



High-temperature wires & cables

H05S-K / H05SJ-K / UL 3512 / 3644

Silicone Rubber Insulated High-Temperature Wire (H05S-K & UL 3512)

300/500 V to 1,000 V –60 to +200 °C EN 50525-2-41 & UL single-core silicone wire

EN 50525-2-41 & UL 758

300/500 V to 1,000 V

–60 to +180 / +200 °C

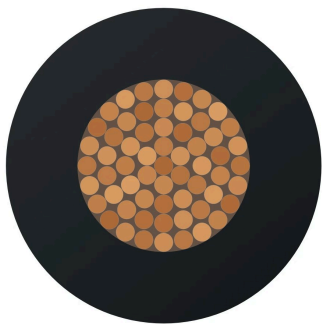
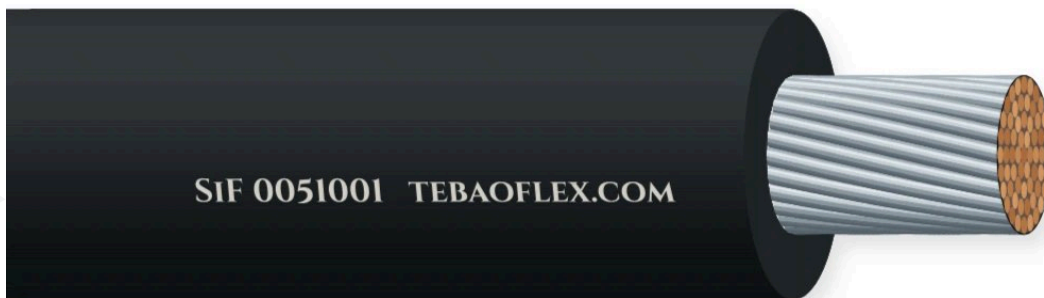


Application

Harmonized European EN 50525-2-41 (H03S-K, H05S-U, H05S-K, H05SJ-U, H05SJ-K, H05S-H) and UL 758 (Styles 3512 600 V & 3644 1,000 V) single-core cross-linked silicone rubber hook-up and panel wires for –60 °C to +180/+200 °C service.

Typical uses: Switchgear, inverter & UPS cabinet wiring, Commercial catering & baking ovens, High-temperature lighting & ballasts, Sauna, HVAC & climate test chambers, Plastics extrusion & moulding heaters, Metallurgical & glass-plant control panels

Construction



Cross-section, not to scale

1	Tinned or bare copper conductor	EN 60228 & UL 758
2	Cross-linked silicone rubber (EI2)	EN 50363-1 / UL 758
3	Glass-fibre braid (H05SJ-U / H05SJ-K)	EN 50525-2-41

Technical data

Typical values

Rated voltage by style	300/300 V (H03S-K) · 300/500 V (H05S-U, H05S-K, H05SJ-U, H05SJ-K, H05S-H) · 600 Vac (UL 3512) · 1,000 Vac (UL 3644)	AC test voltage	2.0 kV Vac AC test voltage (EN 50525-2-41 & UL 3512) · 3.0 kV Vac (UL 3644 1,000 V)
Conductor classes & plating	Tinned or bare annealed copper per EN 60228 Class 1 solid (-U) or Class 5 flexible (-K / -H), and stranded tinned copper per UL 758	Operating & short-circuit temperature	-60 °C to +180 °C max conductor temperature (EN 50525-2-41 EI2; short-circuit +350 °C) · -60 °C to +200 °C (UL 3512 & UL 3644)
Fire silica-ash integrity	Under direct flame exposure, silicone elastomer converts to a non-conductive SiO2 silica ash layer	Unbraided & braided options	Unbraided smooth EI2 silicone wall (H03S-K, H05S-U/K/H, UL 3512, UL 3644) or EI2 silicone + treated glass-fibre outer braid (H05SJ-U, H05SJ-K)
Minimum bending radius	4-6 × OD fixed	Flame & halogen-free performance	IEC 60332-1-2 & UL FT2 / VW-1 flame retardant; halogen-free per IEC 60754-1/2; forms insulating SiO2 silica ash under fire
Ozone, UV & ageing resistance	Immune to ozone, UV radiation, humid heat and elastomeric plasticiser migration	Standards	EN 50525-2-41 (DIN VDE 0285-525-2-41 / HD 22.3); EN 60228; UL 758 Styles 3512 & 3644

Sizes

16 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Style · Size	Rated voltage	Temp. rating	Nominal CSA	Conductor class / stranding	Cond. Ø mm	SiR wall mm	Nominal OD mm	Mass ≈ kg/km	Max. DC res. (20 °C) Ω/km
EN 50525-2-41 Unbraided · H03S-K (300/300 V) & H05S-U / H05S-K / H05S-H (300/500 V, 180 °C) 7 sizes									
☐ H03S-K · 0.75 mm ²	300/300 V	180 °C	0.75 mm ²	Class 5 (24×0.20)	1.15	0.60	2.35	11.5	26.00
☐ H05S-U · 1.5 mm ²	300/500 V	180 °C	1.5 mm ²	Class 1 (1×1.38)	1.38	0.80	2.98	21.0	12.10
☐ H05S-K · 0.75 mm ²	300/500 V	180 °C	0.75 mm ²	Class 5 (24×0.20)	1.15	0.80	2.75	13.8	26.00
☐ H05S-K · 1.0 mm ²	300/500 V	180 °C	1.0 mm ²	Class 5 (32×0.20)	1.30	0.80	2.90	16.5	19.50
☐ H05S-K · 1.5 mm ²	300/500 V	180 °C	1.5 mm ²	Class 5 (30×0.25)	1.60	0.80	3.20	22.0	13.30
☐ H05S-K · 2.5 mm ²	300/500 V	180 °C	2.5 mm ²	Class 5 (50×0.25)	2.00	0.90	3.80	34.5	7.98
☐ H05S-H · 1.5 mm ²	300/500 V	180 °C	1.5 mm ²	Class 5/6 Fine	1.60	0.80	3.20	22.2	13.30
EN 50525-2-41 Glass-Fibre Braided · H05SJ-U & H05SJ-K (300/500 V, 180 °C, 0.5-95 mm ²) 5 sizes									
☐ H05SJ-U · 1.5 mm ²	300/500 V	180 °C	1.5 mm ²	Class 1 (1×1.38)	1.38	0.80	3.40	24.5	12.10
☐ H05SJ-K · 1.5 mm ²	300/500 V	180 °C	1.5 mm ²	Class 5 (30×0.25)	1.60	0.80	3.60	25.5	13.30
☐ H05SJ-K · 2.5 mm ²	300/500 V	180 °C	2.5 mm ²	Class 5 (50×0.25)	2.00	0.90	4.20	38.0	7.98
☐ H05SJ-K · 6.0 mm ²	300/500 V	180 °C	6.0 mm ²	Class 5 (84×0.30)	3.10	1.00	5.60	76.0	3.30
☐ H05SJ-K · 16 mm ²	300/500 V	180 °C	16 mm ²	Class 5 (126×0.40)	5.10	1.20	8.10	182.0	1.21
UL 758 Extruded Silicone · Style 3512 (600 Vac, 200 °C) & Style 3644 (1,000 Vac, 200 °C) 4 sizes									
☐ UL AWM 3512 · 16 AWG	600 Vac	200 °C	1.31 mm ²	26/30	1.50	0.76	3.02	18.5	14.00
☐ UL AWM 3512 · 12 AWG	600 Vac	200 °C	3.31 mm ²	65/30	2.36	0.76	3.88	38.0	5.60
☐ UL AWM 3644 · 14 AWG	1,000 Vac	200 °C	2.08 mm ²	41/30	1.88	1.14	4.16	32.5	8.90
☐ UL AWM 3644 · 10 AWG	1,000 Vac	200 °C	5.26 mm ²	105/30	2.95	1.14	5.23	64.0	3.50

- H05SJ-K is manufactured up to 95 mm²; UL 3512 (600 Vac) and UL 3644 (1,000 Vac) are available up to 500 kcmil and 1,000 kcmil respectively.

Standards and approvals

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/silicone-rubber-insulated-high-temperature-wire



Typical values for this cable type, based on EN 50525-2-41 & UL 758. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.