

## Promat SUPERSET® AC1/ HARDSET®/SUPERPLASTIC®

Insulation Compounds and Cements

### INTRODUCTION – Promat SUPERSET® AC1 FINISHING CEMENT

Promat SUPERSET® AC1 is a hydraulic setting Portland cement based product, suitable for application over pre-formed, plastic or sprayable insulation. It can be used indoors or outdoors wherever an exceptionally hard and durable protection is required.

Each 25kg bag of Promat SUPERSET® AC1 should be mixed with 11 litres of water and applied over wire netting, expanded metal or wire reinforcement, in one 5mm layer and trowelled to a smooth finish. The dry Promat SUPERSET® AC1 may be coated with PVA or water-based paints; oil based paints will need an alkali resistant primer applied to completely dry cement.

Promat SUPERSET® AC1 finishing cement conforms with BS3958: Part 6.

Performance and properties	
Nominal applied density	1200kg/m <sup>3</sup>
Resistant to impact	22mm
Flexural strength	3000kN/m <sup>2</sup>
Drying shrinkage	0.15%
Temperature limits for continuous service temperature	150°C
Combustibility (BS476: Part 4)	Non-combustible
Dry state shelf life	12 months
Appearance	White grey powder
Wet covering capacity	140m <sup>2</sup> /1000kg/5mm thickness over calcium silicate

### INTRODUCTION – Promat HARDSET® SETTING COMPOSITION

Promat HARDSET® setting composition is a clay-based product suitable for application over preformed or plastic insulation where heat is available to dry it out. It is for use indoors where a hard and durable finish is required.

Each 25kg bag of Promat HARDSET® setting composition is mixed with 21 litres of water and applied over wire netting, expanded metal or wire reinforcement in two layers, each 5mm thick. The final coat should be trowelled to a smooth finish. The dry Promat HARDSET® setting composition may be painted with emulsion paint, undercoat and gloss paint or PVA based coatings.

Promat HARDSET® setting composition conforms with BS3958: Part 6.

Performance and properties	
Nominal applied density	1300kg/m <sup>3</sup>
Flexural strength	3000kN/m <sup>2</sup>
Temperature limits for continuous service temperature	150°C
Combustibility (BS476: Part 4)	Non-combustible
Dry state shelf life	12 months
Appearance	White/pink powder
Wet covering capacity	100m <sup>2</sup> /1000kg/10mm thickness over calcium silicate

NOTE: All physical property values are averages based on standard production. The figures can change dependent on the test methods used. If a particular value is of prime importance for a specification, please contact Promat Technical Services Department.

## Promat SUPERSET® AC1/HARDSET®/SUPERPLASTIC®

### Insulation Compounds and Cements

#### INTRODUCTION – Promat SUPERPLASTIC® INSULATION COMPOUND

Promat SUPERPLASTIC® is an insulant powder form which is usually used for the general filling of joints between preformed insulation and for bedding in of slabs on irregular surfaces.

It is also particularly suitable for insulation of complex shapes where application of preformed or prefabricated insulation is impractical.

Performance and properties													
Maximum recommended operating temperature	800°C												
Compressive strength													
• Cold distortion, percentage thickness reduction (1000kN/m <sup>2</sup> load at onset of disruption)	1.5% at 600kN/m <sup>2</sup>												
• After 24 hours heat soak at maximum temperature distortion percentage thickness reduction	1.5% at 500kN/m <sup>2</sup>												
Flexural strength	550kN/m <sup>2</sup>												
Linear shrinkage after 24 hours heat soak at maximum temperature	1.4% at 800°C												
Specific heat capacity	0.84kJ/kgK												
Thermal conductivity at mean temperature	<table border="0"> <tr><td>100°C</td><td>0.054W/mK</td></tr> <tr><td>150°C</td><td>0.058W/mK</td></tr> <tr><td>200°C</td><td>0.063W/mK</td></tr> <tr><td>250°C</td><td>0.068W/mK</td></tr> <tr><td>300°C</td><td>0.074W/mK</td></tr> <tr><td>350°C</td><td>0.082W/mK</td></tr> </table>	100°C	0.054W/mK	150°C	0.058W/mK	200°C	0.063W/mK	250°C	0.068W/mK	300°C	0.074W/mK	350°C	0.082W/mK
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Covering capacity	172m <sup>2</sup> /1000kg/25mm thickness if mixing instructions are followed												

Preparation	
Substrate preparation	The surfaces to be insulated should be free from dirt, grease and loose scale. For best results Promat SUPERPLASTIC® should be applied to a surface primed with china clay slurry or well fibred hard setting cement at 80°C.
Mesh reinforcement	Promat SUPERPLASTIC® should be reinforced with galvanised wire netting every 65mm of thickness.

Application	
Mixing	It is recommended that 22.5 litres of water is added to each 12.7kg bag approximately four hours before Promat SUPERPLASTIC® is required.  Just prior to use, the bag should be split open and the contents thoroughly mixed, adding more water if required to achieve the desired working consistency.
Methods	The first coat should be applied as thinly as possible, followed by 13mm thick coats up to the specified thickness.

#### STANDARD COMPLIANCES

- Exceeds the performance requirements of BS3958: Part 2: 1982.
- Complies with the requirements of ASTM 533-85 with reference to strength and thermal properties.
- Meets the requirements of Naval Engineering Standards NES 800: Part 1: 1985.
- MOD and Powergen/National Power approved.

# Promat

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