

SIGRAFLEX® oxidation resistant yarn

Oxidation resistant graphitized PAN yarn with proprietary coating

SIGRAFLEX oxidation resistant yarn is a graphitized braidable textile packing yarn produced with a coating using SIGRAFLEX APX2 technology – specially designed for high temperature applications. It is the only coated textile yarn in the market currently meeting the graphite requirements of the Shell specification MESC SPE 85/204 as shown in the table below.

Properties

- High temperature and oxidation resistance
- High degree of purity
- Low sulfur content
- Low chloride content
- Low fluoride content

Material data of SIGRAFLEX oxidation resistant yarn¹⁾

Typical properties	Test methods	Units	GPS15S03XX15 GPS15Z03XX15
			Graphitized twisted stretch broken yarn
Precursor			PAN
Coating			proprietary
Carbon content ²⁾	ASTM D5373	%	≥ 99.5
Ash content ²⁾	ASTM C561	%	≤ 0.15
Sulfur content ²⁾	ASTM D4239	ppm	≤ 100
Chloride content ²⁾	ASTM D4327	ppm	≤ 25
Fluoride content ²⁾	ASTM D4327	ppm	≤ 10
Total halogen content ²⁾	ASTM D4327	ppm	≤ 100
Moisture content	ASTM C562	%	≤ 0.1
Density	ASTM D3800	g/cm ³ (lb/ft ³)	1.67 (104)
Linear weight	ASTM D1907	g/m	1.07
Break strength	ASTM D2256	kg (lb)	45 (100)
Coating content	ASTM D537	%	15
Twist	ASTM D1423	TPM (TPI)	45 (1.1)
Available twists			S, Z
Oxidation resistance (weight loss at 670 °C) ²⁾	ASTM D7582 LECO TGA	%	< 2

¹⁾ Non-binding and preliminary

²⁾ Property meeting Shell specification MESC SPE 85/204 (latest version)



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