



# GORE™ Geophysical Seismic Cable

*Solid Core Cable Technology*

## Reliability for underwater applications

In demanding environments, such as geophysical seismic surveying, GORE™ Geophysical Seismic Cables provide superior performance and reliability for underwater applications. GORE™ Geophysical Seismic Cables enable longer cable life, reduce downtime associated with cable failure, and, therefore, are considered a lower overall cost solution.

### SOLID CORE CONSTRUCTION

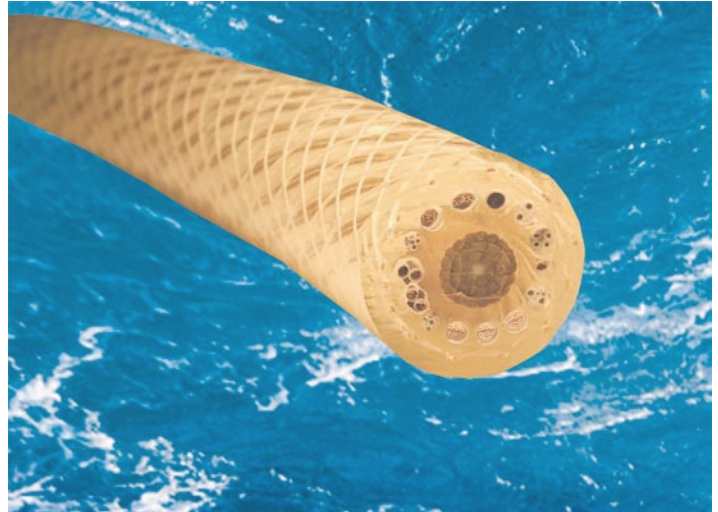
GORE™ Geophysical Seismic Cable is different from conventional cable designs often used in underwater applications. The difference is GORE™ Solid Core Cable Technology. GORE™ Solid Core Cable Technology consists of helically wound, ePTFE buffered components which are isolated from one another by a solid matrix of stress-bearing material linking the outer jacket to the strength member within the core. This design isolates the fiber optic and electrical components from mechanical stress. The GORE™ Solid Core Cable Technology provides one of the most dynamically and environmentally tolerant round cables for towed arrays, umbilicals, lead-ins, tethers and ocean bottom cables available in the market today.

### GORE™ CABLE OUTPERFORMS

The GORE™ Geophysical Seismic Cable outperforms conventionally designed cables in harsh environments.

During an accelerated bend-over-sheath test measuring repeated cable motion over a radial surface while the cable is under tension, the GORE™ Geophysical Seismic Cable performed over 3400 cycles before failure (using 1.3" diameter cable and 5.5" diameter sheath and 225 lb load on the cable) compared to 1 cycle for the conventional type cable design (see Graph 1). The mode of failure for the conventional cable was Z-kinks from concentrated points of compressional stress in the electrical conductors and wire breakage.

The GORE™ Geophysical Seismic Cable survived three to seven times longer than conventional cable (see Graph 2) during testing on a linear traction device with tensions up to 5000 lbs applied in only one direction. Wire breakage was the mode of failure for the conventional cable. A similar GORE™ Cable design was later tested to over 1300 cycles at 5000 lbs before failure. An additional linear traction device test at 1000 lbs tension showed GORE™ Cable surviving in excess of 2000 cycles without failure compared to less than 100 cycles by conventional cable.



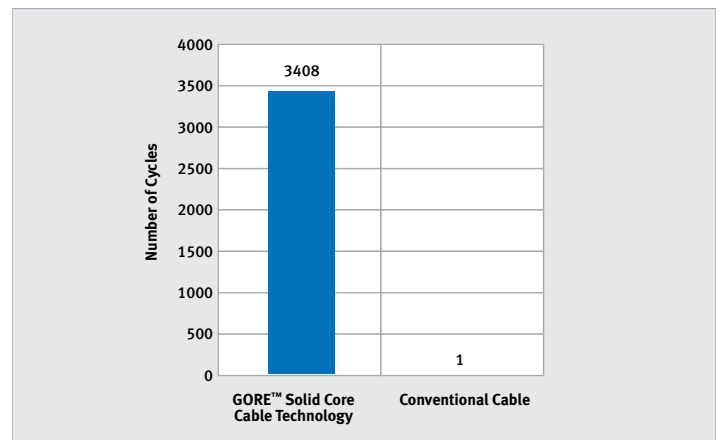
### KEY FEATURES

- Load transfer from outer jacket to central strength member
- Component isolation (data and power)
- Smaller size and bend radius
- Ruggedized jacket

### KEY BENEFITS

- Higher strength
- Longer life, improved handling and flexibility
- High crush and hydrostatic pressure resistance
- Less bulk and drag, faster deploy and retrieval process

**GRAPH 1: 4:1 ACCELERATED BEND-OVER-SHEATH TEST**





# GORE™ Geophysical Seismic Cable

In a recent pressure test to 3000 psi, the GORE™ Geophysical Seismic Cable experienced less than 5% change in impedance and attenuation. When exposed to hydrostatic pressure, there are minimal changes in the diameter and density of the GORE™ Cable. The GORE™ Cable typically has a smaller overall diameter compared to conventional cables. This smaller diameter is achieved by utilizing Gore’s tape wrap technology, and thin wall insulated conductors. The combination of the smaller diameter and the GORE™ Solid Core Cable Technology helps to increase the density of the GORE™ Cable. This unique combination helps to maximize the GORE™ Cable weight in water, while at the same time minimizing its weight in air.

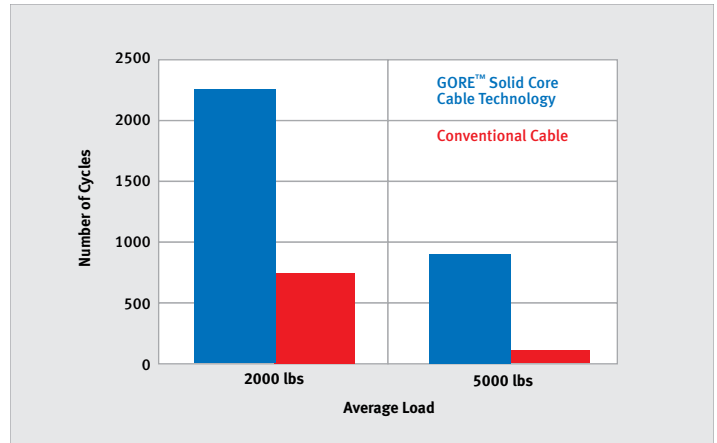
Graph 3 compares GORE™ Geophysical Cable Jacket Technology to two conventional cable designs during cable flexing. The cable jacket for GORE™ Geophysical Seismic Cable is reinforced with ePTFE buffered strength member fibers that are integrally coupled to the interior solid matrix material of the cable. This makes the outer jacket ruggedized and resistant to cuts and abrasions while still providing excellent flexibility and flex life. The strength member fibers create an open braid allowing color-coded sensor and telemetry components to be pulled through openings in the transparent jacket. This provides simplicity and reliability when making takeouts. Conventional cable designs require the outer jacket to be removed when making takeouts, which adds more time to the process and jeopardizes the mechanical integrity of the cable. GORE™ Geophysical Cable Jacket maintains complete mechanical integrity through this process, resulting in longer life and improved cable handling.

## GORE™ CABLE HAS A PROVEN TRACK RECORD

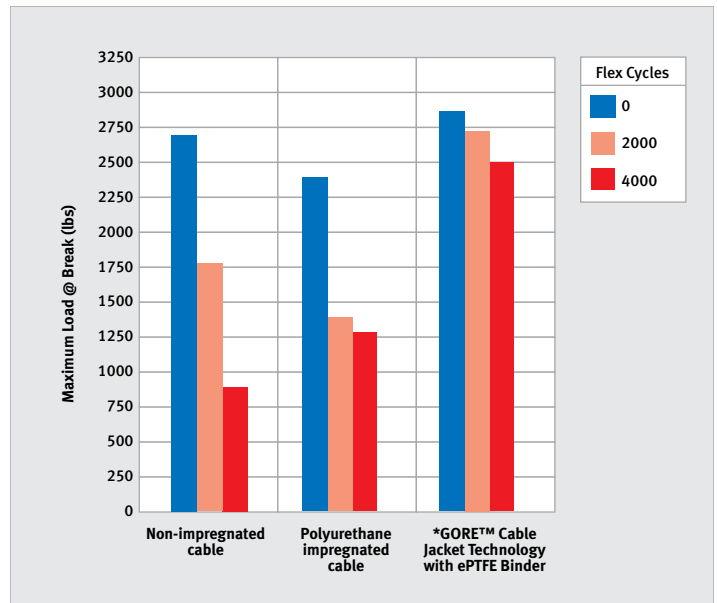
GORE™ Cable has a proven track record for endurance in demanding applications such as robots, pick-and-place or linear motion, material handling or cranes, wafer manufacturing, hand-held industrial tools, medical and pharmaceutical automation, vision inspection, printing or plotting, and storage and warehouse applications.

GORE™ Cable offers superior flex life performance and maximum resistance to severe mechanical and environmental stresses. With 50 years of experience in the wire and cable industry and extensive knowledge of unique materials, Gore provides reliable solutions for your most demanding cable and assembly needs.

**GRAPH 2: LINEAR TRACTION DEVICE TEST**



**GRAPH 3: CABLE FLEXING ON BRAIDED STRENGTH MEMBER FIBERS**



\*Test samples were prepared with fibers twisted at 1.4 twists per inch, then braided at a 40-degree angle between two bonded polyurethane outer jacket layers.

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