FlexoFoam

Established in 1985

AUPEX™ TECHLINE FOAMS

EN45545 MATERIAL SELECTION GUIDE

FlexoFoam's AUPEX™ Techline

AUPEX™ Techline offers multiple material solutions for use as cushioning materials in transport interiors, all complying with the FST requirements of EN45545. The seat cushion foams are supplied in flat parallelograms or as a tailor-made fabricated cushion shaped as per the desired design requirements.

FlexoFoam

Fire Safety & The EN 45545-2 Standard:

EN 45545-1: Fire Protection of Railway Vehicles : General Guidelines

EN 45545-2: Fire Protection of Railway Vehicles: Requirements for Fire Behavior of materials and components

Hazard Level Classification > Product Classification > Requirement Set

HL1 HL2 HL3

HL classification dependent on operation and design category

Any material compliant to HL3 fulfills HL1 & HL2

IN1A, EX2, F1A...etc.

Listed Products: EN 45545-2 Table 2 defines the requirement sets to be met for various listed product / applications. The listed products are categorized into numerous material applications sets for interior, exterior, furniture, electro technical and mechanical equipment.

Non-listed Products: Products not listed in EN 45545-2 Table 2 are subject to the requirements of EN 45545-2 Section 4.3 and Table 3.

R1, R2, R3...

The material requirement set (R1, R2, R3..) defines the specific tests and pass/fail criteria of the associated products (IN1A, 1EX2, F1..) for each Hazard Level classification (HL1, HL2, HL3). The requirement sets are groupings of various product classification and their applications (eg. R21 defines requirements for interior seats).

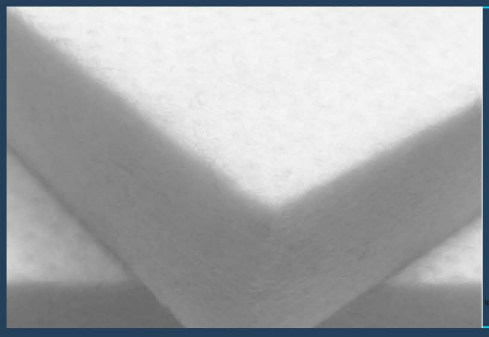
Colors and Patterns: A test that qualifies a product will also qualify any other product which differs only in color and / or pattern.

Material Thickness: All intermediate thickness are also compliant when a product is compliant at two different thickness manufactured with identical formulations.

The AUPEX™ Techline Advantage - Fire Safety At Its Best

All technical foams in FlexoFoam's AUPEX™ Techline are compliant with the FST requirements of EN45545 HL3:

AUPEX™ Techline Material Selection Guide

AUPEX™ Techline	Requirement (Used for)	Test Method Reference	Parameter Unit	Test Results
 AUPEX™ Polyurethane	R21 (F1A; F1B; F1E; F3)	T03.02 ISO 5660-1: 25 kWm-2	MARHE kW/m²	34.5
		T10.03 EN ISO 5659-2: 25 kWm-2	$D_{S\ max.}$ dimensionless	18
		T11.02 EN ISO 5659-2: 25 kWm-2	$CIT_{G\ max.}$ at 8 min dimensionless	0.028
 AUPEX™ Polyester Fibre Block	R21 (F1A; F1B; F1E; F3)	T03.02 ISO 5660-1: 25 kWm-2	MARHE kW/m²	26.41
		T10.03 EN ISO 5659-2: 25 kWm-2	$D_{S\ max.}$ dimensionless	5.70
		T11.02 EN ISO 5659-2: 25 kWm-2	$CIT_{G\ max.}$ at 8 min dimensionless	Zero
 AUPEX™ Silicone	R21 (F1A; F1B; F1E; F3)	T03.02 ISO 5660-1: 25 kWm-2	MARHE kW/m²	39
		T10.03 EN ISO 5659-2: 25 kWm-2	$D_{S\ max.}$ dimensionless	25.51
		T11.02 EN ISO 5659-2: 25 kWm-2	$CIT_{G\ max.}$ at 8 min dimensionless	0.015

AUPEX™ Techline Specialty Services

Foam Sheets

Cut to desired sheet dimensions

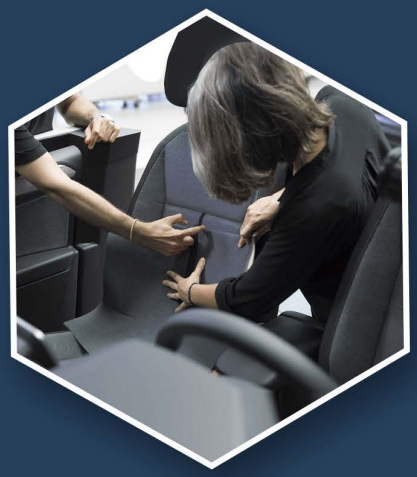
Moulded Foam

Jointless moulding to achieve complex contours & Shapes

Contour Cut Foam

Smooth contour cut to meet desired shape

Technical expertise for design and application support



Seat & Cushion Design Guidance

CAD mockup and prototyping

In-house testing facilities, R&D & product development

AUPEX™ Techline Benefits

Passenger Safety

- Non-toxic production of foam in secured facility
- Fire retardant properties of foam inherent due to the homogenous formulation of naturally formed cell structure

Durability & Long Lasting

- Class leading dimensional stability
- Resilient to mechanical fatigue
- High & Low temperature resistance
- Low compression set, creep & stress relaxation

Design Reliability

- Long term material durability & performance
- Resistant to environment factors (UV, Ozone, Chemical, Temperature Resistance)

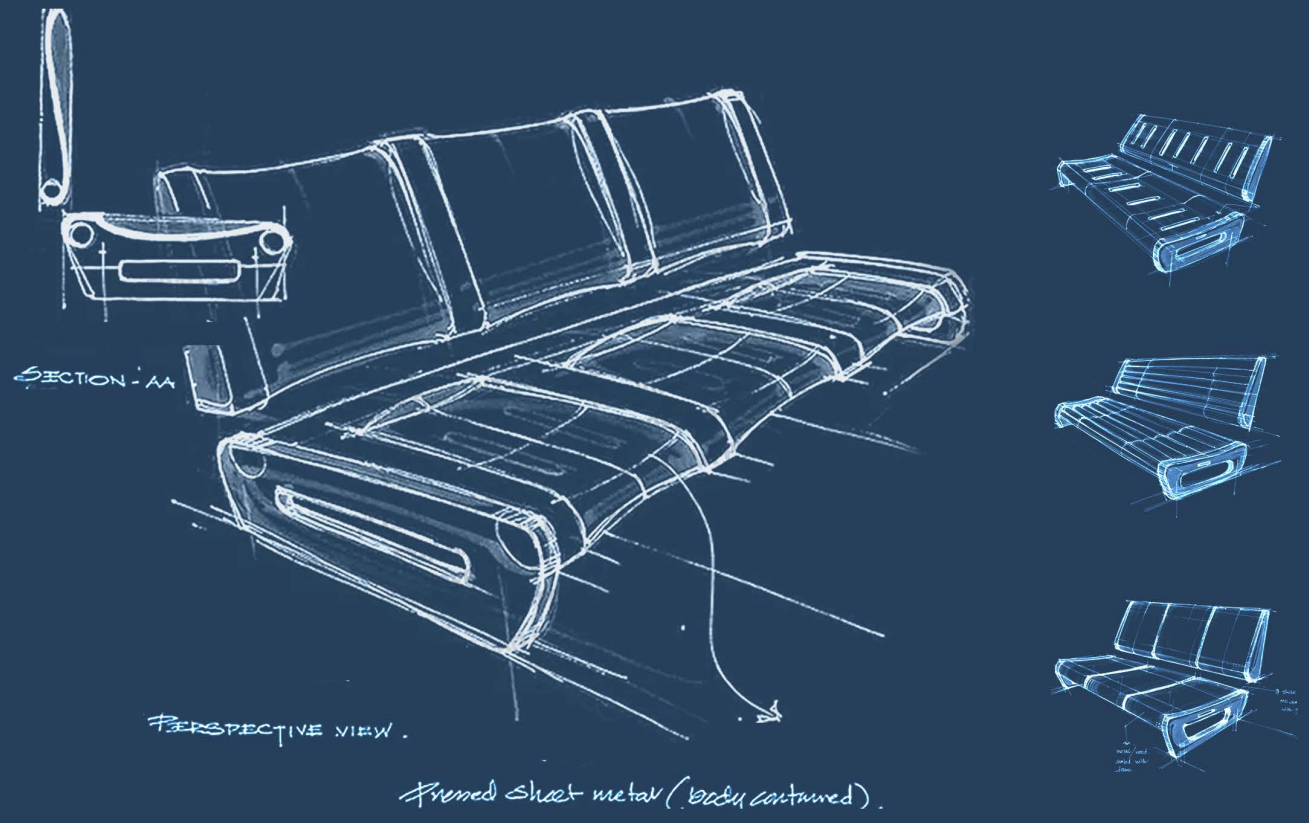
Control on Maintenance Costs

- Long life & low tendency to lose form of AUPEX foams ensure significant savings in maintenance costs
- No revenue loss due to downtime/overhauling
- Unique chemistry of AUPEX foams deliver excellent performance over long term physical, thermal and environmental abuse

About FlexoFoam Pvt. Ltd.

FlexoFoam is a well-established, 35-year-old manufacturer of high quality fire retardant technical foams. FlexoFoam is the biggest Tier-I manufacturer, co-developer and supplier of seating systems, cushions & berths with accessories to all three Rail Coach Building factories of the Indian Railways. FlexoFoam's products are consistently tested and approved by Underwriter Laboratories (UL), RDSO and Integral Rail Coach Factory, Chennai .

FlexoFoam is a trusted and leading manufacturer of Seating Systems, Densified Thermal Bonded Polyester Blocks, Fire Retardant Polyurethane Foam, Polyester Fibre Solutions and Fire Retardant Silicone Foam in India.



CONTACT INFORMATION

FlexoFoam

Established in 1985

FlexoFoam Pvt. Ltd.

ISO 9001:2015 CERTIFICATION
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