



**PRODUCT MANUAL FOR
FIRE EXTINGUISHER – 135 LITRES CAPACITY
MECHANICAL FOAM TYPE
ACCORDING TO IS 14951: 2001**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 14951:2001
	Title	:	Fire Extinguisher 135 litres capacity- Mechanical foam type
	No. of Amendments	:	2
2.	Sampling Guidelines:		
a)	Raw material	:	As per Clause 5, Table 1 of IS 14951: 2001
b)	Grouping guidelines	:	Not applicable as the IS covers 135 litre capacity only
c)	Sample Size	:	i) Extinguisher - 1 no. ii) CO ₂ Gas Cartridge of 1kg Capacity iii) Foam concentrate – Clause 8 of IS 14951 : 2001.
3.	List of Test Equipment	:	Please refer ANNEX – A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – B
5.	Possible tests in a day:		
	Licence is operating on factory testing basis and hence complete testing is to be carried out in factory.		
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 14951: 2001 with the following scope:		
	Name of the product	:	Fire Extinguisher 135 litres capacity- Mechanical foam type

ANNEX A**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Capacity (Clause 3.0)	- Measuring jars
2	Shape (Clause 6)	- Micrometer - Vernier calliper
3	Carrying handle (Clause 7.3)	- Vernier calliper - Micrometer
4	Neck ring (Clause 7.4) Cap (Clause 7.5)	- Vernier calliper - Ring thread gauge as per Class A of IS 2643 (Part 1) - Plug gauges
5	Hose (Clause 7.9) Drain plug (Clause 7.12) Wheeled carriage (Clause 7.13)	- Vernier calliper - Measuring tape
6	Anti-corrosive treatment (Clause 9.1)	- Coat meter or by chemical method - Pressuring unit to pressure the extinguisher to 15 kgf/cm ² - Arrangement to maintain temperature of laboratory at 27 ± 5 °C - Hydrochloric acid - Antimony trioxide - Temperature controlled liquid bath
7	Discharge Test (Clause 11.1)	- Measuring Tape, - Stop watch - Weighing balance - Arrangement to maintain temperature of laboratory at 27 ± 5 °C
8	Internal Pressure Testing (Clause 11.3)	- Hydrostatic pressure testing arrangement with pressure gauge - Stop watch
9	Burst Pressure Testing (Clause 11.4)	- Hydraulic burst testing arrangement with hydraulic pump and pressure gauge

The above list is indicative only and may not be treated as exhaustive.

ANNEX B

Scheme of Inspection and Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirements of IS 14951: 2001.

4. CONTROL UNIT-- All fire extinguishers produced under similar conditions in a month subject to a maximum of 20 shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016. However, the disposal mechanism should be as eco-friendly as possible.

TABLE 1

(1)				(2)	(3)		
TEST DETAILS				Test Equipment requirement. R: Required (or) S: Sub-contracting permitted	LEVELS OF CONTROL		
Cl.	Requirement	Test Methods			No of Samples	Frequency	Remarks
		Clause	Reference				
3	Capacity	3	IS 14951	R	One	Each control unit	-
5	Material ##						
i)	Body	5, Table 1	IS 14951 IS 1079	S	One	Each consignment	-
ii)	Neck ring	5, Table 1	IS 14951 IS 318 IS 1239 (Part 1)	S	One	Each consignment	-
iii)	Cap	5, Table 1	IS 14951 IS 318 IS 6912	S	One	Each consignment	-
iv)	Cap Washer	5, Table 1	IS 14951 IS 538	S	One	Each consignment	-
v)	Safety Valve	5, Table 1	IS 14951 IS 319 IS 318	S	One	Each consignment	-
vi)	Spring	5, Table 1	IS 14951 IS 4454 (Part1)	S	One	Each consignment	-
vii)	Syphon Tube	5, Table 1	IS 14951 IS 407 IS 4984 IS 1545 IS 3601	S	One	Each consignment	-

viii)	Discharge fitting	5, Table 1	IS 14951 IS 318 IS 291 IS 319	S	One	Each consignment	-
ix)	Foam Making Branch Pipe	5, Table 1	IS 14951 IS 617 IS 318	S	One	Each consignment	-
x)	CO ₂ Cylinder	5, Table 1	IS 14951 IS 7285	S	One	Each consignment	-
xi)	Hose	5, Table 1	IS 14951	S	One	Each consignment	-
xii)	Snifter Valve	5, Table 1	IS 14951 IS 319 IS 6603 IS 318 IS 7328	S	One	Each consignment	-
7	Construction	7.1 to 7.14	IS 14951	R	One	Each fire extinguisher	-
8	Charge	8	IS 4989	R	One	Each fire extinguisher	-
9	Anti-corrosive treatment	9.1, 9.2	IS 14951 IS 3203 IS 3618	R	One	Each control unit	-
		9.1.1	IS 14951	R	One	Once in a month	Additional sample may be tested, if material composition or process is changed.

10	Painting	10.1, 10.2, 10.3	IS 14951 IS 2190	R	One	Each fire Extinguisher	-
11.1	Discharge test	11.1	IS 14951	R	One	Once in a week	-
11.2	Foam expansion and formation of film	11.2	IS 14951 IS 4989	R	One	Each control unit	-
11.3	Internal Hydraulic pressure test	11.3	IS 14951	R	One	Each fire Extinguisher	-
11.4	Hydraulic burst failure test	11.3	IS 14951	R	One	Once in a month or one extinguisher manufactured from each cast of body material	-

Raw material which are covered under mandatory certification of BIS shall be ISI marked and received along with manufacturers test certificate.

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head