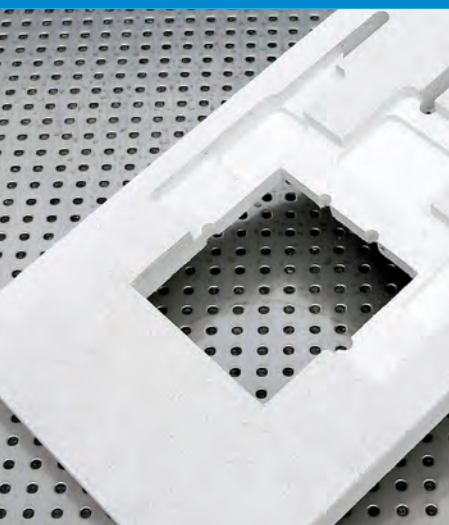


# Promat DURATEC®-XP

New high strength engineering insulation material

## APPLICATIONS

- Induction furnace components
  - Melting
  - Heating
- Electrical insulation
  - Arc chutes



## INTRODUCTION

Promat DURATEC®-XP is a new advanced composite in glass fibre reinforced calcium silicate based technology, with the following characteristics:

- Toughness giving near 'plastic' performance
- Strength at elevated temperature
- Non-brittle/flexible behaviour
- Electrically inert

## ADVANTAGES AND PROPERTIES

- High electrical resistance
- Large board format
- Good physical and mechanical properties
- Easily machinable
- Thermal and electrical insulation properties
- Thermally resistant to 600°C

## TYPICAL PRODUCT PERFORMANCE

Compressive strength (MPa)		> 100
Flexural strength (MPa)	≤ 15mm	> 40
	25mm	> 28
Modulus of elasticity (GPa)		4.5
Nominal density (kg/m³)		1800
Hardness (Shore D)		90
Toughness (kJ/m³)	6mm	120
	25mm	70
Maximum service temperature (°C)		600

Maximum service temperatures are application specific. Practical trials in induction furnaces, cookware manufacture and arc chutes have indicated satisfactory performance at temperatures up to 700°C dependent on time exposure.

## STANDARD SIZES

Length x width (mm)	1200 x 900	
Thickness (mm)	5, 8, 10, 12, 15, 20, 25, 30	
Tolerance (mm)		
	– Length and width	± 4
	– Thickness	± 1

## ELECTRICAL PROPERTIES

	Units	Data
<b>Flatwise Electrical Strength</b> DIN EN 60243-1 (VDE 0303 part 21):1999-03	kV/mm	1.8
<b>Arc Resistance</b> (Stage 40: 40 mA) DIN EN 61621 (VDE 0303 Part 71): 1999 - 01	s	> 420
<b>Volume Resistivity</b> $\rho$ DIN IEC 60093 (VDE 0303 Part 30): 1980-12	25 °C $\Omega$ cm 600 °C $\Omega$ cm	5.2 x 10 <sup>12</sup> 1.2 x 10 <sup>8</sup>
<b>Surface Resistivity</b> $\sigma$ DIN IEC 60093 (VDE 0303 Part 30): 1980-12	25 °C $\Omega$ 600 °C $\Omega$	2.4 x 10 <sup>13</sup> 2.1 x 10 <sup>9</sup>
<b>Dissipation Factor</b> $\tan \delta$ VDE 0303 Part 4: 1969-12 (DIN IEC 60093)	25 °C	0.094
<b>Relative Permittivity</b> $\epsilon_r$ VDE 0303 Part 4: 1969-12 (DIN IEC 60093)	25 °C	4.05
<b>Comparative Tracking Index</b> DIN EN 60112 (VDE 0303 Part 1): 2003-11		600
<b>Flammability</b> DIN EN 60707 (VDE 0304 Part 3): 1999-12	Material classification :	FH1

## WORKING AND PROCESSING

Promat and its approved convertors are well equipped with special processing machines.

### CUTTING TO SIZE

When cutting to size, the dust generated must be managed in accordance with Workplace Exposure Limit (WEL) values. In general, dust extraction is recommended.

### STORAGE

Promat DURATEC®-XP should be transported and stored under dry conditions.

### HEALTH AND SAFETY

Safety data sheets are available on request from Promat UK Limited.

### TECHNICAL INFORMATION

For additional details of product properties and applications please contact Promat Technical Services Department on Telephone: 01344 381400 Fax: 01344 381401.

# Promat

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