

## केन्द्रीय मुहर विभाग - III

हमारा संदर्भ- केन्द्रीय मुहर विभाग-III/16: IS 4989

17 जनवरी 2019

विषय: अनुपालन हेतु एस आई टी

सभी शाखा कार्यालय से आग्रह है कि एस आई टी का अनुपालन तत्काल प्रभाव से सुनिश्चित करें।

(एस डी राणे)  
वैज्ञानिक 'ई' (सी एम डी-III)

प्रमुख (सी एम डी-III)

सभी क्षेत्रीय/शाखा कार्यालय

आई टी एस विभाग — बीआईएस इंटरनेट पर अपलोड करने हेतू

### CENTRAL MARKS DEPARTMENT-III

Our Ref: CMD-III/16: IS 4989

17 January 2019

**Subject: SIT for implementation of Revised IS 4989 : 2018 'Foam concentrate for producing mechanical foam for fire fighting'**

This has reference to the subject mentioned above.

BOs may kindly ensure implementation of the SIT with immediate effect.

(S D Rane)  
Sc-E (CMD III)

Head (CMD - III)

**Circulated to: All ROs/BOs**

**Copy to: ITSD - For hosting on BIS Intranet**

**SCHEME OF INSPECTION AND TESTING  
FOR FOAM CONCENTRATE FOR PRODUCING MECHANICAL FOAM  
FOR FIRE FIGHTING ACCORDING TO IS 4989 : 2018**

**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 4989 : 2018

**4. CONTROL UNIT** – **Foam concentrate of same type produced as a batch per charge** 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.

**TABLE 1**

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Clause	Test Methods Reference		No. of Sample	Frequency	Remarks
4.1	General	4.1	IS 4989	-	All	-	-
4.2 Table 1	<b>Characteristics - Physical and Chemical requirement</b>						
i)	Visual examination	A-1 of Annex- A	IS 4989		Each control unit	-	-
ii)	Freezing and thawing	A-2 of Annex-A	IS 4989	R	Each type of foam concentrate	Once in a month	#
iii)	pH - Original	Annex-B	IS 4989	R	1	Each control unit	-
	pH - Ageing	Annex-B	IS 4989	R	Each type of foam concentrate	Once in a month	#
iv)	Specific gravity - Original	Annex-C	IS 4989	R	1	Each control unit	-
	Specific gravity - Ageing	Annex-C	IS 4989	R	Each type of foam concentrate	Once in a month	#
v)	Miscibility with distilled water	Annex-D	IS 4989	R	Each type of foam concentrate	Once in a week	-
vi)	Viscosity	Sl No. (iv) of Table 2	IS 1206 (Part 3)	R	1	Each control unit	-
vii)	Pour point	Annex-E	IS 4989	R	1	Each control unit	-
viii)	Sludge content	Annex-F	IS 4989	R	Each type of foam concentrate	Once in a month	
ix)	Surface tension	Annex- G	IS 4989	R	1	Each control unit	-
x)	Spreading coefficient	Annex-G	IS 4989	R	1	Each control unit	-

4.2 Table 2	Characteristics - Fire performance						
i)	Expansion at $27 \pm 5^\circ \text{C}$	Annex –J	IS 4989	S	Each type of foam concentrate	Once in six month	-
ii)	25 percent drainage time at $27 \pm 5^\circ \text{C}$	Annex –J	IS 4989	S	Each type of foam concentrate	Once in six month	-
iii)	Fire test on hydrocarbon fires (non polar)	Annex- K and clause 8.1	IS 4989				
	a) Fire control time	Annex –K	IS 4989	S	Each type of foam concentrate	Once in six month	-
	b) Fire extinction time	Annex –K	IS 4989	S	Each type of foam concentrate	Once in six month	-
	c) Seal ability / Film forming	Annex –K	IS 4989	S	Each type of foam concentrate	Once in six month	-
	d) Burn back	Annex –K	IS 4989	S	Each type of foam concentrate	Once in six month	-
iv)	Fire test on polar solvent fire	Annex- M and clause 8.2	IS 4989				
	a) Fire control time	Annex –M	IS 4989	S	Each type of foam concentrate	Once in six month	-
	b) Fire extinction time	Annex –M	IS 4989	S	Each type of foam concentrate	Once in six month	-
	c) Seal ability / Film forming	Annex –M	IS 4989	S	Each type of foam concentrate	Once in six month	-
	d) Burn back	Annex –M	IS 4989	S	Each type of foam concentrate	Once in six month	-

# For type test with same formulation, cycle of conditioning as specified in A-2 shall be followed.

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 of BO Head.