



# MAXMORTER®

## HEAT 1600

### REFRACTORY MORTAR FOR LAYING BRICKS AND COATING IN HIGH TEMPERATURES CONDITIONS

#### DESCRIPTION

**MAXMORTER® HEAT 1600** is a refractory mortar made of special cements and aggregates which withstands a temperature up to 1600 °C. It is designed for laying refractory bricks and coating of walls exposed to extreme conditions at high temperature or fire contact.

#### APPLICATION FIELDS

- Laying of refractory bricks and pieces in ovens, industrial facilities, chimneys, etc exposed to extreme thermal cycles.
- Refractory coating of substrates subject to very high temperature or fire contact.
- Repairing, patching and levelling of refractory bricks and damaged mortar joints.
- Metallurgic plants, steel and iron industry, glass and ceramic industry, incinerators, refineries and petrochemical facilities: ovens, smelting furnace, drying places, heating systems, chemical reactors, etc.

#### ADVANTAGES

- It maintains good mechanical resistance after heat exposure.
- Excellent adhesion on the substrate.
- Good chemical resistance against diluted acids, sulfates and waste water; higher than concrete.
- It is not affected by humidity and water, it can be applied outdoor.
- Non-toxic and non-flammable, environmentally friendly.
- Odour-free, suitable for applications with poor ventilation.
- One component, only needs water for mixing.

#### APPLICATION INSTRUCTION

##### Substrate preparation

Substrate must be solid and resistant. Remove all damaged and unsound areas to expose a structurally resistant substrate. Clean surface of dirt, grease and loose particles with water pressure. Do not apply over gypsum substrates.

##### Mixing

A 25 kg bag of **MAXMORTER® HEAT 1600** is mixed with 3,25 to 3,75 litres of clean water, depending on the ambient conditions and the consistency required, either manually or mechanically by low speed drill (400 – 600 rpm) until achieving a homogeneous mortar with no lumps.

##### Application

Wet surface until saturation but do not leave free standing water. Place the mortar bed and lay refractory bricks by standard method. For coating and levelling of surfaces, apply layers by trowel with a thickness no greater than 5 mm. Holes and voids should be refilled previously.

##### Application conditions

Do not apply with temperatures below 5 °C or if lower temperatures are expected within 24 hours of application. Do not apply on frozen or frosted surfaces. Do not apply with temperatures above 40 °C.

##### Curing

Wet mortar after application if a very quick drying is noticed with high temperature and sun exposure conditions. Allow a minimum curing time of 72 hours at 20 °C before putting into service. Lower temperature conditions require longer curing time.

### **Cleaning**

Clean all tools and equipments immediately with water after use. Once it hardens only can be removed by mechanical methods.

### **CONSUMPTION**

The estimated consumption is approximately 1,87 kg/m<sup>2</sup>·mm thickness. One kilogram of product fills approximately 0,53 litres. This estimative consumption may vary depending on the porosity of the surface and application method. A preliminary test on-site will determine the coverage exactly

### **PACKAGING**

**MAXMORTER® HEAT 1600** is supplied in 25 kg bag.

### **STORAGE**

Twelve months in its unopened original packaging, in a dry and covered place protected from damp and frost, with temperatures above 5 °C.

### **IMPORTANT INDICATIONS**

- Do not use leftover mixed material to prepare a new mix.
- Do not add sand, aggregates, cement or others compounds in order to increase volume.
- Do not exceed the recommended mixing water ratio.
- Do not apply in layers greater than 5 mm thickness.
- Do not apply on paints, structurally weak surfaces and gypsum substrates.
- Setting time is measured at 20 °C. Higher temperatures reduce the setting time and lower temperatures delay the setting time.
- For further information consult our Technical Department.

### **SAFETY AND HEALTH**

**MAXMORTER® HEAT 1600** is non-toxic but it as an abrasive compound. Avoid eye and skin contact. Rubber gloves and safety goggles must be used to mix and apply. In case of skin contact, wash affected areas with soap and water. In case of eye contact, rinse with clean water but do not rub. If irritation continues, seek medical attention. Safety Data Sheet is available by request. Disposal of the product and its empty packaging must be done by the final user, and according to national regulations.

## TECHNICAL DATA

<b>Product characteristics</b>	
Appearance and colour	White powder
Apparent density in powder (g/cm <sup>3</sup> )	1,36
<b>Application and curing conditions</b>	
Mixing water (% weight / weight prod.)	14 ± 1
Density fresh mortar (g/cm <sup>3</sup> )	2,19
Pot life (minutes, 20 °C)	> 30
Setting-time (hours, a 20 °C)	
- Initial	3-5
- Final	6-8
Minimum / maximum application temperature (°C)	> 5 / < 40
<b>Cured mortar characteristics</b>	
Density cured mortar (g/cm <sup>3</sup> )	2,18
Flexotraction strength (MPa)	
- 7 days	4,20
- 28 days	7,81
Compressive strength (MPa)	
- 7 days	20,58
- 28 days	30,17
Mechanical resistance at 28 days, after 6 hours exposure at 1600 °C (MPa)	
- Flexotraction strength	26,36
- Compressive strength	> 185
Adhesion on concrete after 28 days (MPa)	> 1,5
Maximum service temperature (°C)	1600
<b>Consumption/thickness</b>	
Approximate consumption (kg/m <sup>2</sup> . mm)	1,87
Maximum thickness per layer (mm)	5

## GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. **DRIZORO<sup>®</sup>, S.A.** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be carried out under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.



### DRIZORO, S.A.

C/ Primavera 50-52 Parque Industrial Las Monjas  
28850 TORREJON DE ARDOZ – MADRID (SPAIN)  
Tel. 91 676 66 76 - 91 677 61 75 Fax. 91 675 78 13  
e-mail: [info@drizoro.com](mailto:info@drizoro.com) Web site: [drizoro.com](http://drizoro.com)

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