

SIGRAFLEX® oxidation resistant yarn

Oxidation resistant graphitized PAN yarn with anti-oxidation 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 oxidation resistant graphite
Coating			
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	1.6
Linear weight	ASTM D1907	g/m	1.6
Break strength	ASTM D2256	kg [lb]	45 [100]
Coating content	ASTM D537	%	15
Twist	ASTM D1423	TPI [TPM]	1.75 [69]
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)

Other yarn weights/sizes and coating contents are available on request. Please contact us.

Unless stated otherwise, all values are measured in accordance with referenced test methods, typical, non-binding and nominal. They may be subject to change and do not constitute an actual specification value. For engineering or design purposes please contact our technical sales team.



Graphite Solutions | SGL CARBON GmbH | SGL Technic LLC
 Sales Europe/Middle East/Africa | sigraflex-europe@sglcarbon.com
 Sales Americas | sigraflex-americas@sglcarbon.com
 Sales Asia/Pacific | sigraflex-asia@sglcarbon.com
 www.sigraflex.com | www.sglcarbon.com

TDS OXR_yarn.01

01 2021/0 2NÄ Printed in Germany
 ®registered trademarks of SGL Carbon SE

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should therefore not be construed as guaranteeing specific properties of the products described or their suitability for a particular application. Any existing industrial property rights must be observed. The quality of our products is guaranteed under our "General Conditions of Sale".

