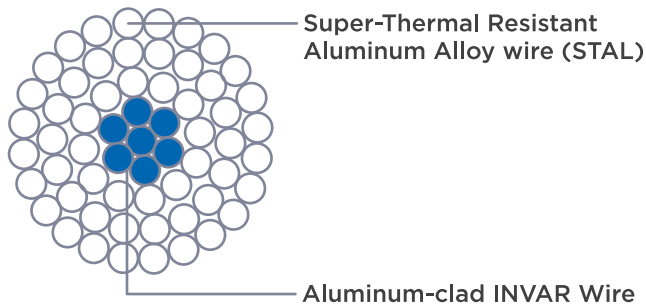


STER-STACIR™

Sterlite® Super Thermal Alloy Conductor Invar Reinforced (STACIR) conductor has outer layers composed of Super Thermal Aluminium (STAL) alloy wires that can operate up to 210°C (410°F). The inner core is composed of aluminium clad INVAR wires. INVAR is a metal alloy with 36% Ni in steel.



APPLICATION

STACIR/AW conductors are suited for re-conductoring applications. The capacity of existing transmission line can be enhanced by simply replacing the existing conductor without any modification to the tower.

BENEFITS

- Can carry 100% more current than that of ACSR of the same size, while maximum sag and maximum working tension remain the same as that of ACSR.
- No modification or reinforcement is required to existing towers for uprating transmission and distribution lines.

TECHNICAL SPECIFICATIONS

| PROPERTIES | STACIR (ACSR MOOSE EQUIVALENT) | | STACIR (ACSR ZEBRA EQUIVALENT) | | STACIR (ACSR PANTHER EQUIVALENT) | |
|--|--------------------------------|------------------------|--------------------------------|-----------------------|----------------------------------|------------------------|
| Typical factors | 3.53 mm | 0.1390 in | 3.18 mm | 0.1252 in | 3.00 mm | 0.1181 in |
| Reference specifications | IEC 62004 | | IEC 62004 | | IEC 62004 | |
| Total cross section area | 597.00 mm ² | 0.9254 in ² | 484.50 mm ² | 0.751 in ² | 261.50 mm ² | 0.4054 in ² |
| Conductive wire | Al Zr AT3 | | Al Zr AT3 | | Al Zr AT1 | |
| Core wire | Aluminium clad Invar | | Aluminium clad Invar | | Aluminium clad Invar | |
| Conductor diameter | 31.77 mm | 1.2508 in | 28.62 mm | 1.1268 in | 21.00 mm | 0.8268 in |
| Weight | 1993 kg/gm | 1339.2 lbs/mile | 1582 kg/km | 1063.1 lbs/mile | 939 kg/km | 631.0 lbs/mile |
| Ultimate tensile strength | 14641 kg | 32277.84 lbs | 11968 kg | 26384.89 lbs | 8436 kg | 18598.17 lbs |
| DC resistance at 20°C temperature | 0.06 Ω/km | 0.09 Ω/mile | 0.07 Ω/km | 0.11 Ω/mile | 0.13 Ω/km | 0.21 Ω/mile |
| Maximum operating temperature | 210°C | 410°F | 210°C | 410°F | 210°C | 410°F |
| Current carrying capacity at maximum operating temperature | 1871 Amp | | 1626 Amp | | 1040 Amp | |

Assumptions: Ampacity is calculated based on, 45°C (113°F) ambient temperature, 0.6 m/s wind velocity, 0.5 as coefficient of solar absorption, 0.6 as coefficient of emmisivity and 1200 wt/sqm coefficient for solar radiation, at sea level.