

**SELF-APPRAISAL/CHECKLIST FOR CHEMICAL INDUSTRIES**  
(Using chemicals with flash point below 23 °C)

1	Name of the Address of the Industry	
2	Name and Address of the Owner	
3	Area of the premises	
4	No. of Floors	
5	Particulars of clearances from the licensing authorities	
6	Covered area	

S.No	Fire Safety Measure	Yes	No	N.A
1*	Whether the Factory is located away from residential and public buildings and densely populated areas(No public building should be located within 30m)	Yes		
2*	Whether the Factory has enough open space around to minimize the possible damage to near by property and community	Yes	No	---
3*	Whether the industry has fencing compound all round the plot	Yes	No	---
4*	Whether the plot is kept free of weeds, other vegetations, scrap paper, wood, saw Dust etc.,	Yes	No	---
5*	Whether minimum 06m wide roads are there in between blocks and interblock distance is minimum 15m	Yes	No	---
6*	Whether there is a minimum distance of 30m between the blocks which have explosion hazard.	Yes	No	---
7*	Whether the main gate of the Factory is 5m width and has a head room of 4.5m.	Yes	No	---
8*	Whether no transformer electric generator, or boiler are within 15m from manufacturing building.	Yes	No	---
9*	Whether separate building are there for raw materials, processes and for finished products.	Yes	No	---
10*	Whether each building is divided in to smaller compartments by compartment wall.(The communicating Door in between compartments should have 2 hrs fire resistance)	Yes	No	---
11*	Whether compartment are non combustible material and have same resistance as walls of the main building	Yes	No	---
12*	Whether no permanent openings are provided in separating walls except for check doors.	Yes	No	---
13*	Whether building used for manufacturing purpose have fire resistance equivalent to that of Type I construction as specified in IS 1642-1986	Yes	No	---
14*	Whether building used as godowns have a fire resistance equivalent to that of Type II construction as specified in IS 1642-1986	Yes	No	---
15*	Whether adequate means of escape are provided as per IS 1644:1986 and NBC(Part-IV) for safe evacuation of all inmates during any emergency.	Yes	No	---
16*	Whether Stairs elevators and other means of exit are protected by Non- combustible fire resistance rating equal to that of the building.	Yes	No	---
17*	Whether roof covering is No-Combustible and the resistant, (Underside of the roof should be painted with fire retardant paint.	Yes	No	---
18*	Whether adequate ventilation is provided for the processing and storage blocks with due regard to nature of the materials.	Yes	No	---
19*	Whether there are at least two doors in each room arranged to open outward or at least two widely separated alternate exit to the corridors door to the outside.	Yes	No	---
20*	In process buildings whether at least 3 doors are provided.	Yes	No	---
21*	Whether windows are fitted with plain glass in areas where explosion risk is involved.	Yes	No	---
22*	Whether floor areas in processing and storage godowns are compartmented by fire resisting walls with self closing double doors.	Yes	No	---
23*	Whether aisles are of minimum 2.5 m wide and free from storage and obstructions.	Yes	No	---
24*	Whether the following areas are separated by the walls of prevent quick spread of fire	Yes	No	---

A	Raw and semi finished material storage area	Yes	No	---
B	Moulding, extrusion or processing area	Yes	No	---
C	Finished Material storage	Yes	No	---
D	Maintenance and utilities area	Yes	No	---
25*	Whether all electrical installations are in accordance with IS 1646-1982	Yes	No	---
26*	Whether all electric motors and lighting fittings and switches are flame proof and dust proof in hazardous areas as per IS 5572 (Part I) – 1978	Yes	No	---
27*	Whether provision is made for remote control of electrical circuits so that the current for lighting and power in the building can be switched off outside the building at a distance of 1.25 m from the nearest doorway.	Yes	No	---
28*	Whether all incoming feeders from main substation through underground cables	Yes	No	---
	<b>Storage and handling of Materials</b>	Yes	No	---
29*	Whether bulk storage of combustible raw/finished products are kept separate from manufacturing areas.	Yes	No	---
30*	Whether vessels used for storage of products having a flash point below 65° C are vented to the outside of the building.	Yes	No	---
31*	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	---
32*	Whether flammable liquid drum storage 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	---
33*	Whether flammable liquid tanks are surrounded by bunds of sufficient height to contain the entire contents in case of rupture	Yes	No	---
34*	Whether all precautions are taken to minimize the spills of chemicals and its spreading while storage or handling.	Yes	No	---
35*	Whether all openings to tanks except vents are kept securely closed.	Yes	No	---
36*	Whether vents open to atmosphere are fitted with flame arrestors or pressure vacuum vents.	Yes	No	---
37*	Whether each tank is clearly marked regarding its capacity, flammability and nature of contents.	Yes	No	---
38*	Whether all tanks are earthed suitably to dissipate static charges.	Yes	No	---
39	Whether no drums of solvent are stored in working areas.	Yes	No	N.A
40*	Whether all sources of ignition are kept away from the operations	Yes	No	---
41*	Whether Metallic pipes through which flammable solvents flow are earthed	Yes	No	---
42*	Whether loading and unloading of bulk flammable solvents is done in authorised premises	Yes	No	---
43*	Whether all safety measures are adopted in the storage of pressurized cylinders.	Yes	No	---
44*	Whether due precautions is taken not to store incompatible gasses together (Viz. Hydrogen and Chlorine, Ammonia and Chlorine)	Yes	No	---
45	Whether all the reaction kettles and pressure vessels are properly maintained and periodically tested to ascertain their capability to withstand optimum pressure for which they are designed.	Yes	No	N.A
46*	Whether all temperature indicators, pressure gauges, control valves, pressure relasing valves attend to the process equipments must be periodically tested and their proper functioning is ensured.	Yes	No	---
47*	Whether all utility lines conveying steam, chilled water, brine, Nitrogen etc., bear clear identification tags and identifiable by color codes.	Yes	No	---
48*	Whether all equipment, receivers, storage tanks, barrels etc are adequately earthed to the ground through metal conduits and periodically inspected and tested.	Yes	No	---
49*	Whether electrical jobs are performed by authorised persons only.	Yes	No	---
50*	Whether all Material Data Safety Sheets (MSDS) are made available with stores in charge and security personnel.	Yes	No	---
51*	Whether all statutory requirements of Indian explosive Act are adhered to in the storage of flammable solvents.	Yes	No	---
52*	Whether all hot works are carried out after written approval of appropriate authority.	Yes	No	---
53*	Whether all precautions are taken to control the sources of ignition.	Yes	No	N.A

54	Whether automatic fire control and extinguishing systems are provided.	Yes	No	N.A
55	If the number of employees exceeded 300, whether a qualified fire officer is available for emergency response and training.	Yes	No	---
56*	Whether require number of self contained B.A. Sets, Personal protection equipment acid resistant hoses etc are provided.	Yes	No	---
57*	Whether Posting of identification of hazard of Materials for emergency response are provided at the location of hazardous chemicals.	Yes	No	---
58*	Whether all precautions are taken to prevent overheating, Safety in heat transfer and reactor safety.	Yes	No	---
59	Whether hazard Analysis is done before beginning of all the existing processes and new processes.	Yes	No	N.A
60*	Whether Emergency plan of action is prepared, practised and modified as per need.	Yes	No	---
61*	Whether all security staff are well trained in the usage of safety systems, summoning the fire service and coordination with fire Service in times of emergency.	Yes	No	---
62*	Whether fire extinguishers of required type and sufficient numbers are provided as per IS 2190-1992	Yes	No	---
63*	Whether all fire safety measures as per the Annexure are provided and maintained in trim working condition.	Yes	No	---
64*	Whether foam compound is stored in sufficient quantity so as to meet the Fire Fighting requirement (Minimum 1000 Ltrs.Foam Compound should be stored in premises where the plot area exceeds 1000 sq.mtrs.	Yes	No	---

Date :

Signature of the Owner/Occupier

Note : All safety measures shown with(\* mark) are mandatory.