submarine & offshore power composite cable

CIR TC-ER-HL 600V

CIR UL 2225 TC-ER-HL & UL 1309 600 V Crush- & Impact-Resistant Class I

UL 2225 TC-ER-HL / UL 1309 · 600 V (0.6/1 kV) · Submarine & offshore power composite cable



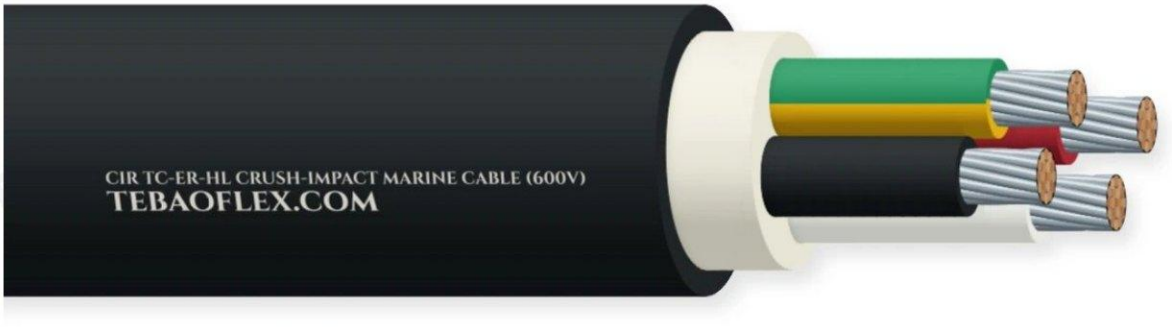
UL 2225 TC-ER-HL / UL 1309 | **600 V (0.6/1 kV) (-40 to +110 °C)** | **Oil-Resistant CPE / LSZH Outer Sheat**

Application

CIR UL 2225 TC-ER-HL & UL 1309 600 V Crush- & Impact-Resistant Class I Div 1 Hazardous Marine Cable (UL 2225 TC-ER-HL / UL 1309) engineered for 600 V (0.6/1 kV) service across -40 to +110 °C (min. bend radius 6 × OD).

Typical uses: Offshore Wind Inter-Array & Export Submarine Links, Subsea Island & Platform HV/MV Power Interconnects, Offshore Oil & Gas Drilling Rigs & FPSOs, Commercial Vessels, Polar Ships & Marine Propulsion

Construction





Cross-section, not to scale

1. Stranded Tinned Copper Conductors (4 Cor
2. 90°C/110 °C XLPO Core Insulation
3. CIR Polymeric Crush & Impact Inner Barri
4. Oil-Resistant CPE / LSZH Outer Sheath

Technical data

Typical values

Rated voltage / transmission duty	600 V (0.6/1 kV) (UL 2225 Type TC-ER-HL & UL 1309 Class I Div 1 Crush- & Impact-Resistant Marine Specification)	**Core / conductor construction**	Stranded Tinned Copper Conductors (4 Cores) — 3 power cores + 1 ground conductor (18 AWG to 500 MCM)
Primary dielectric / buffering	90°C/110 °C XLPO Core Insulation — Flame-retardant cross-linked polyolefin insulation	**Continuous operating temperature**	−40...+110 °C (subsea & offshore duty)
Hydrostatic & thermal stability	Verified thermal and hydrostatic stability per UL 2225 Type TC-ER-HL & UL 1309 Class I Div 1 Crush- & Impact-Resistant Marine Specification	**Storage & transport temperature**	−40...+80 °C on export wooden/steel winch reel
Outer protection / armouring	Oil-Resistant CPE / LSZH Outer Sheath — Heavy-duty flame-retardant outer jacket for deck winches & hazardous zones	**Minimum bending radius**	6 × OD
Armour, strength member & mechanical duty	CIR Polymeric Crush & Impact Inner Barrier — High-strength armorless polymeric barrier rated for Class I Div 1 HL	**Seawater, hydrostatic & hydrolysis resistance**	Engineered for continuous seawater immersion, pressure cycling and hydrolysis resistance per UL 2225 Type TC-ER-HL & UL 1309 Class I Div 1 Crush- & Impact-Resistant Marine Specification
Oil, drilling mud & abrasion resistance	Resistant to marine hydraulic oils, salt mist, winch sheave wear and seabed abrasion per UL 2225 Type TC-ER-HL & UL 1309 Class I Div 1 Crush- & Impact-Resistant Marine Specification	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	UL 2225 Type TC-ER-HL & UL 1309 Class I Div 1 Crush- & Impact-Resistant Marine 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
CIR TC-ER-HL 600V Construction Schedule (−40...+110 °C) 3 sizes						
☐ CIR TC-ER-HL 600V 3×16+1G16 mm²	3 × 16 + 1G16 mm² (or 1C×50 mm²)	IEC 60228 Class 2/5 Cu/SnCu	22.4	920	18.5	135
☐ CIR TC-ER-HL 600V 3×35+1G16 mm²	3 × 35 + 1G16 mm² (or 1C×150 mm²)	IEC 60228 Class 2/5 Cu/SnCu	28.8	1,690	32.0	175
☐ CIR TC-ER-HL 600V 3×95+1G50 mm²	3 × 95 + 1G50 mm² (or 1C×300 mm²)	IEC 60228 Class 2/5 Cu/SnCu	41.2	3,680	58.0	250

– Custom core cross-sections, pair/fibre counts, armour breaking loads and continuous winch/seabed lengths available per UL 2225 Type TC-ER-HL & UL 1309 Class I Div 1 Crush- & Impact-Resistant Marine Specification.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/kmor dB/km	Rating / Impedance	Operating temp.
3 × 16 + 1G16 mm² (or 1C×50 mm²)	1.15	600 V (0.6/1 kV) (98 A)	−40...+110 °C
3 × 35 + 1G16 mm² (or 1C×150 mm²)	0.52	600 V (0.6/1 kV) (158 A)	−40...+110 °C
3 × 95 + 1G50 mm² (or 1C×300 mm²)	0.19	600 V (0.6/1 kV) (285 A)	−40...+110 °C

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

Standards and approvals

- UL 2225 TC-ER-HL / UL 1309 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/cir-tc-er-hl-crush-impact-marine-cable-600v

Typical values for this cable type, based on UL 2225 Type TC-ER-HL & UL 1309 Class I Div 1 Crush- & Impact-Resistant Marine Specification. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.