

Rail and Commercial Seating



Vita Technical Foams

Vita Group

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PYROFLEX VFR2/140: high resilience safety critical polyurethane foam

**For the best seat in the house...
or the best on the train, coach or cinema!**
Requirements for commercial seating can be
extremely demanding.

Did you know, over the 11 commercial lines on the London Underground, there were more than a billion passenger journeys made throughout 2018 and a great deal of those found a seat? Resilience and comfort is naturally a very high priority however safety is absolutely critical. Vita has a long proven track record of developing and delivering the safest and highest quality products and services, coupled with outstanding technical support to the commercial seating industry.

PYROFLEX VFR2/140 - Open cell flame retardant, high resilience polyurethane foam is specified and in use on the London Underground.

Consistent supply and control is ensured through total control from concept to completion, a discipline that has helped secure long-term customer relationships and partnerships.



6mm Pyroflex VFR2/140

C2C Business Class Seat
Headrest trim foam prior
to final covering



UNDERGROUND

PYROFLEX-VFR2/140

is an open celled flame retardant, high resilience impregnated polyurethane foam. Originally developed as safety critical foam, it was developed to meet the stringent requirements of BS6853, for use as seat trim foam for underground rolling stock. It can be supplied in sheets or cut parts either plain foam or self adhesive.

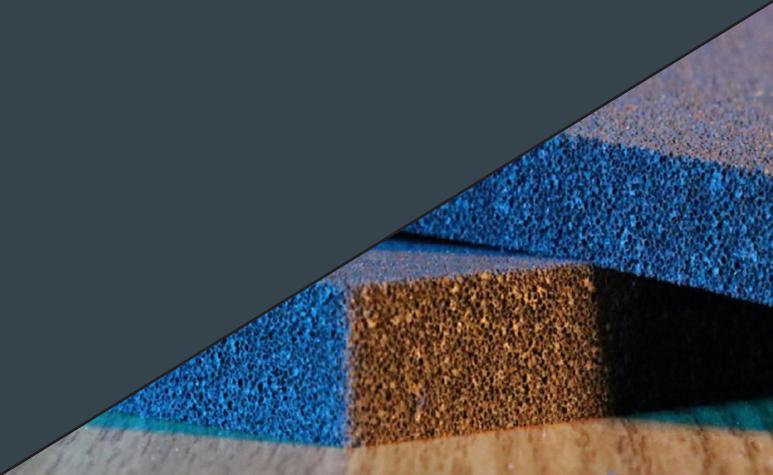
Vita's manufacturing and technical expertise is exceptional meeting both local and international standards. By providing an extensive range of products Vita can satisfy many types of complex needs in an efficient manner. Consistent supply and quality is assured from concept to completion, a discipline that has helped secure long term customer relationships and partnerships.

Vita have a comprehensive range of polyether polyurethane base foams, meeting the requirements of Schedule 1, Part 1 of The Furniture and Furnishings (Fire) (Safety) Regulations, commonly used in conjunction with one of our impregnated safety critical foams such as Pyrosorb-S and Pyroflex VFR2/140



PYROFLEX VFR2/140

PROPERTY	REQUIREMENT	TEST METHOD
Density (kg/m ³)	130 min	BS4443 Part 1 Method 2 (1988)
Thickness (mm)	Nominal +/-1	Internal Specification
Indentation Hardness (N)	220 min	BS4443 Part 2 Method 7A (1998)
Tensile Strength (Unaged) (KPa)	70 min	BS4443 Part 1 Method 3A (1988)
% Loss after Ageing	15 max 15 max	BS4443 Part 4 Method 11 (1980) BS4443 Part 4 Method 12 (1980)
Elongation at Break (Unaged %)	150 min	BS4443 Part 1 Method 3A
Compression Set at 75% Compression (%)	15 max	BS4443 Part 1 Method 6A (1988)
Smoke Index	50 max	NES 711 (Issue 2 Jan 81)
Toxicity Index	3.5 max	NES 713 (Issue 2 Apr 81)
Oxygen Index (%)	50 min	NES 714 (Issue 2 Feb 81)
Pounding Class	Class S	BS3379
Surface Spread of Flame	Class 1	BS476 Part 7 : 1987
Reaction to Fire	Class M1	Epiradiateur NFP 92-501
Rating to NF 16-101	Class F1	NFX 70-720 & NFX 70-100
Smoke Emission	A0 <9	BS6853 : 1987





PYROSORB-S : Class 'O' Self-extinguishing PU Foam

PYROSORB-S forms the basis of Vita's impregnated product range. It is an open celled acoustic/thermal polyurethane foam. Pyrosorb-S was originally developed as safety critical foam. Acoustic performance is good and absorption coefficients are typical for a cellular material, but unusually high deadening performance is attributable to the high density of approximately 85 kgm³. The high mass helps to reduce vibration in metal enclosures hence drumming and noise.

PYROSORB-S Class O rating also lends itself to many uses outside the acoustic design. For instance, Prosorb-S is commonly used as a 'topper' in the manufacture and refurbishment of cinema seating. Whilst retaining comfort, the level of the seat construction's fire retardancy is significantly improved by the self extinguishing properties of the Pyrosorb layer.

FLAMMABILITY PROPERTIES

METHOD	RESULT
BS 476 Part 5	Non-Ignition
BS 476 Part 6	$I \leq 12, I_1 \leq 6$
BS 476 Part 7	Class "1"
BS 476 P6 & P7 Building Regulations	Class "O"
BS EN ISO 4589-3	No ignition, tested at 240°C, 300°C, 360°C and 380°C
UL94	V-0, 94-5V
BS6853:1987 App. B.5.3	A0(max) <5
NES 713	<3.0



PHYSICAL PROPERTIES

METHOD	RESULT
Density (Kg/m ³)	75 – 100
Hardness (N)	120 – 180
Tensile Strength (Kpa)	>70
Elongation at Break (%)	>90%
Thermal Conductivity (W/mK)	0.048 – 0.051
Erosion Resistance	6000ft/min
Working Temperature (°C)	-40 - ~+110
CFC Free	Yes

