

VFR(2) – MF775 / FR8775 U

Flame Retardant Silicone Rubber (Rail Spec)

General Information

A fire retardant compound with good mechanical properties. This compound has good heat stability inside a wide temperature range. Pigmentation options are limited due to off-white base colour.

Material compliance

- BS6853 : 199 (Category 1A conformity) LOI of 37%
- NF F 16-101 & NF F 16-102 Classification: F0
- IEC 60695-11-10 Classification: V0 (3mm thick sample)
- EN45545-2 R22, R23 HL1, HL2, HL3 (2.2mm thick sample)

Test reports available on request

Key Features

- Excellent fire resistant
- LSFOH: Low smoke, free of halogen
- Non-toxic and non-corrosive smokes

Applications

Production of profiles (doors, windows, walls) and panels used in rolling stocks, and any flexible extruded articles which need to combine high fire performances with low smoke emission.

Material Properties

Cure conditions: 1.5% (50% paste of bis (2,4-dichlorobenzoyl)-peroxide in silicone fluid), vulcanized for 8 min at 115°C in press, post-cured 4h / 200°C.

Property	Inspection Method	Unit	Value
Heat Stability	-	°C	Up to 200
Appearance	-	-	Off White
Hardness	ISO 48-4	° Shore A	69
Density at 25°C	-	g/cm ³	1.29
Tensile Strength	ISO 37-2	MPa	9.3
Elongation at Break	ISO 37-2	%	300
Tear Strength	ASTMD 624A	kN/m	22
Volume Resistivity	IEC 60093	Ω.cm	8.1 x 10 ¹⁵
Dielectric Constant at 1MHz	IEC 60250	-	3.0
Dielectric dissipation factor at 1MHz	IEC 60250	-	3 x 10 ⁻³

These figures are only intended as a guide and should not be used in preparing specifications. Size tolerance to ISO 3302-1: 2014.

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Fire Resistance

Measurement on ASTM slab after post-curing 4 hours at 200°C.

	Standard	Value
Vertical Burning Classification	IEC 60695-11-10	V0 on 2mm
LOI %	ISO 4589-2	40% on 2mm

EN45545-2 homologation

Measurement on ASTM slab after post-curing 4 hours at 200°C.

Requirement	Classification
R1	HL1, HL2, HL3
R7	HL1, HL2, HL3
R22	HL1, HL2, HL3
R23	HL1, HL2, HL3

Additional classification: BS 6853 Table 7

Interior minor use materials of mass 100g to 500g → **Classification category 1a**

Smoke density annex D <0.017

LOI > 34%

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