

WACOSIT® Glass Fiber/Polyester B03

WACOSIT-B03 pultruded glass-fiber-reinforced plastics were developed specifically for use in railroad cars and meet the requirements according to DIN 5510, Part 2 and NFF 16-101 "Preventive fire protection in railroad cars".

Properties	Units	Value	Standard
Flammability			
Flammability class	-	S4	Part 5510, Part 2
Smoke development class	-	SR2	Part 5510, Part 2
Drop-forming class	-	ST2	Part 5510, Part 2
Smoke gas toxicity according to ISO 5659-2	-	Meets FED ≤ 1	Part 5510, Part 2
NF P 92-501	-	M2	NF F 16-101
NF X 70-100	-	F0	NF F 16-101
NF X10-702	-	F0	NF F 16-101
LOI (limiting oxygen index) according to ISO 4589-2	-	HL4 ≥ 34	prEN 45545
Resin content	% by weight	appr. 40	DIN EN 2746
Glass content, including fillers	% by weight	appr. 60	DIN EN 2746
Apparent density	g/cm ³	1.7 ± 0.1	DIN 53 479
Expansion coefficient in fiber direction	K ⁻¹	appr. 7·10 ⁻⁶	DIN VDE 0304-1
cross fiber direction	K ⁻¹	appr. 48·10 ⁻⁶	DIN VDE 0304-1
Water absorption	%	appr. 1.0	DIN 53 495
Heat conductivity	W/m·K	0.22 - 0.25	DIN 52 612

Mechanical properties	Units	Value	Standard
Bending strength in fiber direction	MPa	≥ 250	DIN EN 63
cross fiber direction	MPa	≥ 60	DIN EN 63
Tensile strength in fiber direction	MPa	≥ 245	DIN EN ISO 527-4
cross fiber direction	MPa	≥ 30	DIN EN ISO 527-4
Flexural modulus in fiber direction	MPa	≥ 13,000	DIN EN 63
cross fiber direction	MPa	≥ 7,000	DIN EN 63
Tensile modulus in fiber direction	MPa	≥ 15,000	DIN EN ISO 527-4
cross fiber direction	MPa	≥ 8,000	DIN EN ISO 527-4
Transverse contraction coefficient in fiber direction	-	0.35	DIN EN ISO 527-4
cross fiber direction	-	0.15	DIN EN ISO 527-4

All values stated are to be seen as typical values. We reserve the right to introduce changes within the framework of further technical development. We do not accept any obligations of liabilities in respect of this information.

Status: 03/2021