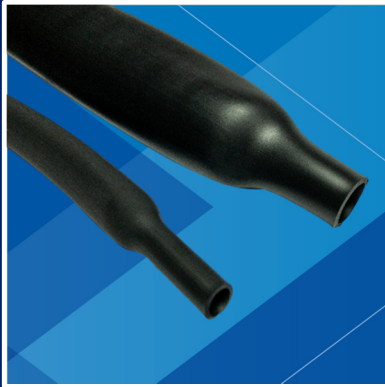


# HEAT-SHRINKABLE TUBING

## HTS-FR25(TW)

SUMITUBE<sup>®</sup>, Made of radiation cross-linked Elastomer, very thin-walled, highly flexible



### Highlights

- Operating temperature - 75 °C to 150 °C
- Flame retardent
- Very thin-walled, therefore quickly shrinking
- Highly flexible
- Diesel- and fluid resistant
- Shrink rate 2:1
- Shrink temperature: 170 °C
- Colour: black
- RoHS and REACH conform
- Approvals: ASTM D, SAE-AS23053

### Dimensions

Art.-No.	Before Shrinkage (mm)		After Shrinkage (mm)		Standard Packaging	
	Inch	Inner Diameter (min)	Inner Diameter (max.)	Wall Thickness (nom.)	Spool (m)	Box (m)
Z87144	3/32	2.40	1.20	0.40 - 0.60	150	600
Z87145	1/8	3.20	1.60	0.40 - 0.60	150	600
Z87146	3/16	4.80	2.40	0.40 - 0.60	60	300
Z87147	1/4	6.40	3.20	0.50 - 0.80	60	300
Z87148	3/8	9.50	4.75	0.50 - 0.80	60	180
Z87149	1/2	12.70	6.40	0.50 - 0.80	60	180
Z87150	3/4	19.10	9.50	0.60 - 0.90	30	90
Z87151	1	25.40	12.70	0.75 - 1.05	30	90
Z87152	1-1/4	31.50	15.00	0.80 - 1.20	30	90
Z87153	1-1/2	38.00	19.10	0.80 - 1.20	30	60
Z87154	2	51.00	25.40	0.90 - 1.40	30	60

### Technical characteristics

Property	Test	Inspection requirements	Typical values
Physical	Longitudinal change	SAE-AS23053, ± 10%	Passed
	Tensile strength	SAE-AS23053, min. 11,7 MPa	≥ 17 MPa
	Elongation at break	SAE-AS23053, min. 250%	≥ 400%

Created by: VS 20.11.2020

We reserve the right to make product changes.

**RELIABLE, FLEXIBLE,  
CUSTOMER-ORIENTED**

**HEINRICH THULESIUS GMBH & CO. KG**  
Zum Panrepel 15, D-28307 Bremen, GERMANY



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# HEAT-SHRINKABLE TUBING

## HTS-FR25(TW)

SUMITUBE®, Made of radiation cross-linked Elastomer, very thin-walled, highly flexible

### Technical characteristics

Property	Test	Inspection requirements	Typical values
Thermal	Operating temperature	SAE-AS23053	-75 °C to 150°C
	Min. Shrink temperature	For complete shrinkage	165 °C
	Shrinkage begins at		90 °C
	Heat shock (200 °C x 4 h)	SAE-AS23053, no cracking, flowing or dripping	Passed
	Elongation after thermal aging (150 °C x 168 h)	SAE-AS23053, min. 200%	≥ 300%
	Tensile strength after thermal aging (150 °C x 168 h)	SAE-AS23053, min. 10,4 MPa	≥ 12 MPa
Chemical	Cold bending (-75 °C x 4 h)	IEC 60684-3-271, no cracks	-75°C x 4h
	Copper Corrosion	SAE-AS23053, no corrosion	Passed
	Flammability	ASTM D 2671, Procedure B	Passed
	Water absorption	ASTM D 570, max. 2,0%	≤ 1,4%
	Fluid resistance (24 °C x 24 Std.)	SAE-AS23053, Diesel included, min. 10,4 MPa (tensile strength)	≥ 14 MPa
Electrical		SAE-AS23053, Diesel included, min. 200% (Elongation)	≥ 320%
		SAE-AS23053 Diesel included, min. 7,9 kV/mm (Dielectric strength)	≥ 13 kV/mm
	Fungus resistance	SAE-AS23053, no growth	Passed
Electrical	Ozone resistance	NF F 00-608, no cracking or sweating	Passed
	Volume resistance	SAE-AS23053, min. 10 <sup>9</sup> Ω/cm	≥ 10 <sup>11</sup> Ω/cm
	Dielectric strength	SAE-AS23053, min. 11,9 kV/mm	≥ 18 kV/mm

Note: SAE-AMS-DTL 23053/16 does not include dimensions for very thin walls. For standard dimensions see Sumitube FR25. Megol transformer oil (J10) test: thermal aging (110 °C x 168 hours) / immersion. Tensile strength after aging: > 10.4 MPa: Passed. Elongation after aging: > 200%: passed.

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