

PRODUCT INFORMATION

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 HV0 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	D _s 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

LyondellBasell (NYSE: LYB) is one of the largest plastics, chemicals and refining companies in the world. Driven by its employees around the globe, LyondellBasell produces materials and products that are key to advancing solutions to modern challenges like enhancing food safety through lightweight and flexible packaging, protecting the purity of water supplies through stronger and more versatile pipes, improving the safety, comfort and fuel efficiency of many of the cars and trucks on the road, and ensuring the safe and effective functionality in electronics and appliances. LyondellBasell sells products into more than 100 countries and is the world's largest producer of polymer compounds and the largest licensor of polyolefin technologies. More information about LyondellBasell can be found at www.LyondellBasell.com.

For more information, visit lyb.com

Before using a LyondellBasell product, customers and other users should make their own independent determination that the product is suitable for the intended use. They should also ensure that they can use the LyondellBasell product safely and legally. This document does not constitute a warranty, express or implied, including a warranty of merchantability or fitness for a particular purpose. In addition, no immunity under LyondellBasell's or third parties' intellectual property rights shall be implied from this document. No one is authorized to make any warranties, issue any immunities or assume any liabilities on behalf of LyondellBasell except in a writing signed by an authorized LyondellBasell employee. Unless otherwise agreed in writing, the exclusive remedy for all claims is replacement of the product or refund of the purchase price at LyondellBasell's option, and in no event shall LyondellBasell be liable for special, consequential, incidental, punitive or exemplary damages.

Schulamid and *Polyflam* are trademarks owned or used by LyondellBasell group companies and they are registered in the U.S. Patent and Trademark Office.

lyondellbasell
Advancing Possible