SeaTex® 7

ultra-flexible, low-loss, stray radiation-resistant, and designed for marine applications

SeaTex 7 is a low-loss, halogen-free, highly flexible communication coaxial cable specially designed for marine and offshore applications. It holds the worldwide SHF shipbuilding approval (DNV certificate) and is suitable for deployment on ships, oil platforms, drilling rigs, and wind turbines. The outer jacket of SeaTex 7 is made of a special thermoplastic copolymer (SHF2), providing the cable with high resistance to heat, cold, oils, saltwater, UV radiation, and weather conditions, ensuring a long lifespan in harsh environments.

Based on the proven Aircell 7, SeaTex 7 features excellent attenuation values, and its flexibility and small bending radius allow for installation in tight spaces. Therefore, SeaTex 7 combines the advantages of Aircell coaxial cables with the requirements of maritime applications. The product is specified up to 6 GHz and can be used in a temperature range of -55 to 85°C.

Key features

Diameter	7.3 ± 0.2 mm
Impedance	50 ± 2 Ω
Attenuation at 1 GHz/100 m	21.52 dB
f max	**6 GHz**

Characteristics

- Conductor/screen material according to DIN EN 13602 Cu-ETP-R
- Screen material according to DIN EN 13602 Cu-ETP-A
- Insulation material according to ISO 6722-1 Chap. 5.14, Class "A", bending diameter 80 mm
- Jacket material according to IEC 60092-360 (IEC 60092-359) SHF2
- Wall thickness of the cable jacket according to IEC 60092-376
- Flame-retardant according to IEC 60332-3-22 (Cat. A)
- Flame-retardant according to IEC 60332-1-2
- Oil-resistant according to EN 60811-2-1 (24 hrs/100 °C)
- RoHS compliant (Directive 2011/65/EC & 2015/863/EU RoHS 3)
- Fire-resistant, low smoke, halogen-free (LSZH)
- Corrosivity of the combustion gases according to IEC 60754-2
- Smoke density according to IEC 61034
- UV-resistant
- Approved for marine and offshore applications
- DNV certificate no. TAE00001JX

DNV SHF 2

Technical Data

Inner conductor	stranded (Cu) copper wire
Inner conductor Ø	1.9 mm (19 × 0.38 mm, 14 AWG)
Dielectric	foamed cellular polyethylene (PE) with skin
Dielectric Ø	5.0 mm
Outer conductor 1	overlapping copper (Cu) foil
Shielding factor	100 %
Outer conductor 2	Copper (Cu) shield braiding of bare copper wires
Shielding factor	85 %
Outer conductor Ø	5.7 mm
Jacket	special thermoplastic copolymer (SHF2) black
Weight	73 kg/km
Min. Bending radius	4 × Ø single, 8 × Ø repeated
Temperature range	-55 to +85 °C transport & fixed installation
Pulling strength	300 N

Electrical Data at 20 °C

Capacitance (1 kHz)	78 nF/km
Velocity factor	0.85
Shielding attenuation 1 GHz	≥ 90 dB
DC-resistance inner conductor	≤ 9 Ω/km
DC-resistance outer conductor	8.7 Ω/km
Insulation resistance	≥ 10 GΩ*km
Test Voltage DC (wire/screen)	10 kV
Max. voltage	8 kV

	SeaTex 7	RG 58/U	RG 213/U
Capacitance	78 pF/m	101 pF/m	102 pF/m
Velocity factor	0.85	0.66	0.66
Attenuation (dB/100m)			
10 MHz	2.20	5.00	2.00
100 MHz	6.28	17.00	7.00
500 MHz	14.72	39.00	17.00
1000 MHz	21.52	54.60	22.50
3000 MHz	40.88	118.00	58.50

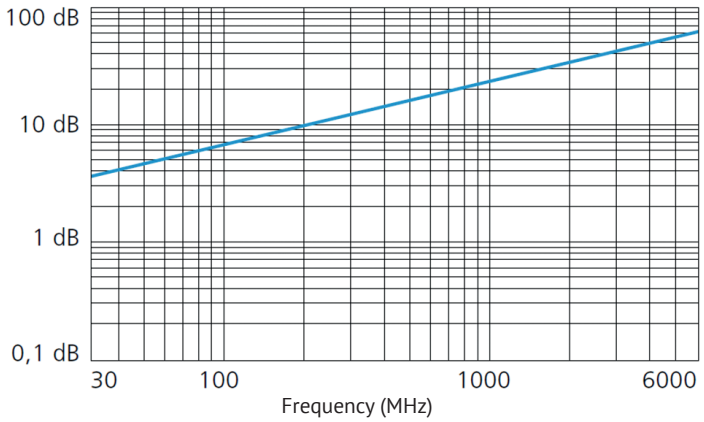
Typ. Attenuation (dB/100 m at 20 °C)

5 MHz	1.60	1000 MHz	21.52
10 MHz	2.20	1296 MHz	24.84
50 MHz	4.52	1500 MHz	27.08
100 MHz	6.28	1800 MHz	30.00
144 MHz	7.60	2000 MHz	31.88
200 MHz	9.04	2400 MHz	35.60
300 MHz	11.20	3000 MHz	40.88
432 MHz	13.60	4000 MHz	49.12
500 MHz	14.72	5000 MHz	57.04
800 MHz	19.00	6000 MHz	64.90

Max. Power Handling (W at 40 °C)

10 MHz	2.040	2400 MHz	118
100 MHz	620	3000 MHz	104
500 MHz	260	4000 MHz	89
1000 MHz	191	5000 MHz	78
2000 MHz	131	6000 MHz	70

Typ. Attenuation (dB/100 m at 20°C)



Typ. Return Loss