

## Classification of Low Fire Hazard performance (LFH)



### Inherently Low Fire Hazard

These products are made entirely from metals so there is no non-metallic material to burn or create smoke or toxic fumes.

Inherently Low Fire Hazard products include; FU, SSU, FB, FUSSB, FTGB and metal fittings.



### Extra Low Fire Hazard

These products have a Limiting Oxygen Index of greater than 34% as well as being low smoke and low toxicity.

Extra Low Fire Hazard products include; LFHU, LFHUBRD, LTPLFH, LTBRDLFH, LFHP, FPR, FPRSS and FPRTC



### Standard Low Fire Hazard

These products have a Limiting Oxygen Index of greater than 22% as well as being low smoke and low toxicity.

Standard Low Fire Hazard products include; FPAS, FPAH, FPI, FPISS, FPIH, FPIHSS and PA66 fittings.

## Specifying Bodies

**Flexicon provides Technical data sheets which give full details of product performance and test data on each product. Full independent test reports are available on request.**

**UK Rail** uses BS6853 which includes tests for LOI, glow wire, smoke and toxicity. Minimum LOI for over ground trains is 28%.

**London Underground** uses BS6853 which includes tests for LOI, glow wire, smoke and toxicity with additional requirements within its own standard 1-085. Minimum LOI for underground trains is 34%. The following products have been approved by London Underground;

Certificate No. 296, conduit types FU, SSU and FUSSB.

Certificate No. 297, conduit types LFHU, LFHUBRD and LFHP.

Certificate No. 298, conduit types FPR and FPRSS.

Certificate No. 658, conduit type LTBRDLFH.

Certificate No. 2020, conduit type LTPLFH.

Certificate No. 2624, EXD barrier glands.

**French Rail** uses NF F 16-101/2 which gives an I (Ignition) and F (Fume) rating.

**German Rail** uses DIN 5510.

**Italian Rail** uses CEI 11170.

**European Rail**, there is now a new European rail fire standard, EN 45545, which will eventually replace national rail standards. This gives a HL (Hazard Level) classification.

**Australian Rail** uses AS/NZS 1530.3.

**USA Rail** uses ASTM E 162 and ASTM E 662.

**UK Ministry of Defence** uses Defence Standards 02-711 and 02-713.

**Russian Fire Certificate** No. 0642449



Flexicon Technical Data Sheets



## Buyer Beware

It is unfortunate that the European standard writing organisation for cable management products has yet to prepare a classification standard for Low Fire Hazard products that would define terms, detail test methods and classify results. As a result there are many undefined terms used that may not be clearly understood.

To be Low Fire Hazard a product must display **ALL** of the following: Highly flame retardant, Low smoke emission, Low toxic fumes and Halogen free.

Terms such as Low Smoke and Fume (LSF) may not address Toxicity and Low Smoke Zero Halogen (LS0H) may not address flame retardancy.

Make sure your supplier can provide documented evidence for all four aspects of Low Fire Hazard performance.

