

A-C® PERFORMANCE ADDITIVES IN CABLE MANUFACTURING

A-C® performance additives – low molecular weight polymers – are used as processing aids in polyethylene cable manufacturing. Their unique combination of low melting point and low viscosity, coupled with excellent electrical properties and general chemical inertness, help dispersion filler, help flame retardant dispersion, enhance flow and leads to enhanced cable properties.

PROPERTIES	A-C® 6A HOMOPOLYMER	A-C® 400A EVA COPOLYMER
Dielectric Constant (60 Hertz)	2.38	2.70
Dielectric Constant (1 mega Hertz)	2.24	3.00
Dissipation Factor (60 Hertz)	0.0005	0.0020
Dissipation Factor (1 mega Hertz)	0.0006	0.0120
Loss Factor (60 Hertz)	0.0012	0.0054
Loss Factor (1 mega Hertz)	0.0013	0.0360
Volume Resistivity (at 765 Volts DC in Ohm-meter)	1.4×10^{12}	7.0×10^{12}

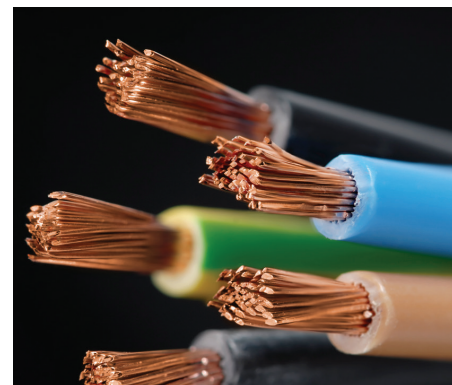
Determinations made at 23.5°C (70°F) and 30% relative humidity.

A-C® 6A BENEFITS BY APPLICATION

- **Telecom Foam:** Better and more regular dispersion of the blowing agent, at a dosage level of around 1%. Reduced melt sticking. This results in increased output rates with less mechanical effort and can result in significant cost savings. Improved gloss properties.
- **Telecom Jacketing:** Improved dispersion of additives, such as aluminium trihydrate. Improved additives dispersion, i.e. the filler ATH. Better incorporation and dispersion of the additive, which results in a better overall processing.
- **Strippable semi-conductor:** Improved stripping force of the compound.
- **Fully bonded semi-conductors:** Reduced dye-drool, lower viscosity and improved smoothness of the interface between the conductor and the dielectric.

A-C® RECOMMENDED DOSAGE LEVEL (%)

APPLICATIONS	A-C 6A	A-C 400A	MAH
Semicon	1-2	1-2	
LLDPE	1-2	1-2	
HFFR	1-2	2-4	4-7
Telecom: LDPE		3-5	
LLDPE		3-5	
MD/HD	1-2	3-5	
Cellulaire	0.5-2		
HFFR	1-2	2-4	4-7



A-C® 400A BENEFITS BY APPLICATION

- **Medium Voltage Cable:** Improved dispersion of Carbon Black. This minimizes batch to batch fluctuation of the dielectric constant.
- **LDPE Jacketing:** Reduced stress cracking. Lowers the viscosity, which boosts the process, flow and gloss properties.
- **EVA/PE Cable:** Improved dispersion of high dosage ATH per:
 - 1-2% for new generation
 - 1-2% for new ATH high flowability generation
 - 2-4% for standard ATH



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