

# Single Armored Submarine Cable

GJLTM 12-192 fibers 10-ton SA

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## Features

- For unrepeated systems
- Water depth 3000 m
- Compact design, only 22 mm in diameter
- 12-192 optical fibers
- With or without electroding conductor
- Single layer steel wire reinforcement
- Hydrogen protected
- Outer protection polypropylene yarns or polyethylene sheath

## Application

GJLTM, 10-ton SA is a single layer armored, loose tube cable for submarine installation where moderate protection is required.

This submarine cable is based on a hermetically sealed stainless tube. Inside the tube the fibers are free to move in a thixotropic water blocking compound. The steel tube is protected by a polyethylene sheath. Outside the sheath there is one layer of galvanized steel wires. The steel wires are flooded in bitumen.

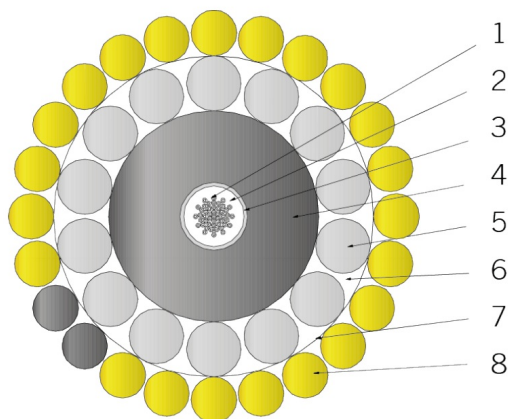
The complete cable is wrapped with a layer of polypropylene yarns or a polyethylene sheath.

The steel wire reinforcement provides reliable mechanical protection, enabling installation and operation during rough conditions.

High packing density of the fibers is provided by the loose tube technique. This permits a small outer diameter and easy handling of the cable.

The fibers are easy to identify due to color and colored yarns.

## Product Information



- 1 Primary coated fiber: Silica, acrylate
- 2 Filling compound: Thixotropic compound
- 3 Tube: Stainless steel
- 4 Sheath: Polyethylene, black
- 5 Armoring: Galvanized steel wires, single layer 14 x  $\varnothing$ 3.0 mm
- 6 Filling compound: Bitumen
- 7 Wrapping: Polyester tape
- 8 Wrapping: Polypropylene yarns or HDPE sheath

## Technical Information

|   |  |
|---|--|
| <b>Product Color</b>                      | Yellow with black contrast yarns.  |
| <b>Temperature, Operation [°C]</b>        | -30 to +60   |
| <b>Temperature, Storage [°C]</b>          | -40 till +70   |
| <b>Temperature, Installation [°C]</b>     | -15 till +40   |
| <b>Diameter Ø [mm]</b>                    | 22   |
| <b>Max. Water Depth [m]</b>               | 3000   |
| <b>Bend Radius, No Load [mm]</b>          | 500  |
| <b>Bend Radius With Tensile Load [mm]</b> | 1500   |
| <b>Bend Radius Coiling [mm]</b>           | 1500   |
| <b>Weight [kg/km]</b>                     | 1100   |
| <b>Weight in Seawater [kg/km]</b>         | 800  |
| <b>Tensile Force UTS [kN]</b>             | 130  |
| <b>Tensile Force FBL [kN]</b>             | 130  |
| <b>Tensile Force NTTS [kN]</b>            | 100  |
| <b>Tensile Force NOTS [kN]</b>            | 70   |
| <b>Tensile Force NTPS [kN]</b>            | 50   |
| <b>Crush Resistance [N/100 mm]</b>        | 10000  |
| <b>Electroding Resistance [Ω/km]</b>      | 7  |
| <b>Impact Resistance [J]</b>              | 200  |
| <b>Marking</b>                            | The submarine cable is marked with kilometer markers and factory joint markers.        |
| <b>Technical Notes</b>                    | Mechanical and environmental test in accordance with IEC 60794-1-21 and IEC 60794-1-22 |
| <b>Ordering Information</b>               | The cable is supplied in any length in coil.   |