

ULTEM™ R16SG29 SHEET

ULTEM R16SG00 sheet complies with the new pan-European fire safety standard, CEN/TS 45545 (“Fire protection of railway vehicles”) at the highest level (Hazard Level 3) for R1 applications (Requirements for interior components) across all four occupational categories at 3mm. ULTEM R16SG29 sheet delivers excellent impact resistance and chemical resistance for easy cleaning, anti-graffiti performance and long useful life.



Based on polyetherimide (PEI) resin, SABIC’s ULTEM™ R16SG29 sheet features inherent flame retardancy and low smoke emission. This amorphous thermoplastic extruded PEI alloy sheet that offers outstanding high heat resistance, high strength, modulus and broad chemical resistance, can be used for railway interior applications . ULTEM R16SG29 sheet also meets United States Federal Rail Administration (FRA 49 CFR Part 238, Appendix B) flammability and smoke emission characteristics for passenger cars and locomotive cabs. In addition, the product complies with toxicity standard Bombardier SMP 800-C. The material may be thermoformed, pressure formed, twin sheet formed, or used in flat or cold formed applications.

Pan-European Fire Safety Norm EN 45545

Test	Test norm	Parameter	Requirement definition	R1			R5			R3			Ultem™ R16SG29 Sheet at 3mm
				HL1	HL2	HL3	HL1	HL2	HL3	HL1	HL2	HL3	
Spread of Flame	ISO 5658-2	CFE [kW/m2]	minimum	20	20	20	---	---	---	13	13	13	25,9
Heat Release	ISO 5660-1 (50 kW/m2)	MARHE [kW/m2]	maximum	---	90	60	90	90	60	"---	"---	"---	12,95
Smoke Density	ISO 5659-2 (50 kW/m2)	Ds, 4 [---]	maximum	600	300	150	600	300	150	600	480	240	70
Smoke Density	ISO 5659-2 (50 kW/m2)	VOF4 [min]	maximum	1200	600	300	1200	600	300	1200	960	480	103
Toxicity	ISO 5659-2 (50 kW/m2)	CITg [---]	maximum	1.2	0.9	0.75	1.2	0.9	0.75	1.2	0.9	0.75	0,09
Classification												R1 HL3	

R1 Requirements for Interior Components

R5 Requirements for Back shell and Base shell of passenger seats

R3 Lighting

Results are based on tests done by SABIC at the independent laboratories.

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