

» PRODUCT BULLETIN

ECCOH™ Low Smoke and Fume Non-Halogen Formulation 5983

With high environmental stress cracking resistance for power cable jacketing

The new ECCOH™ 5983 formulation helps prevent environmental stress cracking in low and medium-voltage armored power cables, helping to prevent costly cable damage and disrupted power supply.

Stress cracking can be a common issue when cables are subjected to bending in their installed locations or installed underground. To mitigate this problem, metal armoring is incorporated into the cable construction to help protect against stress cracking. Temperature fluctuations in the environment where the cable is installed can mean the armoring and the other cable materials expand and contract at different ratios, further increasing the risk of cracking in the cable jacket.

The ECCOH 5983 formulation has been developed to help prevent stress cracking in armored cables by offering high tear strength and elongation at break at temperatures ranging from -25°C to 90°C. The new formulation surpasses all specifications associated with the BS 7655-6.1:1997 standard, including the most stringent LTS1 classification, even for complex designs and armored cables.

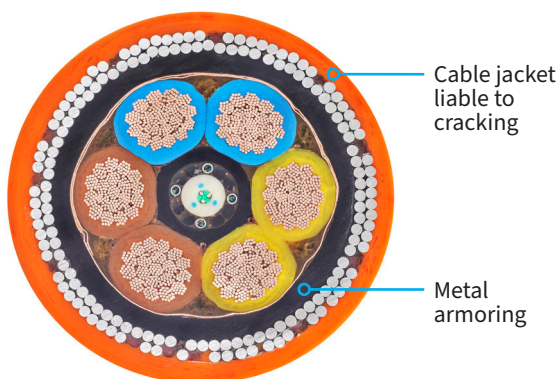
MARKETS AND APPLICATIONS

- Cable jackets for low and medium-voltage power cables with metal armoring, typically installed underground or where installation requires them to be bent
- Armored cable applications that require compliance with LTS1 requirements as per the BS 7655-6.1 standard

IMPACT

- High environmental stress cracking resistance
- High tear strength and elongation at break at temperatures ranging from -25°C to 90°C
- Flame retardant performance
- Limiting oxygen index (LOI) of 36%
- Exceeds BS 7655-6.1:1997 standard criteria for LTS1–LTS4 for complex designs and armored cables

Power Cable Cross Section





PERFORMANCE DATA

KEY CHARACTERISTICS	ECCOH 5924 FORMULATION	ECCOH 5981 FORMULATION	ECCOH 5983 UV FORMULATION
Material Standards	BS7655-6, 1 (LTS1-4), BS6724, IEC 60502	BS7655-6, 1 (LTS3)	BS7655-6, 1 (LTS1-4)
Tear Strength at 23°C	7.7 N/mm	10 N/mm	11 N/mm
Tear Strength at 65°C	2.3 N/mm	5 N/mm	6.5 N/mm
Hot Pressure Test (6h at 90°C)	39%	-	<5%
Cold Elongation at -25°C	60%	-	70%
Limited Oxygen Index (%)	36%	38%	36%
Price	+	+++	++
Performance	Standard	Good ESCR	Enhanced ESCR

AVIENT CAPABILITY NOTES

ADTS can provide customers with material processing assistance to achieve mechanical properties at low thickness.

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