	Yes	No	--
*21	Whether stairs, elevators and other means of exit are protected by non-combustible fire resisting enclosure, raising fire resistance rating equal to that of the building	Yes	No	--
*22	Whether any openings in these enclosure are fitted with fire check doors	Yes	No	--
*23	Whether no beams, sill and the like are there in areas where combustible dusts are likely to form.	Yes	No	--
*24	Whether compartments in which the operations involve handling rubber, plastic, sulphur or combustible dust are kept separate from the other sections(such compartments should be of non-combustible fire resistant construction with adequate explosive venting system above the head level	Yes	No	--
*25	Whether roofs are directly supported on wall with out any intermediate columns or posts	Yes	No	--
*26	Whether roof covering is of non-combustible and fire resistant. (underside of the roof should be painted only with fire radiant paint)	Yes	No	--

*27	Whether godowns are only single story construction	Yes	No	--
*28	Whether adequate ventilation is provided for the processing and storage blocks with due regard to nature of the materials	Yes	No	--
*29	Whether all doors are non-combustible material and self closing fire resistant type confirming to IS 3614(part) 1996	Yes	No	--
*30	Whether there are two doors in each room arranged to open out ward or at least two widely separated alternate exit to the corridor or to the outside	Yes	No	--
31	In process building Whether at least three doors are provided	Yes	No	Not Applicable
*32	Whether there are no external windows or openings except the one for lighting and ventilation	Yes	No	--
*33	Whether windows are fitted with plain glass in areas where risk is involved	Yes	No	--
*34	Whether the floor of manufacturing area is water proof	Yes	No	--
*35	Whether fire-resisting walls compartment floor areas in processing and storage areas. With self closing double door	Yes	No	--
36	In a multi storied structure whether space identified the outside of the wall under the wall under the window sill by means of 25cms dia yellow dot to indicate location of ladder for the access of fire fighters.	Yes	No	Not Applicable
*37	Whether aisles are of minimum 2.5M wide and free from storage and obstructions.	Yes	No	--
*38	Whether the following areas are separated by fire walls to prevent quick spread of fire <ul style="list-style-type: none"> <li>a. Raw and semi-finished materials storage area</li> <li>b. Moulding, extrusion or processing area</li> <li>c. Finished material storage</li> <li>d. Maintenance and utility area</li> </ul>	Yes	No	--
*39	Whether air inlets and out lets are provided in the compartmentition walls to properly ventilate a room where manufacturing process are carried out involving flammable vapors or combustible rubber or plastic dusts.	Yes	No	--

### **ELECTRICAL INSTALLATIONS**

*40	Whether all electrical installations are in avoidance with IS 1646-1982	Yes	No	--
*41	Whether all electric motors and lighting fittings and switches are flame proof in hazardous areas as per IS 5572(part I) 1978	Yes	No	--
*42	Whether provision is made for remote control of all electric circuits so that the current of the lightning and power in the building can be switched off outside the building at a distance of 1.25M from the nearest doorway (provision may also be made for switching off the whole factory by switches located at one or more central points such as office or watchman cabin)	Yes	No	--
*43	Whether no electrical switches are mounted on any machine which produces excessive vibration, while in operation.	Yes	No	--
*44	Whether all incoming feeders from main substation are through underground cables	Yes	No	--

### **STORAGE AND HANDLING OF MATERIALS**

*45	Whether bulk storage of combustible raw/finished products are kept separate from manufacturing area	Yes	No	--
*46	Whether vessels used for storage of products having a flash point 65°C are vented to the of the building.	Yes	No	--
*47	Whether it is ensured that no flammable liquid or vapors are present in the building or section used for storage of combustible materials	Yes	No	--
48	Whether flammable liquid drum is at least 20M away from building and other storage areas (drums should be stacked at intervals of 5M of separation to permit effective approach)	Yes	No	Not Applicable
49	Whether all combustible open storage area are fences and opening provided for fire fighting purposes	Yes	No	Not Applicable
50	Whether flammable liquid tanks are surrounded by bunds of sufficient height	Yes	No	Not Applicable
51	Whether adequate drainage facility is provided to carry liquid to some areas where it can burn without endangering adjacent building or other storage.	Yes	No	Not Applicable
52	Whether all openings to the tanks excepts vents are properly closed	Yes	No	Not Applicable
53	Whether vents opened to atmosphere are fitted	Yes	No	Not

	with same arresters or pressure vacuum vents			Applicable
54	Whether each content is clearly marked about its content, capacity and nature of the contents.	Yes	No	Not Applicable
*55	Whether all tanks are earthed suitably to dissipate static charge	Yes	No	--
*56	Whether all storage areas are provided with sprinklers unless the storage building is located at least 20M away from flammable liquid storage, combustible material in open, or any other building high away.	Yes	No	--
57	Whether no drums of solvents are stored in working areas.	Yes	No	Not Applicable
58*	Whether all sources of ignitions are kept away from operations	Yes	No	--
59*	Whether exhaust fans are provided to prevent excessive accumulation of dust	Yes	No	--
60*	Whether chemicals such as carbon bio sulphide benzene, to luene, vinly acetate and ethyl acetate are stored in closed building with ventilation at floor levels.	Yes	No	--

### **PROCESSING**

*61	Whether effective cooling arrangements are provided for removal of heat shredding, grinding, mastication, kneading, and similar operations to prevent combustion of materials.	Yes	No	--
62	Whether provision is made to control temperatures with trip set for a pre-determined temperature with alarm of shut heating, element, steam, where applicable.	Yes	No	Not Applicable
63	Whether provision is built in water sprayers and steam nozzles is made to extinguish dries fire.	Yes	No	Not Applicable
64	Whether no open flame, naked light, smoking, electric or gas cutting, and welding are permuted with in the building containing polymer process.	Yes	No	Not Applicable
*65	Whether all hot work viz. welding cutting, grinding, etc is carried out after written approval from appropriate authority.	Yes	No	--
*66	Whether all equipments is treated to diaper static charges.	Yes	No	--

### **FIRE FIGHTING**

*67	Whether automatic fire alarm/gas dictators are provided to alert all persons to combat fire emergency.	Yes	No	--
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68	Whether sprinklers installations in high is balanced with adequate water supply together with current board and roof venting.	Yes	No	Not Applicable
69	Whether self contained breathing provided in sufficient numbers and operating personal are trained in it use.	Yes	No	Not Applicable
*70	Whether no stack height exceeds 4M	Yes	No	--
*71	Whether there is minimum 1M clearance between the tops of stack and the underside of the lowest beam grinders or other obstructions.	Yes	No	--
*72	Whether sufficient number of water CO2 and DCp extinguishers are provided at all places as per IS 2190:1992	Yes	No	--
*73	Whether personal protective equipment is provided and maintained	Yes	No	--
74	Whether fire fighting foam is provided in sufficient quantity taking into considerations the characters of liquid	Yes	No	Not Applicable
*75	Whether fire hydrant system is provided to discharge water 7kg/CM 2 2250LPM	Yes	No	--
*76	Whether static water tank of minimum 2.7 lakh liters is provided (to meet 2 hours continuous fire fighting)	Yes	No	--
*77	Whether no smoking /signage's are provided in large letters in the vicinity of the processing form tank and storage area	Yes	No	--
*78	Whether boards indicating stock of flammable/hazardous material are displayed at places accessible from outside at all tanks.	Yes	No	--
*79	Whether all staff is trained in emergency plan of action and first aid fire fighting	Yes	No	--
*80	Whether security personals are trained in the usage of fire safety system.	Yes	No	--
*81	Whether fir drills are conducted periodically?	Yes	No	--
*82	Whether all fire safety systems are maintained in trim working condition.	Yes	No	--

**NOTE:- All safety Measures with \* mark are mandatory.**

**(Signature of the owner)**