

PLASKOLITE

NFPA 130 Standard for Fixed Guideway and Transit Systems

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The National Fire Protection Code, NFPA 130, specifies fire-protection and life-safety requirements for underground, surface, and elevated fixed guideway transit and passenger rail systems, including stations, train ways, emergency ventilation systems, and communications and control systems. NFPA 130 regulates the type of materials, material fire safety properties (flammability, combustibility, and smoke production), and potential fire hazards. NFPA 130 applies to new systems and to extensions of existing systems, to new rolling stock, and to retrofitting existing rolling stock and equipment.

Application:

This standard covers the fire protection requirements for underground, surface, and elevated fixed guideway transit and passenger rail systems, including trainways, vehicles, and vehicle maintenance and storage areas. The purpose of this standard shall be to establish minimum requirements that will provide a reasonable degree of safety from fire and its related hazards in fixed guideway transit and passenger rail system environments.

Requirements:

Flammability and Smoke Emission - The test procedures and minimum performance for materials and assemblies are detailed in the table below. Materials tested for surface flammability shall not exhibit any flaming running or flaming dripping. The ASTM E662 maximum test limits for smoke emission (specific optical density) shall be based on both the flaming and the non-flaming modes.

NFPA 130 APPROVED PRODUCTS:

TUFFAK TG¹
TUFFAK FC¹
TUFFAK AR¹
TUFFAK 15¹
TUFFAK Lumen XT¹

¹ Meets ASTM E162 $I_s \leq 100$, ASTM E662 $D_s (1.5) \leq 100$, $D_s (4.0) \leq 200$

Test reports are typically available for 0.250", 0.375" and 0.460" in clear and tinted sheets. Lumen XT reports available in 0.060", and 0.118". Check with Technical Services for details.

NFPA 130 Fire Test Procedures and Performance Criteria for Material and Assemblies

Category	Function of Material	Required Testing	Test Method	Performance Criteria
Cushioning	All individual flexible cushioning materials used in seat cushions, mattresses, mattress pads, armrest, crash pads, and grab rail padding	Surface Flammability	ASTM D 3675	$I_s \leq 25$
		Smoke Density	ASTM E 662	$D_s (1.5) \leq 100$ $D_s (4.0) \leq 175$
Fabrics	Seat upholstery, mattress ticking and covers, curtains, draperies, window shades, and woven seat cushion suspensions	Burning behavior	14 CFR 25	Flaming time ≤ 10 sec Burn Length ≤ 6 in.
		Smoke density	ASTM E 662	$D_s (4.0) \leq 200$

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Other vehicle components	Seat and mattress frames, wall and ceiling lining and panels, seat and toilet shrouds, toilet seats, trays and other tables, partitions, shelves, opaque windscreens, combustible signage, end caps, roof housings, articulation bellows, exterior shells, nonmetallic skirts, and component boxes and covers	Surface Flammability	ASTM E 162	$I_s \leq 35$
		Smoke Density	ASTM E 662	$D_s (1.5) \leq 100$ $D_s (4.0) \leq 200$
	Thermal and acoustical insulation	Surface Flammability	ASTM E 162	$I_s \leq 25$
		Smoke Density	ASTM E 662	$D_s (4.0) \leq 100$
	HVAC ducting	Surface Flammability	ASTM E 162	$I_s \leq 25$
		Smoke Density	ASTM E 662	$D_s (4.0) \leq 100$
	Floor covering	Critical Radiant Flux of Floor-Covering System	ASTM E 648	CRF ≥ 5 kW/m ²
		Smoke Density	ASTM E 662	$D_s (1.5) \leq 100$ $D_s (4.0) \leq 200$
	Light diffusers, windows and transparent plastic windscreens	Surface Flammability	ASTM E162	$I_s \leq 100$
		Smoke Density	ASTM E 662	$D_s (1.5) \leq 100$ $D_s (4.0) \leq 200$
	Adhesives and Sealants	Surface Flammability	ASTM E162	$I_s \leq 35$
		Smoke Density	ASTM E 662	$D_s (1.5) \leq 100$ $D_s (4.0) \leq 200$
	Elastomers	Flame Propagation	ASTM C 1166	Flame propagation ≤ 100 mm (4 in.)
		Smoke Density	ASTM E 662	$D_s (1.5) \leq 100$ $D_s (4.0) \leq 200$
Wire and cable	All	Fire test for cable and wire	NFPA 130	See 8.6.7.1.1.1 to 8.6.7.1.3
Structural component	Flooring, other	Fire Tests of Building Construction	ASTM E 119	Pass

DISCLAIMER:

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.