



# Indian Register of Shipping

**Place** : Mumbai  
**Date** : 16<sup>th</sup> July 2010  
**Certificate No** : 2010TAC126

## TYPE APPROVAL CERTIFICATE

*The fire extinguishing chemicals - low expansion 'fluoroprotein' and 'aqueous film forming foam (including alcohol resistant type)' concentrates as described below have been approved and considered suitable for use in ships classed or intended to be classed with Indian Register of Shipping.*

**Manufacturer** : **K.V. FIRE CHEMICALS (I) PVT. LTD.**  
Office: Kamala Niwas, Lane – D, Sector-8  
Vashi, Navi Mumbai – 400 703, India  
  
Works: Village - Mundhegaon, Taluka - Igatpuri,  
Dist - Nashik, 422 403, India

**Product Description** :  
1. KV-LITE FP (3% and 6%)  
2. KV-LITE AFFF (3 % and 6%)  
3. KV-LITE AR-AFFF (Type 3/3 and 3/6)

**Reference Standards** :  
- IMO MSC/CIRC. 1312 for KV-LITE FP (3% and 6%),  
KV-LITE AFFF (3 % and 6%) and KV-LITE AR-AFFF  
(Type 3/3 and 3/6).  
  
- IS 4989: 2006 "Foam Concentrate For Producing  
Mechanical Foam For Fire Fighting"  
  
- IS 4989 (PART 4): 2003 "Multipurpose Aqueous Film  
Forming Foam Liquid Concentrate for Extinguishing  
Hydrocarbon and Polar Solvent Fires"

**Intended Application** : Foam forming liquid for use in approved fixed and mobile  
fire extinguishing systems.

**Conditions of Approval** : See Annexure

**Validity** : This approval is valid till 30<sup>th</sup> June 2015

  
(U.S. KALGHATGI)  
CHIEF SURVEYOR

See overleaf for conditions of Issue of this certificate

**ANNEXURE-I****(To Certificate No. 2010TAC126 dated 16<sup>th</sup> July, 2010)**

This approval is valid for following conditions:

- 1) Minimum and Maximum usage temperature: +2°C (35.6 F) and +50°C (122 F)
- 2) Foam Concentrate products are
  - To be supplied with instruction regarding its use with respect to storage, charging and disposal
  - To be supplied with manufacturer's test certificate together with main characteristics (sedimentation, pH-value, expansion ratio, drainage time and volumetric mass).
- 3) Marking on the containers of foam concentrates is to carry all information as listed in clause 3.13 of IMO MSC.1/Circ. 1312.
- 4) Suitable instructions are to be given to the ship owner or operator to conduct periodical tests, in accordance with clause 4 and 5 of IMO MSC.1/Circ. 1312, not more than 3 years after being supplied to the ship and thereafter every year, at laboratories accredited by NABL to assess the condition of foam concentrate and results should comply with the values mentioned on test certificate of corresponding batch.
- 5) This approval is given to the foam concentrate and not extended to the foam generating equipments.
- 6) Storage facilities and piping arrangement in fire extinguishing systems are to be designed and constructed with regard to the minimum allowed temperature for the foam liquid.
- 7) Each particular application is to be specifically approved in conjunction with the relevant fire fighting system and is to be subject to any special instructions and acceptance by the Flag Administrations.
- 8) Any change in the constituents or manufacturing process affecting the approval is to be intimated to IRS.



**(U.S. KALGHATGI)  
CHIEF SURVEYOR**