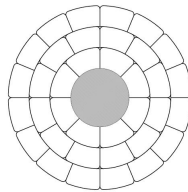


# DATA SHEET: WARSAW



Version 0, PRELIMINARY

Conductor Type			LF ACCC 530			
Code name			WARSAW			
Conductor values:						
Nominal aluminium equivalent area	mm²		532			
Nominal Cross-sectional area of aluminium	mm²		514,6			
Nominal Cross-sectional area of Core	mm²		60,3			
Number, diameter and type of Core	#, mm		1	8,76	R	CC
Number, (eq.) diameter and type of wire in layer 1	#, mm		8	4,27	T	Al
Number, (eq.) diameter and type of wire in layer 2	#, mm		12	4,26	T	Al
Number, (eq.) diameter and type of wire in layer 3	#, mm		16	4,27	T	Al
Minimum filling factor of the aluminium cross section	%		93			
Lay ratio of inner layer(s)			10-16			
Lay ratio of outer layer			10-14			
Overall diameter	mm		27,72			
Diameter of Core	mm		8,76			
Diameter tolerance of Core	mm		± 0,06			
Rated Tensile Strength of Conductor (RTS as per ASTM B 857) *	kN		159,1			
Extreme Load Safety Strength of Conductor (with 40% of the aluminium strength) **	kN		142,2			
Rated Tensile Strength of Core	kN		130,2			
Nominal Mass per unit length - Total	kg/km		1538,8			
Nominal Mass per unit length - Aluminium	kg/km		1425,8			
Nominal Mass per unit length - Core	kg/km		113,0			
DC resistance at 20 °C (nominal)	Ohm/km		0,0545			
DC resistance at 20 °C (maximum)	Ohm/km		0,0556			
DC current rating at maximum continuous surface operating temperature *** (calculated with maximum DC resistance at 20°C)	A, °C		1732	175		
Maximum allowable continuous operating temperature (surface)	°C		175			
Maximum allowable continuous operating temperature (core)	°C		180			
Coefficient of linear expansion above thermal kneepoint	/ K		0,00000161			
Coefficient of linear expansion below thermal kneepoint	/ K		0,0000188			
Modulus of elasticity above thermal kneepoint	GPa		118,6			
Modulus of elasticity below thermal kneepoint	GPa		63,0			
Individual wires:						
Resistivity of aluminium at 20 °C (maximum)	nohmm		27,35			
Minimum tensile strength, aluminium wire	MPa		58,6			

Standard applied for conductor manufacturer: EN50182

\* Note ASTM calculates aluminium strength at 96% of the minimum Tensile Strength of the aluminium wire

\*\* This safety strength is recommended where sustained loads of over 80% of the RTS are expected for prolonged periods. For further information, please see the ACCC Conductor Technical Note TN-750-001.

\*\*\* Conditions: Wind : 0,6m/s; emissivity= abs. Coef. = 0,5; sun radiation : 1000W/m<sup>2</sup>; Ambient temperature: 25°C