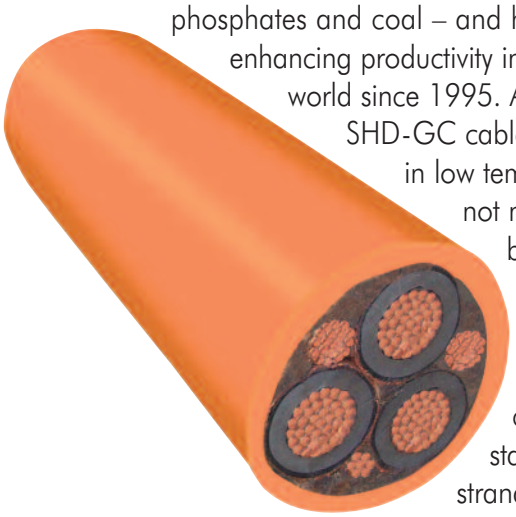
Nexans AmerCable

Tiger Tips

Thermoplastic Polyurethane (TPU) Jacketed SHD-GC Cable for Surface Mines

Nexans AmerCable's TPU is an extremely tough and abrasion-resistant jacketing material that improves power cable performance at surface mines. TPU's physical properties in crush, cut-through, and abrasion resistance testing far exceed those of common thermoset rubber jackets. TPU is a proven performer in the harshest mining environments – including copper, phosphates and coal – and has been enhancing productivity in mines around the world since 1995. AmerCable's TPU SHD-GC cables remain flexible in low temperatures and are not negatively affected by ultraviolet rays.



The internal components of the cable are comprised of: standard flexible stranding, extruded strand shielding, Ethylene Propylene Rubber insulation, copper/nylon braid shield, two grounds, and one ground check.

The conductors are cabled together with rubber fillers and a separator tape overall. This taped core may have a reinforcing webbing over it. The jacket is extruded in a single pass to meet the standard diameter and wall thickness of the Insulated Cable Engineers Association (ICEA).

Physical Properties

TPU meets or exceeds the following minimum physical properties:

Property	TPU	ICEA Spec for Extra Heavy Duty Jackets
Tensile (%)	>5000	2400 min
Elongation (%)	500	300 min
Modulus (200%)	1200	700 min
Tear (pounds)	120	40 min

Splices, Terminations and Jacket Repairs

Using standard procedures, remove the jacket and build the splice and termination. Taper the jacket cut-off so there is plenty of contact area to tape upon (usually 6 to 8 times the jacket thickness). Clean the splice area with solvent, allowing it to dry thoroughly. Apply a good adhesive for bonding dissimilar materials, such as Chemlock, manufactured by the Lord Corporation. Apply the uncured rubber jacketing tapes, preferably Hypalon,® to the splice or termination as recommended by the tape manufacturer. Cure in a mold at a temperature much lower than is commonly used for thermoset jacket curing. The table below gives recommended time and temperature combinations. After cooling and removal from the mold, allow at least one hour to further cool before bending or stressing this area.

Mold Temperatures (Fahrenheit)	Time at Preset Temperature
200°	8 hours
220°	4 hours
240°	2 hours

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