



AFLAS Fluoroelastomers for High Voltage Cable

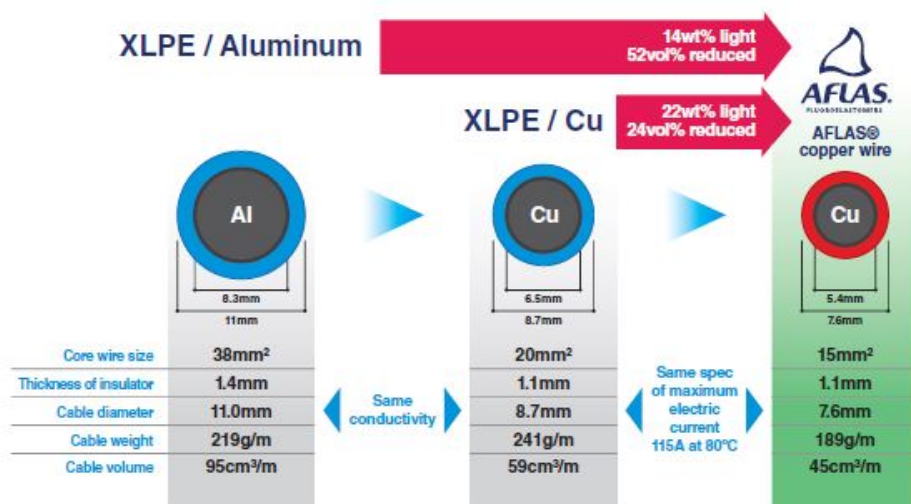
High Performance at Reduced Weight

Lightweight cable constructions with sustained performance have become necessary in the automotive industry. AFLAS® Fluoroelastomers are durable, flexible, high temperature (200 °C) electrical insulation rubber materials that allow for thinner wire insulation at equivalent performance levels. Ideal for HEV/EV high voltage cable.

Tehnology

- Non-flammable
- Vibration resistance
- Superior chemical resistance
- Service temperature at 200 °C vs. XL-PE at 150 °C
- Exceptional flexibility over XL-PE which is stiff
- No fillers necessary vs. XL-PE containing $MgOH_2$

Weight Reduction Concept: Cable Comparison





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AFLAS® Performance Data Compared to Other Material Constructions

	AFLAS	Other Fluoroelastomers	Silicone Rubber	Crosslink Polyethylene
	FEPM	FKM	Q as compound	XL-PE as compound
Specific Gravity	1.55	1.8	1.2	1.3
Dielectric Breakdown (kV/mm)	23	20	25	35
Volume Resistivity ($\Omega \cdot \text{cm}$)	10^{16}	10^{13}	10^{16}	10^{16}
Dielectric Constant (1kHz)	2.8	17	3-4	2.3
Flexibility	Excellent	Excellent	Excellent	Applicable
Flame Resistance	Excellent	Excellent	Good	Applicable (with fillers)
Heat Resistance (max operating temp)	200 °C	200 °C	180 °C	150 °C
Oil Resistance	Excellent	Excellent	Not Recommended	Good
Hot Water & Steam Resistance	Excellent	Applicable	Applicable	Good

Excellent	Good	Applicable	Not recommended
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Wire Construction Example



NOTE: The data listed here represents typical values for the stated grades of AFLAS® fluoroelastomers. This information should be used as a guide only and not to establish specification limits or design criteria. AGC Chemicals Americas assumes no obligation or liability for any advice furnished by us or for results obtained with respect to this product. All such advice is provided free of charge and the buyer assumes sole responsibility for results obtained in reliance thereon.

**AGC Chemicals Company
AGC Inc.**

Shin-Marunouchi Bldg.,
1-5-1 Marunouchi
Chiyoda-ku, Tokyo, 100-8405 Japan
Tel: +81-3-3218-5438
www.agc-chemicals.com

AGC Asia Pacific Pte., Ltd.

460 Alexandra Road, #32-01
PSA Bldg., Singapore, 119963
Tel: +65-6273-5656
www.agc-asiapacific.com

**AGC Chemicals Trading
(Shanghai) Co., Ltd.**

Room 4008/09, 40F, T1
Raffles City Changning
No. 1133 Changning Road
Shanghai, China 200051
Tel: +86-21-6386-2211
www.agcsh.com

**AGC Chemicals
(Thailand) Co., Ltd.**

24th Floor, Bangkok Insurance Bldg
25 South Sathorn Road
Kwang Tungmahamek Khet Sathorn
Bangkok 10120, Thailand
Tel: +66-2-679-1600
www.acth.co.th

AGC Chemicals Europe, Ltd.

PO Box 4, York House
Hillhouse International
Thornton, Cleveleys
Lancashire FY5 4QD, UK
Tel: +44-(0)-1253-209-600
www.agcce.com

**AGC Chemicals Europe, Ltd.
Commercial Centre**

World Trade Center, Zuidplein 80
1077 XV Amsterdam, Netherlands
Tel: +31-(0)-20-880-41-70
www.agcce.com

AGC Chemicals RUS

Russian Federation, 121596
Moscow, Gorbunova Street 2,
Grand Setun Plaza, Bldg. 204, BC
5th Floor, Block B, Office B 504
Tel: +7-918-555-34-37
www.agcce.com

AGC Vidros do Brasil Ltda.

Al. Ministro Rocha Azevedo, 38,
10º andar, cj 1004
Cerqueira César
São Paulo, SP, Brasil
CEP 01400-000
Tel: +88-11-3373-9981
www.agcchem.com



**Chemistry
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AGC Chemicals

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AGC Chemicals Americas, Inc.

55 E. Uwchlan Avenue, Suite 201
Exton, PA 19341
United States of America

Telephone: +1 610-423-4300
Toll Free (US only): 800-424-7833
Fax: +1 610-423-4305

www.agcchem.com

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