Fire Safety Documentation Pack

T3 Modular Display System

This pack collates the fire safety documentation for the materials used in the T3 modular display system, for submission to venues, organisers and safety officers. It covers the aluminium extrusions that form the structure and the polycarbonate components used in connectors and fittings.

Component	Material	Standard	Classification
Structural profiles and extrusions	Aluminium and aluminium alloy	DIN 4102 Part 4 BS 476 Part 4	**Non-flammable**
		BS 476 Part 5	**Class 1 surface spread of flame**
Connectors and moulded fittings	Polycarbonate (LEXAN FR)	UL 94	**V-0 at 3.0 mm** **V-2 at 1.5 mm**
		ISO 4589	**Oxygen Index 35%**

What is in this pack

1	**Manufacturer’s declaration**	Tecna Display Ltd — statement of conformity for aluminium profiles
2	**Aluminium and fire certificate**	Smiths Profiles — DIN 4102 Pt 4, BS 476 Pt 4 and Pt 5
3	**UL component listing**	SABIC LEXAN polycarbonate — UL 94 flame class ratings
4	**Material technical data sheet**	SABIC LEXAN FR resin — full property data including flame characteristics

Scope and limitations

The certificates in this pack relate to the **materials** used in the T3 system. They are not a fire certificate for a completed stand. A finished exhibition stand also includes graphics, fabrics, flooring and furniture supplied by ourselves or by others, each of which carries its own fire documentation. Where a venue requires certification for a specific build, we supply the relevant graphic and fabric certificates alongside this pack.

Graphic substrates — SEG tensioned fabric, rigid panel and printed textile — are certified separately by the material supplier, typically to BS 476 Part 7 or EN 13501-1. Please request these with your project reference so we send the certificates matching the substrate actually specified for your stand.

The materials in detail

Aluminium extrusions — the structure

Every load-bearing element of a T3 stand is aluminium extrusion. Aluminium and its alloys are classed as **non-flammable** under DIN 4102 Part 4 and BS 476 Part 4, and provide **Class 1 surface spread of flame** under BS 476 Part 5.

Aluminium extrusions do not burn and do not support combustion. Above the melting range of roughly 600–660 °C the exposed surface will melt, but it does not ignite. The high thermal conductivity of aluminium also carries heat away from the area exposed to a fire. This is why aluminium is used so widely in exhibition staging as well as in building and construction.

T3 profiles for the projects covered by this pack are supplied **mill finish**. No anodising or surface coating is applied, so there is no additional surface material to consider in a fire assessment.

Polycarbonate connectors and fittings

The twist-lock connectors and moulded fittings that join the profiles are polycarbonate. The resin used is a flame-retardant grade, UL 94 **V-0 rated at 3.0 mm** and V-2 at 1.5 mm, with a Limiting Oxygen Index of 35% under ISO 4589.

A V-0 rating means that in the UL 94 vertical burning test, flaming stops within ten seconds of the flame being removed and no flaming drips are produced. An Oxygen Index of 35% means the material will not sustain combustion in normal air, which contains about 21% oxygen.

If a venue asks for something not in this pack

Send us the requirement and the show, and we will provide it. Between our own documentation and our suppliers' we can normally cover graphics and fabric certification, structural load data, and project-specific statements on headed paper where an organiser requires one.

Independent structural load testing of the T3 system, carried out by the University of West London, is published in full at t3systems.com/exhibition-stand-load-testing/

Contact

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Manufactured in the United Kingdom and France. ISO 9001 certified. ESSA member. Two Queen's Awards for Enterprise.

Source documents

The original certificates and data sheets follow, unaltered, in the order listed on page one.

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MANUFACTURER'S DECLARATION

Fire Performance of Aluminium Profiles — T3 Modular Display System

Date of issue: 15 September 2026

To whom it may concern,

We confirm that Tecna Display Ltd and T3 Display Systems SAS, manufacturers of the T3 modular exhibition and display system, use aluminium profiles as the principal structural material in all T3 framework structures.

The aluminium is supplied by an established and reputable manufacturer and conforms to the relevant fire safety standards for the events and exhibitions industry:

DIN 4102, Part 4	Aluminium and aluminium alloys classed as non-flammable
BS 476, Part 4	Aluminium and aluminium alloys classed as non-combustible
BS 476, Part 5	Class 1 surface spread of flame

Aluminium extrusions do not burn and do not support combustion. Where the temperature exceeds the melting range of approximately 600–660 °C the exposed surface may melt, but it does not ignite. The high thermal conductivity of aluminium additionally transfers heat away from the exposed area.

These aluminium alloys are fundamental to the design of our products and meet the fire certification requirements of the events and exhibitions industry. The supporting certificate from our profile supplier is enclosed with this declaration.

This declaration relates to the aluminium structural elements of the T3 system. Graphics, fabrics, floor coverings and furniture are certified separately by their respective suppliers, and those certificates are available on request for any specific project.

Please contact us if you require any further information.

Yours faithfully,

Philippe Van Ameyde

Managing Director
Tecna Display Ltd | Président, T3 Display Systems SAS

[signature and company stamp]

Component - Plastics

File Number: E45329

SABIC INNOVATIVE PLASTICS B V

EUROPE - RESIN, PLASTICSLAAN 1, BERGEN OP ZOOM 4612 PX NL

Lexan: 943A(f1)

Polycarbonate (PC), pellets

(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

NOTE - Material designation may be followed by a color nomenclature consisting of either an alpha/numeric or a numeric/alpha combination.

Flammability	Value	Test Method
Flame Rating		UL 94 IEC 60695-11-10, -20
1.50 mm, ALL	V-2	
3.00 mm, ALL	V-0	
6.00 mm, ALL	V-0	
Electrical	**Value**	**Test Method**
Hot-wire Ignition (HWI)		UL 746
1.50 mm	PLC 3	
3.00 mm	PLC 2	
6.00 mm	PLC 1	
High Amp Arc Ignition (HAI)		UL 746
1.50 mm	PLC 3	
3.00 mm	PLC 2	
6.00 mm	PLC 2	
Comparative Tracking Index (CTI)	PLC 3	UL 746
Dielectric Strength	24 kV/mm	ASTM D149 IEC 60243-1
High Voltage Arc Tracking Rate (HVTR)	PLC 3	UL 746
Volume Resistivity	1.0E+15 ohm·cm	ASTM D257 IEC 60093
Arc Resistance	PLC 7	ASTM D495
Thermal	**Value**	**Test Method**
RTI Elec		UL 746
1.50 mm	130 °C	
3.00 mm	130 °C	
6.00 mm	130 °C	
RTI Imp		UL 746
1.50 mm	120 °C	
3.00 mm	120 °C	
6.00 mm	120 °C	
RTI Str		UL 746
1.50 mm	125 °C	
3.00 mm	130 °C	
6.00 mm	130 °C	
Physical	**Value**	**Test Method**
Dimensional Stability	0.10 %	ASTM D1042 ISO 2796
Outdoor Suitability	f1	UL 746C

Form Number: E45329-100506951

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Report Date: 6/19/1975
Last Revised: 6/13/2012

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

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ALUMINIUM AND FIRE – CERTIFICATE

Aluminium and aluminium alloys are classed as non-flammable according to :

DIN Standard 4102, Part 4

BS 476, Part 4

And they provide Class 1 surface spread of flame according to :

BS 476, Part 5

Aluminium and aluminium alloys in the form of extrusions do not burn nor support combustion. In fire tests on aluminium materials, when the temperature exceeds the melting point in the range of 600° - 660° C, the aluminium surface exposed to the fire can be seen to melt but it does not burn.

Where an aluminium structure is exposed to the heat of a fire, the relatively high thermal conductivity enables heat to be transferred away from the exposed area.

For these reasons, aluminium structures are used widely in the field of exhibition staging and stands as well as being used extensively within building and construction applications. The structure and strength of aluminium extrusions are not affected in any way within the temperature ranges of normal living environments.

For Smiths Profiles

13th December 2022

Smiths Profiles is a division of Smiths Metal Centres Ltd.
Registered in London No. 03485838.
Registered Office: Stratton Business Park, Biggleswade, Bedfordshire SG18 8QB
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LEXAN™ FR RESINS 940A

REGION AMERICAS

DESCRIPTION

LEXAN™ 940A resin is a 10 MFR polycarbonate. Mold release. Flame retardant, UL94 V0 rated. Available in transparent and translucent colors.

TYPICAL PROPERTY VALUES

Revision 20201125

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	90	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	91	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2240	MPa	ASTM D790
Hardness, Rockwell M	70	-	ASTM D785
Hardness, Rockwell R	118	-	ASTM D785
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	ASTM D1044
IMPACT			
Izod Impact, unnotched, 23°C	3204	J/m	ASTM D4812
Izod Impact, notched, 23°C	640	J/m	ASTM D256
Tensile Impact Strength, Type S	525	kJ/m²	ASTM D1822
Falling Dart Impact (D 3029), 23°C	169	J	ASTM D3029
THERMAL			
Vicat Softening Temp, Rate B/50	151	°C	ASTM D1525
HDT, 0.45 MPa, 6.4 mm, unannealed	137	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	132	°C	ASTM D648
CTE, -40°C to 95°C, flow	6.84E-05	1/°C	ASTM E831
Thermal Conductivity	0.19	W/m-°C	ASTM C177
Relative Temp Index, Elec	130	°C	UL 746B
Relative Temp Index, Mech w/impact	120	°C	UL 746B
Relative Temp Index, Mech w/o impact	130	°C	UL 746B
PHYSICAL			
Specific Gravity	1.21	-	ASTM D792
Specific Volume	0.83	cm³/g	ASTM D792
Density	1.217	g/cm³	ASTM D792
Water Absorption, (23°C/24hrs)	0.15	%	ASTM D570
Water Absorption, (23°C/Saturated)	0.35	%	ASTM D570
Water Absorption, equilibrium, 100°C	0.58	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D1238
OPTICAL			
Light Transmission, 2.54 mm	85	%	ASTM D1003
Haze, 2.54 mm	1	%	ASTM D1003

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Refractive Index	1.586	-	ASTM D542
ELECTRICAL			
Volume Resistivity	>1.E+17	Ω.cm	ASTM D257
Dielectric Strength, in air, 3.2 mm	16.7	kV/mm	ASTM D149
Relative Permittivity, 50/60 Hz	3.01	-	ASTM D150
Relative Permittivity, 1 MHz	2.96	-	ASTM D150
Dissipation Factor, 50/60 Hz	0.0009	-	ASTM D150
Dissipation Factor, 1 MHz	0.01	-	ASTM D150
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	3	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-100175209	-	-
UL Recognized, 94V-2 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	3.0	mm	UL 94
Radiant Panel Listing	☑	-	UL Tested
Oxygen Index (LOI)	35	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	290 – 310	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	215 – 295	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

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