



Performance

Innovation

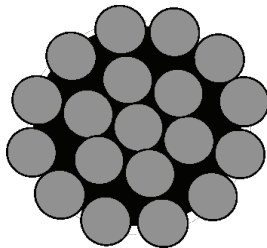
Reliability

## URD Cables Meet Moisture Control

Cable reliability is of extreme importance in today's medium voltage underground marketplace. Prysmian strives to meet and exceed the industry's reliability requirements through extensive research and development.

Since water and moisture have been shown to be the major causes of decreased cable life, Prysmian's approach to cable design continues to be focused on the control and elimination of water migrating into the cable core.

Prysmian developed Doubleseal™ and Superdri™ cables as enhancements over standard URD cables. Both Doubleseal and Superdri cable designs impede water and moisture migration in stranded conductors through the use of Strandseal® conductor filling compound, which exhibits >15 psi water pressure withstand when subjected to ICEA T-31-610 Longitudinal Water Penetration Resistance tests.



**Doubleseal** cables further improve standard URD cables by applying additional water-blocking agents over the insulation shield and around the concentric



neutral wires. The Doubleseal cable design provides 15 psi water pressure withstand across the full cable cross section, which far exceeds ICEA T-34-664 requirements of 5psi.

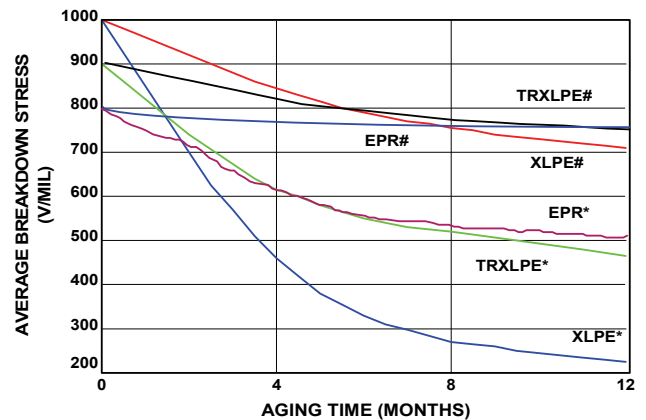
**Superdri** cables further improve URD cable designs with a sleeved jacket construction by incorporating water-blocking agents over the insulation shield and around the concentric neutral



wires in powder form as well as water swellable tape. The Superdri cable design withstands 5 psi water pressure through the balance of a cable cross section, increases cable flexibility, and includes rip cords for easy jacket removal.

## Performance

Industry standard Accelerated Water Treeing Test (AWTT) results have been compared against a modified AWTT, where the cable designs



incorporated water-blocking agents. The top three curves, which incorporated water-blocking agents and jackets (denoted by #), all performed better than the cables without water-blocking agents or jackets (denoted by \*).

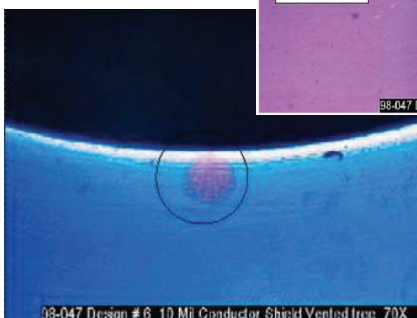
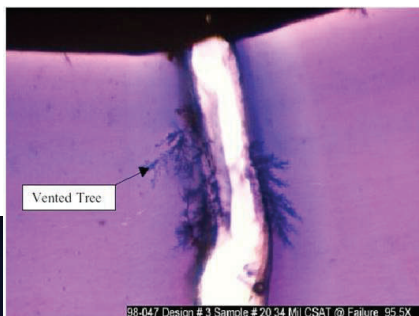
## Installations

Doubleseal and Superdri cables can be supplied over a 5 to 46kV operating range which are suitable for installations in conduit, direct buried, and isolated in free air. Both cables are designed to operate in wet or dry locations and have sunlight resistant LLDPE jackets.

## Water Blocking

Underground cables will operate in wet conditions; however, water can degrade the insulation, through the formation of water trees, and lead to a shortened cable life.

In order to inhibit the formation of water trees, water-blocking agents are



necessary. Unfortunately, all water-blocking agents are not created equally. It is important to keep in mind that

Prysmian's Strandseal conductor filling compound exhibits the following capabilities:

- Highly adherent to conductor wires
- Excellent low temperature characteristics
- High viscosity at emergency temperatures
- Exceptional thermal aging properties
- Exceeds industry standards (5 psi) by 3 times
- Compatible with conductor metals, conductor shield materials, and conductor connectors

The combination of Strandseal and water swellable agents applied around the concentric neutral wires provides a cable capable of withstanding 5 psi water pressure in the case of Superdri, and 15 psi in the case of Doubleseal.

## Key Design Features

Aluminum or Copper Conductor  
Prysmian Strandseal Filling Compound  
EPR or TRXLPE Insulation  
Water Swellable Agents  
Linear Low Density Polyethylene Jacket

Prysmian's Doubleseal and Superdri cables are manufactured to the latest versions of the following industry standards:

AEIC CS8  
ICEA S-94-649  
ICEA T-31-610  
ICEA T-34-664

Optional manufacturing capabilities are further detailed below:

- Black LLDPE jacket with no stripes
- Multiplex cables
- Compact stranded conductors
- Super smooth conductor shield
- Tinned round and flat strap neutrals
- UL Rating if required
- REA/RUS U-1 where applicable

## The Choices

### Doubleseal

### Superdri



**The KEY is choosing the right cable for the right application**

700 Industrial Drive  
Lexington, South Carolina  
29072  
1.800.845.8507  
[www.prysmianusa.com](http://www.prysmianusa.com)



137 Commerce Drive  
R.R. #3  
Prescott, Ontario K0E1T0  
1-800-263-4405 (West-CAN)  
1-800-361-1418 (East-CAN)  
[www.prysmiancanada.com](http://www.prysmiancanada.com)