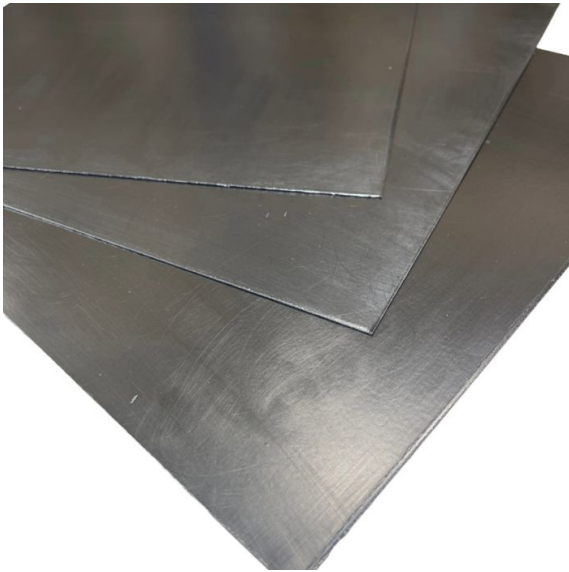




Expanded Graphite with Stainless Foil Insert 500 mm length X 500mm Width X 3mm Thick

Product SKU:	GP550L750W500T3
Material:	Graphite
Colour:	Black
Length:	500mm
Width:	500mm
Thickness:	3mm
Weight:	0.975kg
Max Temperature:	550°C

Polymax GP550, a high-performance sealing solution made from expanded natural graphite with over 99% purity and a stainless steel foil insert, ideal for demanding industrial applications. With BAM (oxygen) approval, it operates in extreme temperatures from -200°C to 550°C and offers exceptional durability, making it perfect for oil and gas, power generation, and chemical industries.

Approvals and compliances:
BAM (oxygen)

Key Features:

Premium Expanded Graphite – Manufactured from 99%+ pure expanded natural graphite with a 0.05 mm AISI 316 stainless steel foil insert for added strength and durability.

Oxygen Service Approved – BAM (oxygen) certified, making it suitable for oxygen-enriched applications.

High Purity Material – Low sulphur, chloride, fluoride (20 ppm each), and less than 1% ash content to minimise contamination.

Excellent Sealing Performance – 42% compressibility and 15% recovery provide reliable, long-lasting sealing.

High Mechanical Strength – Withstands residual stress up to 49 MPa, even at elevated temperatures.

Reliable in Harsh Conditions – Excellent compression and creep relaxation properties ensure stability under high pressure and temperature variations.

Although the technical details and recommendations made correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use Polymax products must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.
All sales subject to our standard terms www.polymax.co.uk/sales-terms

Applications:

High-Temperature Service – Suitable for temperatures from -200°C to 550°C in oxidising atmospheres and up to 700°C in reducing or inert atmospheres.

High-Pressure Performance – Designed to withstand pressures up to 100 bar (1450 psi).

Chemical & Petrochemical Industries – Ideal for demanding sealing applications in aggressive process environments.

Oil & Gas – Provides reliable sealing for pipelines, valves, flanges, and process equipment.

Power Generation – Suitable for high-temperature and high-pressure sealing applications.

Industrial Manufacturing – Delivers dependable sealing performance across a wide range of manufacturing processes.

Technical Data:

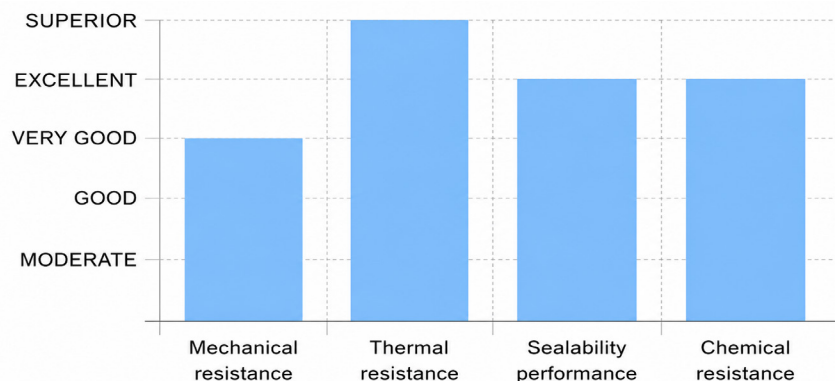
Density	DIN 28090-2	g/cm ³	1.3
Density (plain graphite)	DIN 28090-2	g/cm ³	1.0
Carbon content	DIN 51903	%	>99
Total sulfur content	ASTM D5016	ppm	/
Leachable chloride content	FSA NMG 202	ppm	20
Leachable fluoride content	FSA NMG 202	ppm	20
Leachable halogen content			/
Ash content	DIN 51903	%	<1
Weight loss (air, 670°C, 4 h)	DIN 28090-2	%/h	/
Compressibility	ASTM F36A	%	42
Recovery	ASTM F36A	%	15
Tensile strength	ASTM F152	%	
Longitudinal		MPa	/
Transversal		MPa	/
Residual stress	DIN 52913		
50 MPa, 300°C, 16 h		MPa	49

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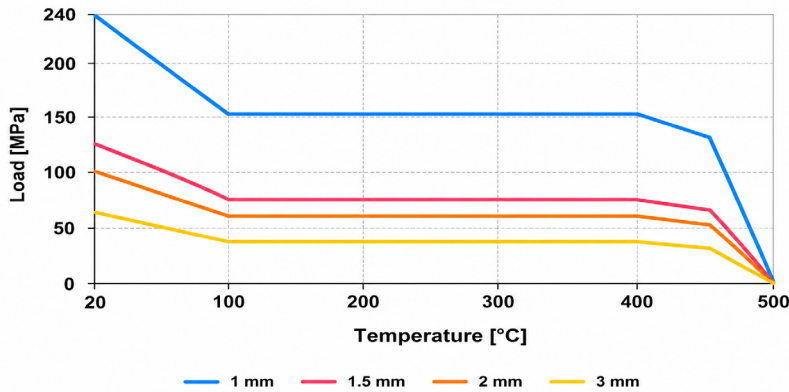
Specific leak rate	DIN 3535-6	mg/(s·m)	0.05
Thickness increase	ASTM F146	°C/°F	440/824
Oil IRM 903, 150°C, 5 h		%	/
ASTM Fuel B, 23°C, 5 h		%	
Compression modulus	DIN 28090-2		
Creep relaxation at room temperature	FSA NMG 202	%	/
Creep relaxation at an elevated temperature of 300°C		%	/
Creep relaxation	DIN 28090-2		
Creep relaxation at room temperature		%	38
Creep relaxation at an elevated temperature of 300°C		%	1.2
Operating Conditions			
Minimum temperature		°C/°F	-200/-328
Maximum continuous temperature			
– under oxidizing atmosphere		°C/°F	550/1022
– under reducing or inert atmosphere		°C/°F	700/1292
Maximum pressure		bar/psi	100/1450

Properties:



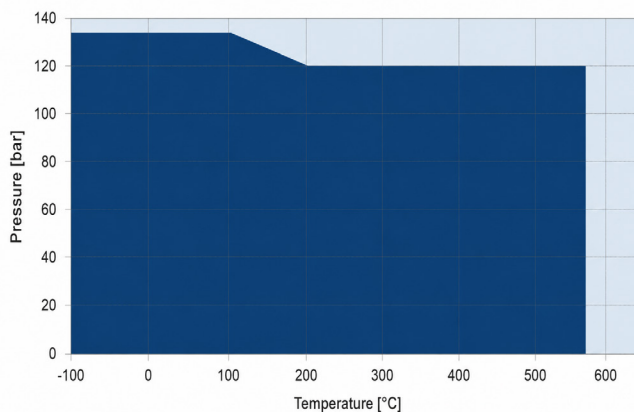
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Maximum Gasket Stress Diagram:



Maximum gasket stress diagrams represent Maximum gasket stress values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the gasket area involved without destructing or damaging the gasket material.

P-T DIAGRAMS EN 1514-1, Type IBC, PN 40, DIN 28091-2 / 3.8, 2 mm Steam or gasses:



Legend:

- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

P-T diagrams indicate the maximum permissible combination of internal pressure and service temperature which can be simultaneously applied to a given gaskets thickness, size and tightness class. Given the wide variety of gasket applications and service conditions, these values should only be regarded as a guidance for the proper gasket assembly. In general, thinner gaskets exhibit better P-T properties.

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