MIL-DTL-24643 EMP-shielded watertight multi-pair submarine cable

MIL-DTL-24643/56 & /57 (LS2SWL-7 / LS2UWS-42)

Submarine Cable

MIL-DTL-24643/56 & /57 · 600 V · Mil-dtl-24643 emp-shielded watertight multi-pair



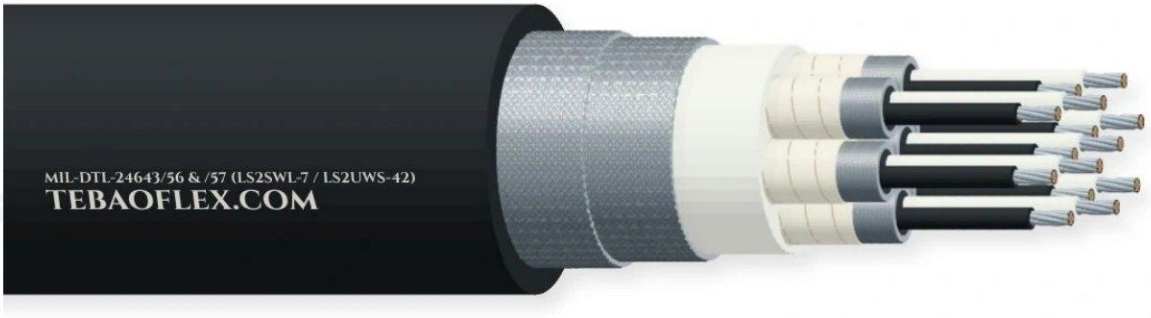
MIL-DTL-24643/56 & /57 | 600 V / 300 V 115 Ω | EMP Double Cu Braid

Application

MIL-DTL-24643/56 & /57 Types LS2SWL-7, LS2UW-42 & LS2UWS-42 Watertight Shielded Multi-Pair Shipboard & Submarine Communication/Control Cable (MIL-DTL-24643/56 & /57, 600 V, -30 to +105 °C, min. bend radius 8 × OD).

Typical uses: Naval Shipboard & Submarine Outboard, Offshore Cathodic Protection (ICCP), Underwater Welding & Nuclear Pools, Deep-Well & Seabed Pump Feeders

Construction





Cross-section, not to scale

1. Watertight Pairs (7×2×16 AWG / 42×2×26 AWG)
2. Individual Pair Braid & Tapes (LS2SWL-7)
3. Watertight Core & Separator Tape
4. Double Overall Tin-Coated Copper Braid
5. Cross-Linked Polyolefin Jacket (XLPO)

Technical data

Typical values

Rated voltage / transmission duty	600 V (MIL-DTL-24643/56F & /57F EMP-Shielded Submarine Standard)	**Core / conductor construction**	Watertight Pairs (7×2×16 AWG / 42×2×26 AWG) — Longitudinally water-blocked tinned copper conductors with XLPE insulation
Primary dielectric / buffering	Individual Pair Braid & Tapes (LS2SWL-7) — Tin-coated copper braid shield + two sealed polyester tapes over each 16 AWG pair	**Continuous operating temperature**	−30…+105 °C (subsea, marine & submersible duty)
Short-circuit / peak thermal rating	Verified thermal stability per MIL-DTL-24643/56F & /57F EMP-Shielded Submarine Standard	**Storage & transport temperature**	−40…+80 °C on export wooden/steel drum
Outer protection / armouring	Cross-Linked Polyolefin Jacket (XLPO) — 1.65–1.91 mm black low-smoke zero-halogen XLPO outer sheath (optional Al armor)	**Minimum bending radius**	8 × OD
Hydrostatic, tensile & crush duty	Double Overall Tin-Coated Copper Braid — Dual overall copper braid shields meeting MIL-DTL-24643 EMP & Zt limits	**Hydrostatic pressure & water blocking**	Engineered for continuous submersion and hydrostatic integrity per MIL-DTL-24643/56F & /57F EMP-Shielded Submarine Standard
Seawater, oil & chemical resistance	Resistant to seawater hydrolysis, hydraulic oils and abrasion per MIL-DTL-24643/56F & /57F EMP-Shielded Submarine Standard	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	MIL-DTL-24643/56F & /57F EMP-Shielded Submarine Standard		

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	Tensile rating kN ≈	Min. bend R mm
MIL-DTL-24643/56 & /57 (LS2SWL-7 / LS2UWS-42) Construction Schedule (−30…+105 °C) 3 sizes							
☐	**MIL-DTL-24643 Config A (Compact)**	**4×2×24 AWG + 2×18 AWG (or 4C)**	**Stranded tinned Cu (IEC 60228 / ASTM)**	**10.4**	**155**	**4.5**	**85**
☐	**MIL-DTL-24643 Config B (Standard)**	**4×2×20 AWG + 4×16 AWG (or 8C)**	**Stranded tinned Cu (IEC 60228 / ASTM)**	**13.3**	**265**	**9.6**	**110**
☐	**MIL-DTL-24643 Config C (Heavy Hybrid)**	**8×2×20 AWG + 4×12 AWG (or 12C)**	**Stranded tinned Cu (IEC 60228 / ASTM)**	**16.6**	**420**	**18.5**	**140**

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per MIL-DTL-24643/56F & /57F EMP-Shielded Submarine Standard.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
4×2×24 AWG + 2×18 AWG (or 4C)	**28.40**	**600 V (45–100 Ω data)**	**−30…+105 °C**
4×2×20 AWG + 4×16 AWG (or 8C)	**10.70**	**600 V (45–100 Ω data)**	**−30…+105 °C**
8×2×20 AWG + 4×12 AWG (or 12C)	**5.40**	**600 V (High-Power Hybrid)**	**−30…+105 °C**

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

Standards and approvals

- MIL-DTL-24643/56 & /57 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/mil-dtl-24643-56-57-ls2swl-7-ls2uws-42

Typical values for this cable type, based on MIL-DTL-24643/56F & /57F EMP-Shielded Submarine Standard. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.