



Differences between Rural Utilities Service (RUS) Specifications RDUP 7 CFR 1775.390 (PE-39) and RDUP 7 CFR 1755.890 (PE-89)

Outside Plant Cables (OSP) manufactured to PE-39 and those manufactured to PE-89 are functionally equivalent with identical scope and applications. Both products are intended for duct and direct buried installations where protection against water and moisture is required. These cables may also be installed aerially by attachment to a support strand but air core cables are typically used for above ground applications.

The main difference between the two cable types is the insulation used:

- **PE-39 cables** are manufactured with “solid” high density polyethylene insulated conductors. This is applied as a solid layer over the copper conductor.
- **PE-89 cables** are manufactured with “foam-skin” insulated conductors. This is a dual insulation consisting of an inner layer of foamed polyolefin surrounded by an outer solid polyolefin skin.

Aside from the insulation difference the two cables have virtually the same materials, including ETPR filling compound, dielectric tape core wrap, a corrugated copolymer-coated aluminum shield (additional steel layer if requested) and black low density polyethylene jacket.

Even with the same intended use, the following characteristics may influence one choice over the other:

- PE-39 cables usually have slightly lower attenuation and higher dielectric strength compared to PE-89.
- PE-89 cables are smaller and lighter when compared to PE-39 cable of the same pair count and conductor size. As a result, PE-89 is less expensive than PE-39.

When choosing an OSP cable, please consider the above factors along with end user preference.