subsea umbilical, ROV tether & oceanographic tow cable

SB-45027 E-M

SB-45027 300 V Polar Under-Ice & Hydrographic Array Aramid Electromech

SB-45027 / Polar Subsea EM · 300 V · Subsea umbilical, rov tether & oceanographic tow



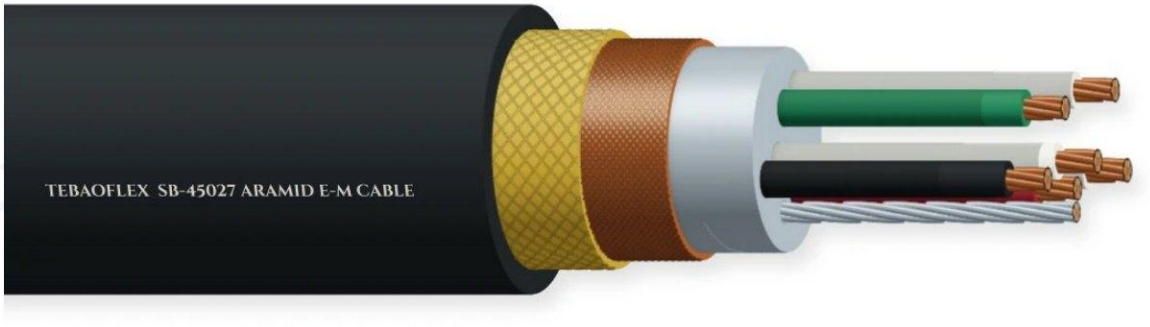
SB-45027 / Polar Subsea EM | **300 V (-40 to +80 °C)** | **Polyurethane (PUR) Outer Sheath**

Application

SB-45027 300 V Polar Under-Ice & Hydrographic Array Aramid Electromechanical Cable featuring 24 awg stranded bare copper pairs (3×2) and polyurethane (pur) outer sheath (SB-45027 / Polar Subsea EM, 300 V, -40 to +80 °C).

Typical uses: Oceanographic CTD, ADCP & Deep-Tow Surveys, Work-Class & Observation ROV / AUV Systems, Side-Scan Sonar, SAS & Towed Hydrophone Arrays, Marine 2D/3D/UHR Seismic Streamers & OBC

Construction





Cross-section, not to scale

1. 24 AWG Stranded Bare Copper Pairs (3×2)
2. Al/PET Foil + Copper Braid Dual Shield
3. Braided Aramid Strength Member
4. Polyurethane (PUR) Outer Sheath

Technical data

Typical values

Rated voltage / transmission duty	300 V (SB-45027 Polar Under-Ice & Hydrographic Aramid-Reinforced EM Cable Specification)	**Core / conductor construction**	24 AWG Stranded Bare Copper Pairs (3×2) — Three twisted pairs with low-capacitance PE insulation plus drain wire
Primary dielectric / buffering	Al/PET Foil + Copper Braid Dual Shield — 100% aluminum-polyester tape plus copper wire braid EMC shield	**Continuous operating temperature**	−40…+80 °C (subsea & offshore duty)
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per SB-45027 Polar Under-Ice & Hydrographic Aramid-Reinforced EM Cable Specification	**Storage & transport temperature**	−40…+80 °C on export wooden/steel winch reel
Outer protection / armouring	Polyurethane (PUR) Outer Sheath — Low-temperature and hydrolysis-resistant black PUR jacket	**Minimum bending radius**	8 × OD
Armour, strength member & mechanical duty	Braided Aramid Strength Member — High-tenacity aramid fiber braid for under-ice & mooring tension	**Seawater, hydrostatic & hydrolysis resistance**	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per SB-45027 Polar Under-Ice & Hydrographic Aramid-Reinforced EM Cable Specification
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per SB-45027 Polar Under-Ice & Hydrographic Aramid-Reinforced EM Cable Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	SB-45027 Polar Under-Ice & Hydrographic Aramid-Reinforced EM Cable Specification		

Sizes

3 standard constructions

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

Order designation	Configuration	Core / stranding	Outer Ø ≈ mm	Net weight ≈ kg/km	Breaking / tensile kN ≈	Min. bend R mm
SB-45027 E-M Construction Schedule (−40…+80 °C) 3 sizes						
☐ SB-45027 E-M 4Pr / 8Ch	4×2×24–20 AWG (or 8-Ch Array)	Stranded SnCu + Foil/Braid + Aramid	11.2	175	12.5	90
☐ SB-45027 E-M 8Pr / 16Ch	8×2×22–18 AWG (or 16-Ch Array)	Stranded SnCu + Foil/Braid + Aramid	16.4	340	24.0	130
☐ SB-45027 E-M 16Pr / 24Ch	16×2×18–16 AWG (or 24-Ch Array)	Stranded SnCu + Foil/Braid + Aramid	24.8	690	35.0	195

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per SB-45027 Polar Under-Ice & Hydrographic Aramid-Reinforced EM Cable Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
4×2×24–20 AWG (or 8-Ch Array)	42.00	300 V (≤55 nF/km)	−40…+80 °C
8×2×22–18 AWG (or 16-Ch Array)	26.00	300 V (≤60 nF/km)	−40…+80 °C
16×2×18–16 AWG (or 24-Ch Array)	15.20	300 V (≤65 nF/km)	−40…+80 °C

– Every production length undergoes routine conductor DC resistance, high-voltage dielectric or OTDR continuity and dimensional verification.

Standards and approvals

- SB-45027 / Polar Subsea EM Compliant
- EN 10204 3.1 Factory Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

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/sb-45027-aramid-e-m-cable

Typical values for this cable type, based on SB-45027 Polar Under-Ice & Hydrographic Aramid-Reinforced EM Cable Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.