

3-Layer 35kV ACSR Tree Wire

An Alternative and Robust Design to Bare ACSR Conductors to Harden the Electrical Grids.

3-Layer 35kV ACSR Tree Wire Concentrically Stranded ACSR Track-Resistant Crosslinked Polyethylene.

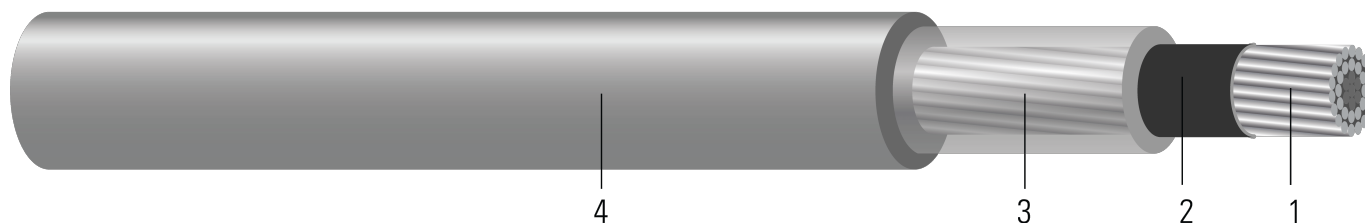


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Concentrically stranded ACSR
2. **Strand Shield:** Semi-conducting cross linked polymer
3. **Inner Layer:** Low-Density Track-Resistant Crosslinked Polyethylene
4. **Outer Layer:** High-Density Track-Resistant Crosslinked Polyethylene

APPLICATIONS AND FEATURES:

Used for primary and secondary overhead distribution where limited space is available or desired for rights-of-way. Installed the same as bare conductors, however, covering is effective in preventing direct shorts and instantaneous flashovers should tree limbs or other objects contact conductors in such close proximity.

- Tree Wire - Used for spans where trees crowd the right-of-way, such as in wooded residential areas, when a minimum of interference with the environment is desired. Covering minimizes power outages due to conductor contact with tree limbs, reducing the need for frequent or severe trimming.
- Covered Aerial MV Cable - Installed with other Covered Aerial MV cables and a supporting messenger through a series of space-maintaining devices (spacers). The resulting close-proximity configuration minimizes the amount of space and hardware required for line installation, particularly useful in congested areas.
- Covering Rated 90°C Normal and 130°C Emergency Operation. Unless adequate knowledge of the thermal characteristics of the environment is known, the permissible conductor temperature should be reduced by 10°C or in accordance with available data.

SPECIFICATIONS:

- ASTM B230 Aluminum, 1350-H19 Wire for Electrical Purposes
- ASTM B231 Standard Specification for Concentric-Lay-Stranded Aluminum 1350 Conductors
- ASTM B498 Zinc-Coated (Galvanized) Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR)
- ASTM B500 Metallic Coated Stranded Steel Core for use in overhead Electrical Conductors
- ICEA S-121-733 Tree Wire and Messenger Supported Spacer Cable



Table 1 – Weights and Measurements

Cond. Size	Cond. Strands	Diameter Over Conductor	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approx. OD	Approx. Weight	Rated Strength
AWG/ Kcmil	#	inch	mil	mil	mil	inch	lb/1000ft	lb
1/0	6/1	0.398	15	175	125	1.028	448	4161
2/0	6/1	0.447	15	175	125	1.077	509	5045
4/0	6/1	0.563	15	175	125	1.193	673	7933
266.8	18/1	0.609	15	175	125	1.239	684	6536
266.8	26/7	0.642	15	175	125	1.272	770	10735
336.4	18/1	0.684	15	175	125	1.314	794	8246
336.4	26/7	0.720	15	175	125	1.35	901	13395
336.4	30/7	0.741	15	175	125	1.371	1170	16435
397.5	18/1	0.743	15	175	125	1.373	889	9443
397.5	24/7	0.772	15	175	125	1.402	949	13870
397.5	26/7	0.783	15	175	125	1.413	1013	15485
477	24/7	0.846	20	175	125	1.486	1091	16340
477	26/7	0.858	20	175	125	1.498	1168	18525
477	30/7	0.877	20	175	125	1.523	1552	22610
556.5	18/1	0.879	20	175	125	1.519	1138	13015
556.5	24/7	0.914	20	175	125	1.554	1220	18810
556.5	26/7	0.927	20	175	125	1.567	1309	21470
636	18/1	0.940	20	175	125	1.58	1637	14915
636	26/7	0.990	20	175	125	1.63	1826	23940

All dimensions are nominal and subject to normal manufacturing tolerances

