



### DESCRIPTION

**Tecplaster® Mortar** is prepared with hydraulic binders, perlite, vermiculite and other additives and specially formulated for fire protection of steel structures, providing up to 240 minutes' fire resistance.

### FIELDS OF APPLICATION

Protection of metal structures not exposed to the elements.

- Beams.
- Columns.
- Support brackets.
- Roof trusses.
- Concrete floor slabs.

### BENEFITS

- Easy to mix and apply.
- Environmentally friendly, it is not harmful to health.
- Provides a finish of exceptional finish - can be painted after application.
- Versatility - can be applied on objects of any shape.

### APPLICATION

- Preparing **Tecplaster® Mortar**: Add water to the mortar at a proportion of 1 kg of dry mortar to 1 litre of water. The ratio between water and **Tecplaster® Mortar** determines the required consistency.
- Surface preparation: Surface must be free of grease, dust and loose debris. Metal surfaces must be primed and concrete surfaces should not contain any remains of stripping agent.
- It is usually applied by means of a mortar projection machine with a wet screw pump. For manual application, it is advisable to first fit a deployed steel mesh properly attached to the surface to be coated.
- **Tecplaster® Mortar** usually has a rough finish from spray projection. In special cases, it can be smoothed. It can be painted with topcoat.

## FIREPROOF MORTAR

### TECHNICAL FEATURES

Reaction to fire	A1
Bulk density (Kg/m <sup>3</sup> )	500 ± 10 %
Wet density (Kg/m <sup>3</sup> )	1100 ± 10%
Dry density after 28 days (Kg/m <sup>3</sup> )	850 ± 10 %
pH	12
Compressive strength (n/mm <sup>2</sup> )	≥ 2
Flexural strength (N/mm <sup>2</sup> )	≥ 1
Heat conductivity λ (w/mK)	0,22
Application temperature	>5 °C
Work time (at 20 °C)	2 hours
Initial setting	24 hours
Final setting	28 days

### STORAGE AND CONSERVATION

Sacks should be stored on flat surfaces, never outdoors, and the material covered from sunlight and moisture. Maximum shelf life is 6 months from the date of manufacture printed on the sack.

### PACKAGING AND PRESENTATION

**Tecplaster® Mortar** is sold in sacks made of an intermediate sheet of plastic between two layers of paper. Each sack contains 15 kg/sack ± 5%, on pallets holding 72 sacks.

### PRECAUTIONS

**Tecplaster® Mortar** is applicable indoors between 5 °C and 40 °C, provided relative humidity is not too high in the environment.

### HEALTH AND SAFETY

The following considerations must be taken into account when handling **Tecplaster® Mortar**:

- Wearing protective gloves to protect the hands is recommended.
- Wearing tight goggles to protect the eyes is recommended.
- Wearing anti-dust mask is recommended.
- Respect the regular work measures.

Consult the safety datasheet for further information.

*We guarantee that the quality of our materials conforms to the indicated technical specifications, while it remains the consumer's own responsibility to determine how suitable the product is for the intended use. You must perform tests and ensure the effectiveness of the product for its application. **mercortecresa®** does not guarantee, explicitly or implicitly, the compatibility of a product for any particular application. We cannot be held responsible for any damage or accident resulting from the use of our products*

## FIREPROOF MORTAR

Thickness table. Protection of metal structures according to standard **EN 13501-2:2016**

Am/V (1/m)	Thickness (mm) of TECPLASTER® mortar for a critical temperature of 500 °C depending on fire resistance time (H and I type open profiles)						
	R 30	R 45	R 60	R 90	R 120	R 180	R 240
68	10,1	10,1	10,1	14,7	20,6	32,4	44,3
80	10,1	10,1	10,4	16,5	22,5	34,6	46,6
100	10,1	10,1	12,5	18,7	24,9	37,2	49,6
120	10,1	10,8	13,9	20,2	26,5	39,1	51,6
140	10,1	11,8	15,0	21,3	27,7	40,4	53,1
160	10,1	12,6	15,8	22,2	28,6	41,4	54,3
180	10,1	13,2	16,4	22,9	29,3	42,2	55,2
200	10,4	13,7	16,9	23,4	29,9	42,9	55,9
220	10,8	14,1	17,4	23,9	30,4	43,4	56,5
240	11,2	14,4	17,7	24,3	30,8	43,9	57,0
260	11,5	14,7	18,0	24,6	31,2	44,3	57,4
280	11,7	15,0	18,3	24,9	31,5	44,6	57,8
300	11,9	15,2	18,5	25,1	31,7	44,9	58,1
320	12,1	15,4	18,7	25,3	31,9	45,2	58,4
323	12,1	15,4	18,7	25,4	32,0	45,2	58,5

Am/V (1/m)	Thickness (mm) of TECPLASTER® mortar for a critical temperature of 500 °C depending on fire resistance time (round or rectangular hollow profiles)						
	R 30	R 45	R 60	R 90	R 120	R 180	R 240
68	10,7	10,7	10,7	15,7	22,0	34,6	47,3
80	10,9	10,9	11,3	17,8	24,3	37,3	50,4
100	11,1	11,1	13,7	20,5	27,3	40,9	54,5
120	11,3	12,1	15,6	22,6	29,7	43,7	57,8
140	11,5	13,4	17,1	24,3	31,6	46,0	60,5
160	11,7	14,6	18,3	25,7	33,2	48,0	--
180	11,9	15,6	19,4	27,0	34,6	49,8	--
200	12,5	16,4	20,3	28,1	35,9	51,5	--
220	13,2	17,2	21,2	29,1	37,1	53,0	--
240	13,8	17,9	22,0	30,1	38,2	54,4	--
260	14,3	18,4	22,5	30,7	38,9	55,4	--
280	14,6	18,7	22,9	31,1	39,3	55,8	--
300	14,9	19,0	23,1	31,4	39,7	56,2	--
320	15,1	19,3	23,4	31,7	39,9	56,5	--
323	15,2	19,3	23,4	31,7	40,0	56,5	--

TECPLASTER® has been tested at different steel temperatures (350 °C - 750 °C).  
Consult technical department.

### Table of equivalent thickness of concrete

**Thickness table.** Protection of concrete elements according to standard **EN 13381-3**.

Thickness of TECPLASTER® mortar	Fire resistance value (minutes)							
	15	30	45	60	90	120	180	240
Dp min= <b>Tecplaster®</b> <b>10,6 mm</b> thick	58,5	60	70	79	86	91	--	--
Dp max= <b>Tecplaster®</b> <b>29,5 mm</b> thick	90	114	138	141	147	149	151	154

Equivalent **thickness**

**mortar.**

