45545 Series – PG63 -- (general purpose tubing for rail applications)

The heat shrink tubes 45545 with shrink ratio 2 to 1 or 3 to 1 are designed for rail applications. These heat shrink tubes are certified by EN-45545-2. Certifications like UL 224, VW-1 and MIL-I-23053/5 allow these tubes to be used in common industrial and military applications too.

Product facts

- EN 45545-2 and UL 224
- 2 to 1 or 3 to1 shrink ratio
- Very flexible
- Flame retardant

Specifications

- Rail approved EN 45545-2
- UL 224, VW-1, 600V, +125°C
- MIL-I-23053/5 Class 1 and 3 (only colours)

Temperature

Operating temperature	-55°C to +135°C
Min. shrinking temperature	+90°C

Dimensions in mm

Part Number	Inside diameter		Wall thickness
	As supplied	After heating	After heating (min.)
2 to 1 shrink ratio			
45545-1.2-Colour code-R	1.2	0.6	0.41 (+/- 0.1)
45545-1.6-Colour code-R	1.6	0.8	0.41 (+/- 0.1)
45545-2.4-Colour code-R	2.4	1.2	0.51 (+/- 0.1)
45545-3.2-Colour code-R	3.2	1.6	0.51 (+/- 0.1)
45545-4.8-Colour code-R	4.8	2.4	0.51 (+/- 0.1)
45545-6.4-Colour code-R	6.4	3.2	0.64 (+/- 0.1)
45545-9.5-Colour code-R	9.5	4.8	0.64 (+/- 0.1)
45545-12.7-Colour code-R	12.7	6.4	0.64 (+/- 0.1)
45545-19.1-Colour code-R	19.1	9.5	0.76 (+/- 0.15)
45545-25.4-Colour code-R	25.4	12.7	0.89 (+/- 0.15)
45545-32.0-Colour code-R	32.0	15.9	0.89 (+/- 0.15)
45545-40.0-Colour code-R	40.0	20.1	1.00 (+/- 0.15)
45545-51.0-Colour code-R	51.0	25.4	1.15 (+/- 0.15)
45545-80.0-Colour code-R	80.0	40.1	1.27 (+/- 0.2)
45545-102.0-Colour code-R	102.0	50.8	1.40 (+/- 0.2)
45545-125.0-Colour code-R	125.0	63.5	1.40 (+/- 0.25)

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Dimensions in mm

Part Number	Inside diameter		Wall thickness
	As supplied	After heating	After heating (min.)
3 to 1 shrink ratio			
45545-1.5/0.5-Colour code-R	1.5	0.5	0.45 (+/- 0.1)
45545-3/1-Colour code-R	3.0	1.0	0.55 (+/- 0.1)
45545-4.5/1.5-Colour code-R	4.5	1.5	0.60 (+/- 0.1)
45545-6/2-Colour code-R	6.0	2.0	0.65 (+/- 0.1)
45545-9/3-Colour code-R	9.0	3.0	0.75 (+/- 0.15)
45545-12/4-Colour code-R	12.0	4.0	0.75 (+/- 0.15)
45545-15/5 Colour code-R	15.0	5.0	0.80 (+/- 0.15)
45545-18/6-Colour code-R	18.0	6.0	0.85 (+/- 0.15)
45545-24/8-Colour code-R	24.0	8.0	1.00 (+/- 0.2)
45545-30/10-Colour code-R	30.0	10.0	1.15 (+/- 0.2)
45545-39/13-Colour code-R	39.0	13.0	1.50 (+/- 0.2)
45545-50/16-Colour code-R	50.0	16.0	2.50 (+/- 0.2)
45545-70/23-Colour code-R	70.0	23.0	2.60 (+/- 0.2)
45545-80/26-Colour code-R	80.0	26.0	2.60 (+/- 0.2)
45545-90/30-Colour code-R	90.0	30.0	2.60 (+/- 0.2)
45545-100/33-Colour code-R	100.0	33.0	2.60 (+/- 0.2)

Standard colours

Colour	Clear	Black	Red	Yellow	Green	Blue	White
Colour code	X	0	2	4	5	6	9

Colours on request

Colour	Brown	Orange	Violett	Grey	Yellow/Green
Colour code	1	3	7	8	45

Properties

			Values	Test Methods
Physical	Working temperature		-55°C to +135°C	
	Flammability, Smoke	Procedure C	VW-1	UL 224
	& Toxicity		R24 – HL3	EN 45545-2
	Longitudinal change		+/- 8%	
	Tensile strength	Unaged	≥ 10.4 MPa	UL 224
	Elongation at break		≥ 200%	
	Tensile strength	Aged 168h at +175°C	≥ 7.3 MPa	UL 224
	Elongation at break		≥ 100%	
	Heat shock	4h at +250°C	No cracking	UL 224
	Cold blend	1h at -55°C	No cracking	UL 224
Electrical	Dielectric strength		≥ 19.7 kV/mm	ASTM D 2671
	Dielectric withstand	60s at 2500V	No Breakdown	UL 224
	Volume resistivity		≥ 10^{14} Ω. cm	ASTM D 876
Chemical	Copper stability	168h at +175°C	Pass	UL 224
	Anti corrosion	168h at +175°C	Pass	UL 224

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