

Railway standard EN 45545

Our flame-retardant materials – Your ticket to safer public transportation



All materials used in railway vehicles will have to be compliant with the European fire safety standard EN 45545. This industry standard presents harmonized fire safety requirements on railway vehicles across the European Union.

The main objective of EN 45545 is:

- to minimize the risk of ignition of materials installed on railway vehicles
- to control the rate and extent of fire development
- to minimize the impact on passengers and staff in the case of an evacuation.

LyondellBasell provides materials for a variety of applications from connectors and cable glands to extruded products such as corrugated tubes. We are committed to broaden our product portfolio depending on your needs.

Typical properties

Properties	Units	Schulamid 6 HVO H FR	Schulamid 6 MV 14 FR HL3	Schulamid 66 MV 5 FR	Schulamid 6 GF 30 FR 2 HL3	Polyflam RIPP 4000 OSD
		High viscosity, flame-retardant PA 6	Medium viscosity flame-retardant PA 6	Medium viscosity flame-retardant PA 66	Reinforced flame-retardant PA 6	Flame-retardant PP-Copo
Processing		Extrusion	Injection Molding	Injection Molding	Injection Molding	Injection Molding
Density	g/cm ³	1,20	1,19	1,14	1,44	1,07
Tensile Modulus	MPa	3200	3700	3600	10800	2100
Tensile Stress (Yield)	MPa	75	75	80	160	20
Tensile Strain (Yield)	%	4,0	4,0	4,9	3,0	3,3
Impact Strength Charpy Notched	kJ/m ²	5,0	4,0	5,0	10,0	3,0
Impact Strength Charpy Unnotched	kJ/m ²	NB	NB	70	70	NB
Oxygen Index	%	>32	>32	>32	>32	>32
Smoke Density	Ds max	79	134	213	271	38
Toxicity	CIT _{NLP}	0,67	0,52	0,44	0,54	0,20
EN 45545 (R22)		HL3	HL3	HL2	HL2	HL3
EN 45545 (R23)		HL3	HL3	HL3	HL3	HL3
EN 45545 (R6)		-	-	-	-	HL3
EN 45545 (R9)		-	-	-	-	HL3

About us

We are LyondellBasell (LYB) – a leader in the global chemical industry creating solutions for everyday sustainable living. Through advanced technology and focused investments, we are enabling a circular and low carbon economy. Across all we do, we aim to unlock value for our customers, investors and society. As one of the world's largest producers of polymers and a leader in polyolefin technologies, we develop, manufacture and market high-quality and innovative products for applications ranging from sustainable transportation and food safety to clean water and quality healthcare. For more information, please visit www.lyb.com or follow [@LyondellBasell](https://www.linkedin.com/company/lyondellbasell) on LinkedIn.

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