

## High Voltage Cable

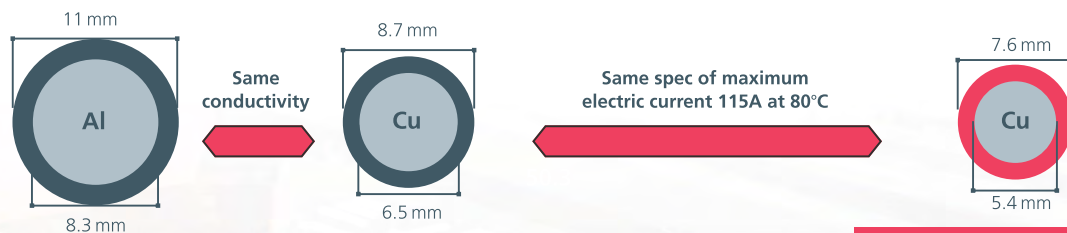
### High Performance at Reduced Weight

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

#### Technology

- 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  $MgOH_2$

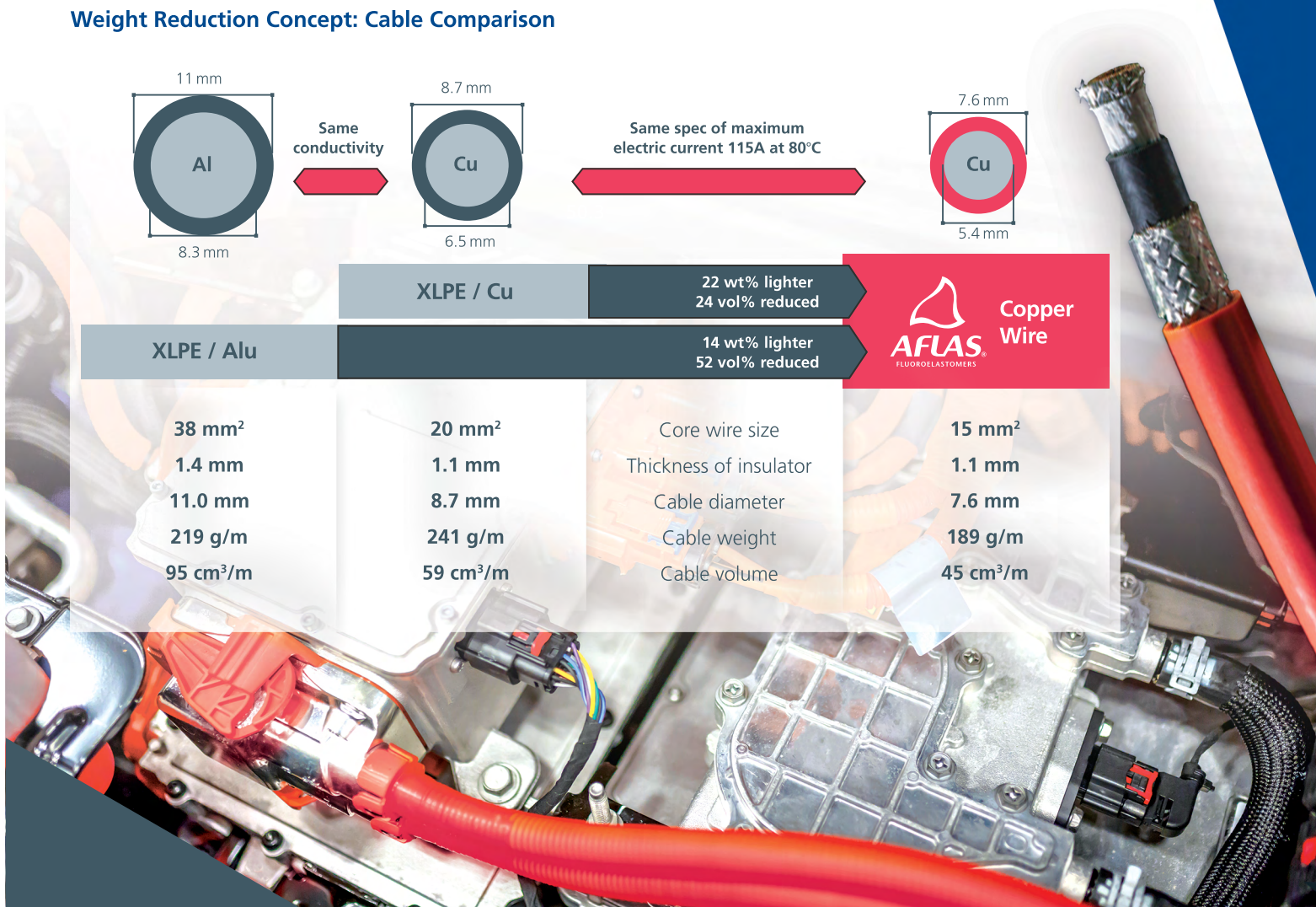
#### Weight Reduction Concept: Cable Comparison



	XLPE / Cu	22 wt% lighter 24 vol% reduced
XLPE / Alu		14 wt% lighter 52 vol% reduced



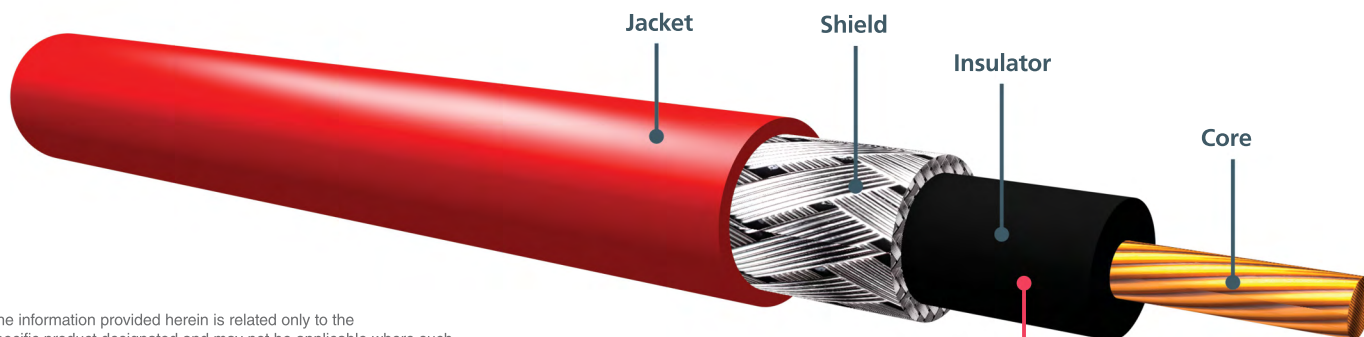
38 mm <sup>2</sup>	20 mm <sup>2</sup>	Core wire size	15 mm <sup>2</sup>
1.4 mm	1.1 mm	Thickness of insulator	1.1 mm
11.0 mm	8.7 mm	Cable diameter	7.6 mm
219 g/m	241 g/m	Cable weight	189 g/m
95 cm <sup>3</sup> /m	59 cm <sup>3</sup> /m	Cable volume	45 cm <sup>3</sup> /m



## AFLAS® Performance Data Compared to Other Materials

	AFLAS FEPM	Other Fluoroelastomers FKM	Silicone Rubber Q as compound	Crosslink Polyethylene XL-PE as compound
Specific Gravity	1.55	1.8	1.2	1.3
Dielectric Breakdown (kV/mm)	23	20	25	35
Volume Resistivity ( $\Omega$ -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 (Maximum 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



The information provided herein is related only to the specific product designated and may not be applicable where such product is used in combination with any other materials or in any process.

NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER.

The user of this product has the sole responsibility to determine the suitability of the product for any use and manner of use intended. This document may be revised after its issuance, and the user is advised to use the latest revision.

**AFLAS®**

# AGC

**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**

Visit our website for compliance information and industry certifications.

AFLAS™ is a registered trademarks of AGC Inc.