

HEAT-SHRINKABLE TUBING

HTS-KH230, KH230 (TW)

SUMITUBE®, Made of Fluoroplastic, Thin-walled, Flexible, Black, High temperature resistant



Highlights

- Operating temperature - 55 °C to 230 °C
- Very flexible and abrasion resistant
- Very good resistance to aggressive Fluids
- Low shrink temperature: 130 °C
- Self-extinguishing
- Shrink rate 2:1
- RoHS and REACH conform
- Approvals: UL, SAE (MIL)
- Very thin-walled: KH230 (TW)

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)
KH230						
Z85045	1/8	3.20	1.60	0.65 - 0.95	30	900
Z85046	3/16	4.80	2.40	0.75 - 1.05	30	300
Z85047	1/4	6.40	3.20	0.72 - 1.08	60	300
Z85048	3/8	9.50	4.75	0.72 - 1.08	30	180
Z85049	1/2	12.7	6.40	0.72 - 1.08	30	180
Z85050	3/4	19.1	9.50	0.90 - 1.30	30	180
Z85051	1	25.4	12.7	0.92 - 1.48	30	180
KH230(TW)						
Z85052	1/8	3.20	1.60	0.23 - 0.31	60	300
Z85053	3/16	4.80	2.40	0.23 - 0.31	60	300
Z85054	1/4	6.40	3.20	0.28 - 0.38	60	300
Z85055	3/8	9.50	4.75	0.28 - 0.38	30	180
Z85056	1/2	12.7	6.40	0.28 - 0.38	30	150
Z85057	3/4	19.1	9.50	0.41 - 0.55	15	150

Created by: VS 20.11.2020

We reserve the right to make product changes.

**RELIABLE, FLEXIBLE,
CUSTOMER-ORIENTED**

HEINRICH THULESIUS GMBH & CO. KG
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**SUMITOMO
ELECTRIC
GROUP**

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Technical characteristics

Property	Test	Inspection Requirements	Typical Values
Physical	Longitudinal change	SAE-AS23053, $0 \pm 10\%$	-5%
	Tensile strength	SAE-AS23053, min. 10.4 MPa	≥ 14 MPa
	Elongation at break	SAE-AS23053, min. 250%	$\geq 400\%$ / $\geq 300\%$
Thermal	Operating temperature	SAE-AS23053, -55 °C - 200 °C	-55 °C to 230 °C
	Min. Shrink temperature	For complete shrinkage	130 °C
	Shrinkage begins at		70 °C
	Heat shock (300 °C x 4 h)	SAE-AS23053, no cracks	Passed
	Elongation after thermal aging (250 °C x 168 h)	SAE-AS23053, min. 200%	$\geq 300\%$
	Low temperature flexibility (-55 °C x 4 h)	SAE-AS23053, no cracks	Passed
	Copper corrosion (175 °C x 16 h)	SAE-AS23053, no corrosion	Passed
Transparence (200 °C x 24 h)	SAE-AS23053, no changes	Passed	
Chemical	Flammability	UL 224 / CSA, VW-1	Passed
	Water absorption (23 °C x 24 Std.)	SAE-AS23053, max. 0.1%	Passed
	Fluid resistance (24 °C x 24 h)	SAE-AS23053, min. 8.2 MPa (tensile strength)	≥ 12 MPa
	Flüssigkeitswiderstand (24 °C x 24 Std.)	SAE-AS23053, min. 250% (elongation)	Passed
	Vacuum outgassing	NASA SP-R-0022, TML 1.0% / Max. CVCM 0.1%	Passed
Electrical	Volume resistance	SAE-AS23053, min. $10^{13}\Omega/\text{cm}$	$>10^{14}\Omega/\text{cm}$
	Dielectric strength	SAE-AS23053, min. 19.7 kV/mm	≥ 30 kV/mm

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