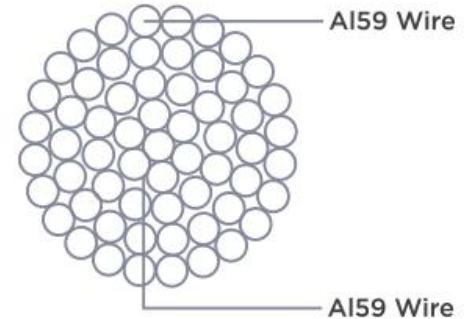


## STER – AL59™

These are homogenous alloy conductors of Aluminium + Magnesium + Silica Alloy type. These conductors have a conductivity of 59% and hence have lesser DC resistance and higher current carrying capacity.

### APPLICATION

Al59 alloy conductors are used in power transmission and distribution lines for a wide voltage range (low to ultra-high voltage). These conductors have higher current carrying capacity and lower losses due to DC resistance. Al59 conductors have high corrosion resistance, making them most suited for deployment in coastal regions.



### BENEFITS

- 26%-31% more current carrying capacity than ACSR of the same size, while maximum sag remains the same and working tension is lesser than that of ACSR.
- Resistivity is substantially lesser than that of ACSR/AAAC conductors, resulting in lower 12R losses.
- Higher corrosion resistance than 6201 alloy series (AAAC).

PROPERTIES	AL59		AL59		AL59	
EQ. TO ACSR	ACSR MOOSE		ACSR ZEBRA		ACSR PANTHER	
Typical factors	3.50 mm	0.1378 in	3.18 mm	0.1252 in	3.00 mm	0.1181 in
Reference Standards	SS 4240814, 13			SS 4240814, 13		
Total cross section area of conductor	587 mm <sup>2</sup>	0.9099 in <sup>2</sup>	484.25 mm <sup>2</sup>	0.7506 in <sup>2</sup>	261.50 mm <sup>2</sup>	0.4053 in <sup>2</sup>
Conductor diameter	31.50 mm	1.2402 in	28.62 mm	1.1268 in	21.00 mm	0.8268 in
Weight	1618 kg/km	1087.2 lbs/mile	1336 kg/km	897.8 lbs/mile	720 kg/km	483.8 lbs/mile
Ultimate tensile strength	14350 kg	31636.3 lbs	12340 kg	27205.01 lbs	6661 kgf	14684.97 lbs
DC resistance at 20°C temperature	0.05 Ω/km	0.08 Ω/mile	0.06 Ω/km	0.10 Ω/mile	0.11 Ω/km	0.18 Ω/mile
Maximum operating temperature	95°C	203°F	95°C	203°F	95°C	203°F
Current carrying capacity at maximum operating temperature	1094 Amp		958 Amp		654 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 emissivity and 1200 wt/sqm coefficient for solar radiation, at sea level.

*Note: The Catalogue conductor Parameter are informative and can be customized as per Project Requirements.*

## STANDARDS

IEC, BS, ASTM, CAN-CSA, DIN, IS, AS and relevant national and international standards.

***Non-Specular (NS) Dull Finish Conductor can be available on special requirement.***

Disclaimer:

*\* Parameters mentioned in the document are indicative and can vary subject to different standards*

*\* Customizations are available on select products. Please indicate your interest by reaching out to the sales team*

Contacts us for more details:

*Saurabh Mahajan, VP Exports & Sales (saurabh.mahajan1@sterlite.com)*

*Amit Charan, VP, Sales and BD (amit.charan@sterlite.com)*