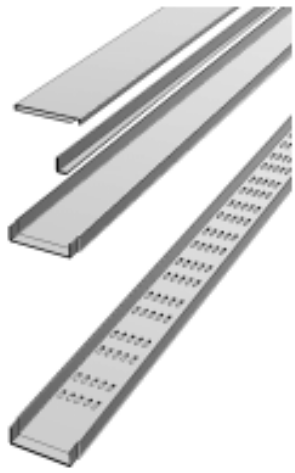


## Cable Tray Product Data Sheet

<b>Product Range</b>	<b>Perforated Pressed Tray</b>	Image shown for reference only  
<b>Description</b>	<b>GRP Tray System</b>	
<b>Key Features</b>	<b>No corrosion</b> <b>Insulating</b> <b>Easy installation</b> <b>Self-extinguishing with zero Halogen</b> <b>Light and Robust</b> <b>Perforated to assist cable fixing</b>	
<b>Dimensions</b>	<b>50x50mm to 400x80mm in 3m length</b>	
<b>Material(s)</b>	<b>Glass Reinforced Polyester (GRP)</b> <b>Standard colour RAL7032</b>	
<b>Compliance / Standard(s)</b>	<b>CE Marked</b> <b>Low Voltage Directive 2014/35/EC</b> <b>BS 7671:2008+A3:2015</b> <b>Refer to sheet 2 for complete list</b>	
<b>Packaging</b>	<b>Recyclable</b>	

### Carbon assessment

The Carbon Trust was set up by Government in 2001 as an independent company. Their mission is to accelerate the move to a low carbon economy by working with organisations to reduce carbon emissions and develop commercial low carbon technologies. Marshall-Tufflex was assessed by the Carbon Trust in 2007 and received an excellent report.

### Sustainability

EBO Cable Tray is manufactured from 100% recyclable materials all offering excellent fire performance.

### Quality Management Systems

Marshall-Tufflex is totally committed to quality and customer satisfaction and the Company is recognised by the British Standards Institution as a firm of Assessed Capability to BS EN ISO 9001:2008.

### Environmental Management Systems

Marshall-Tufflex is totally committed to achieving high environmental standards. The Company is recognised by the BSI as a firm of Assessed Capability to BS EN ISO 14001:2004 (Environment) and BS EN ISO 50001:2011 (Energy).

## Standards Claimed

Properties	Standard references & Standard designations	Country of origin (Lab)	PRESS type resin <b>R96</b>	PULTRUSION type resin <b>R6204</b>	Units
			Tests Output	Tests Output	
<b>Fire behavior</b>					
Inflammability	IEC 695-2-1 <i>Glow wire test</i>	International (LNE)	960	960	°C
Inflammability	UL 94 <i>Test for flammability of plastic materials</i>	USA (LNE)	V0	V0	-
Flammability	NF P 82-507 <i>Fire behavior of building materials</i>	France (LNE)	M3	M2	-
Spread of Flame	ASTM E84 <i>Surface burning characteristics of building materials</i>	USA (OC)	35	35	Index FSI
Spread of Flame	BS 476 Part 7 <i>Surface spread of flame test for materials</i>	England (Uni. Gent)	Class 2	Class 2	-
Fire propagation	BS 476 Part 6 <i>Fire propagation test for materials</i>	England (WFR)	18,3	14,1	Index
Oxygen & Smoke Index	NF F 16-101 <i>Fire behavior of materials for rolling stock</i>	France (LNE)	I2 (> 32) F0 (< 5)	I2 (> 32) F1 (< 20)	-
Smoke	BS 6863 App B52 <i>Fire precautions in the design and construction of rolling stock</i>	England (WFR)	10,47 / 11,23	17,34 / 18,74	Index
Oxygen Index	ASTM D 2863	USA	> 35	-	%
Fire protection Index	EMPA	Switzerland	5.3	5.3	Index
Fire Standard	DIN 4102	Deutschland	B2	B2	-
Fire Standard	IEC 332-3 <i>Fire resistance of cable</i>	Switzerland	Passed	-	-
<b>Mechanical behavior</b>					
Breaking point	NEMA FG1 <i>Fiber glass cable ladder systems</i>	USA (Ebo)	N/A	A to C Class	-
Tensile Strength at break point	DIN 53455 / ISO 527	International	37	155	MPa
Modulus of Elasticity	DIN 53457 / ISO 527-4	International	5000< <7000	10000< <15000	MPa
Choc Resistance	DIN 53453	Deutschland	27 / IPxx 7	80 / 25	kJ/mm <sup>2</sup>
Hardness	ASTM D 2583 / NF T 57-106 <i>Test method for indentation hardness of plastic (Barcol impressor)</i>		55< <65	35< <45	-
Heat Resistance	VSM 77116 <i>Martens point</i>	Switzerland	~ 90	~ 200 / 80	°C
Accelerated Aging	ISO 4892-2 <i>Mechanical and UV resistance</i>	France	Excellent	Excellent	-
Degrees of Protection	NF EN 50102 <i>Degrees of protection against mechanical impact</i>	France	IK10	IK09 - IK10	-
<b>Electrical behavior</b>					
Surface Resistivity	DIN 53482 / EN 60014	Europe	~ 10 <sup>12</sup>	~ 10 <sup>11</sup>	Ω
Volume Resistivity	DIN 53482	Deutschland	~ 10 <sup>12</sup>	~ 10 <sup>12</sup>	Ω.m
Breakage Voltage	IEC 243-1	International	> 15	> 15	kV/mm