

## DATA SHEET:

## 265 KCMIL\_BADEN\_AECC\_M3\_TS



Governing Units: Metric

Mechanical Specifications	Metric		Imperial	
Fully Annealed Al Cross-sectional Area*	134.13	mm <sup>2</sup>	264.70	kcmil
Encapsulated Aluminum Cross-Sectional Area	38.20	mm <sup>2</sup>	0.05921	in <sup>2</sup>
Diameter of Composite Core (Exclude Encapsulation)	4.5	mm	0.17700	in
Cross-sectional Area of Core (Exclude Encapsulation)	15.90	mm <sup>2</sup>	0.02465	in <sup>2</sup>
Overall Diameter of Conductor	14.150	mm	0.557	in
Cross-sectional Area of the Conductor (Exclude Covering)	150.00	mm <sup>2</sup>	0.23256	in <sup>2</sup>
Ultimate Tensile Strength of Conductor 1) ,2)	51.96	kN	11.68	kip
Rated Strength of Core - 399 ksi (2750 MPa)	43.68	kN	9.82	kip
Core Mass per unit length (Exclude Encapsulation)	28.00	kg/km	18.82	lb/kft
Conductor Mass per unit length	395.51	kg/km	265.82	lb/kft
Fully Annealed Al Mass per unit length (Include Encapsulation)**	367.51	kg/km	247.00	lb/kft
Maximum Emergency Temperature at Surface 3)	200	°C	392	°F
Coefficient of Linear Expansion Above Thermal Kneepoint (core)	0.500	x10 <sup>-6</sup> /°C	0.278	x10 <sup>-6</sup> /°F
Coefficient of Linear Expansion Below Thermal Kneepoint (conductor)	17.633	x10 <sup>-6</sup> /°C	9.796	x10 <sup>-6</sup> /°F
Final Modulus of Elasticity Above Thermal Kneepoint (based on core area)	150.0	GPa	21.8	Msi
Final Modulus of Elasticity Below Thermal Kneepoint (based on conductor area)	66.3	GPa	9.6	Msi
Aluminum Heat Capacity	343.8	Watt-s/m-°C	58.2	Watt-s/ft-°F
Core Heat Capacity	23.5	Watt-s/m-°C	4.0	Watt-s/ft-°F
Encapsulation Thickness	1.90	mm	0.07480	in
Stranding Ratio	1.0200			
Covered Thickness	0.000	mm	0.000	in
Electrical Specifications	Metric		Imperial	
DC Resistance at 20°C (Fully Annealed Al 63% IACS)	0.2069	ohm/km	0.3330	ohm/mile
DC Resistance at 25°C	0.2112	ohm/km	0.3398	ohm/mile
DC Resistance at 75°C	0.2534	ohm/km	0.4078	ohm/mile
Temperature Coefficient of Resistance at 20°C	0.00408	1/°C	0.00227	1/°F
Frequency	60	Hz	60	Hz
AC Resistance at 25°C	0.2115	ohm/km	0.3404	ohm/mile
AC Resistance at 75°C	0.2537	ohm/km	0.4082	ohm/mile
AC Resistance at 180°C	0.3422	ohm/km	0.5507	ohm/mile
Ampacity 4)		736	@180°C, & A	
		773	@200°C, & A	
GMR (estimated)	5.73	mm	0.0188	ft
Inductive Reactance (Xa: internal flux+external flux radius 1 ft)	0.2996	ohm/km	0.482	ohm/mile
Capacitive Reactance	0.1796	Mohm-km	0.112	Mohm-mile

\*265 KCMIL\_BADEN\_AECC\_M3\_TS conductor is produced with Fully Annealed Al aluminum. The nominal Aluminum equivalent area is 134.1 sq. mm (264.7 kcmil)

\*\*TS® Conductors are required to exhibit lay lengths (ratios) that conform to established ACSR and ACSS standards.

- 1) Fully Annealed Al rated tensile strength based on applicable standard. Core tensile strength based on 100% of its strength.
- 2) Strength at ambient temperature, Strength may be reduced to Rated Core Strength when temperature is above knee point
- 3) Maximum continuous operating temperature of 265 KCMIL\_BADEN\_AECC\_M3\_TS is 180°C and a maximum emergency temperature of 200°C
- 4). Ampacity based on: 25°C ambient temperature, 2ft/s (0.6 m/s) perpendicular wind, 0.5 Emis 0.5 Absorb.60 Hz, sea level (0) elevation, 30°N line Azimuth, noon on June 10th (96W/sq.ft, 1033W/sq.m), clear atmosphere

The information contained herein is offered in good faith. All values are nominal unless specifically indicated as maximum or minimum. The actual configuration of a given size may vary between conductor manufacturers and may result in slight variations in some of the indicated values. Data herein is to be considered confidential and proprietary to TS Conductor

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