

**1. Design guidelines.**

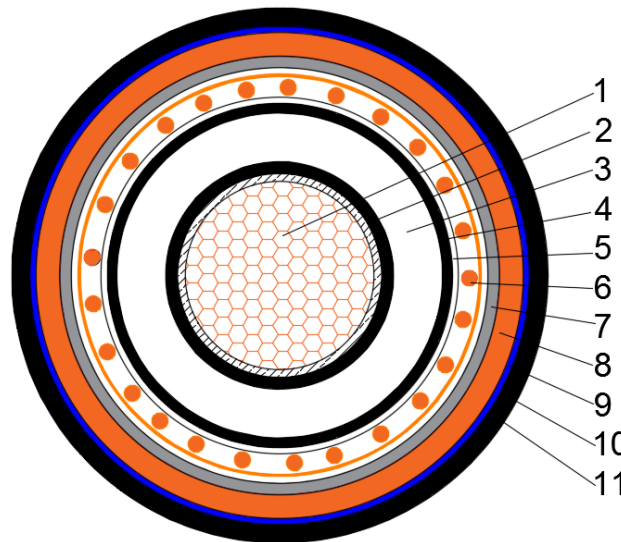
AS/NZS 1429.2	Electric cables—Polymeric insulated Part 2: For working voltages above 19/33 (36) kV up to and including 87/150(170) kV
AS/NZS 1125	Conductors in insulated electric cables and flexible cords
AS/NZS 3808	Insulating and sheathing materials for electric cables

**2. Application.**

Normal use operating temperature	90°C
Max. conductor temperature during short circuit(5s)	250°C
Lowest recommended temperature during installation	0°C

**3. Construction.**

**HCA - 800mm<sup>2</sup> x 1 core Cu(WBY)/XLPE/CWS(13.5kA)/LAS/MDPE/NY/HDPE(Graphite) - HCA503106PWC**



1	Conductor	Class 2, circular compacted Copper conductor(non-conductive water-blocking yarn) A Semi-conductive tape shall be applied over the conductor
2	Conductor screen	Semi-conductive tape and compound
3	Insulation	XLPE
4	Insulation screen	Semi-conductive compound
5	Water blocking	Semi-conductive water-blocking tape
6	Metallic screen	Copper wires with copper tape counter open-helix wrapped
7	Metallic sheath	Lead alloy sheath
8	Inner sheath	MDPE/Orange
9	Anti-termite sheath	Nylon (PA12)/Blue
10	Outer sheath	HDPE/Black with 2% carbon black
11	Outer conductive layer	Graphite coating

**4. Cable mark as listed below, or as purchase order.**

Marking on cable: by printing in two approximately diametrically opposed lines on the surface of outer sheath
HENG TONG CABLE AUSTRALIA "YEAR" ELECTRIC CABLE 38/66kV
800mm <sup>2</sup> 1 core Cu(WBY) XLPE CWS(13.5kA) LAS MDPE NY HDPE(Graphite) XXXXm

**5. Construction parameters.**

Description	Unit	Values
<b>Conductor</b>		
Cross sectional area	mm <sup>2</sup>	800
Shaped	/	Circular
Number of wires	No.	≥53
Approx. diameter of conductor	mm	33.9
<b>Conductor screen</b>		
Min. thickness at any point	mm	1.1
Approx. diameter over conductor screen	mm	36.6
<b>Insulation</b>		
Nominal thickness/Min. thickness at any point	mm	10.0/8.9
Approx. diameter over insulation	mm	56.6
<b>Insulation screen</b>		
Type		Fully bonded
Min. thickness at any point	mm	1.0
Approx. diameter over insulation screen	mm	58.6
<b>Metallic screen</b>		
No. & Diameter of copper wires per phase	No./mm	52/Φ1.4
Approx. diameter over copper wires	mm	64.6
<b>Metallic sheath</b>		
Nominal thickness/Min. thickness at any point	mm	2.0/1.8
Approx. diameter over lead alloy sheath	mm	69.8
<b>Inner sheath (MDPE)</b>		
Nominal thickness/Min. thickness at any point	mm	4.0/3.3
Approx. diameter over MDPE sheath	mm	77.8
<b>Anti-termite sheath (PA12)</b>		
Nominal thickness/Min. thickness at any point	mm	1.3/0.8
Approx. diameter over nylon sheath	mm	80.4
<b>Outer sheath (HDPE w/ graphite)</b>		
Nominal thickness/Min. thickness at any point	mm	3.0/2.2
Approx. diameter over HDPE sheath	mm	86.4
Max. diameter of cable	mm	91.4
Min. bending radius during installation	mm	2412
Min. bending radius after installed	mm	1608
Max. D.C. resistance of conductor at 20°C	Ω/km	0.0221
Max. A.C. resistance of conductor at 90°C	Ω/km	0.0343
Fault current carrying capacity of conductor for 1 second	kA	114.5
Fault current carrying capacity of metallic screen for 1 second	kA	13.5
Maximum pulling tension of conductor	kN	56.0



**TECHNICAL DATA SHEET  
HENG TONG CABLE AUSTRALIA**

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**38/66(72.5) kV PWC**

Cable weight	kg/m	17.2
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