BASF
The Chemical Company

MASTERSEAL® 600 (Thoro Acryl 60)

Liquid bonding agent for cement mixes

DESCRIPTION

MASTERSEAL 600 is a special formulation of acrylic polymers and modifiers designed for use as an additive for Thoroseal cement mixes and other highly alkaline building materials. **MASTERSEAL 600** is a milky-white liquid with a viscosity slightly higher than that of water. It is non hazardous, non-corrosive and non combustible.

FIELDS OF APPLICATION

MASTERSEAL 600 is recommended for uses such as :

In a bonding slurry coat

- To adhere new concrete to old
- To bond thin polymer screeds or toppings to substrates
- To bond screeds to dense substrates such as MASTERSEAL 581 (Thoroseal).

For dry screeds

- To provide an economic wearing floor surface where a higher resistance to wear, abrasion, impact and dusting is required
- To improve resistance to mild chemicals

In a render key coat

- To provide a mechanical key prior to rendering on dense or smooth materials such as concrete, concrete block, concrete brick, engineering bricks and dense clay blocks
- To provide a keyed surface of uniform suction on surfaces with varying absorption rates

For modifying renders

- To allow effective use of thinner renders
- To reduce shrinkage and dusting
- To increase durability, flexibility and weatherproofing

For patching and repair mortars

- For internal and external repairs to floors, roads, paths, etc.
- For repair to spalled and damaged concrete.

FEATURES AND BENEFITS

Stable even under wet conditions	Unaffected by ultraviolet light, contact with water and provides good durability under all conditions.
Plasticising action	Improves the workability of cement mixes, aiding ease of application.
Increased cohesion of mixes	Improves all physical characteristics of cement mixes, therefore increasing resistance to wear and weather.

TYPICAL PERFORMANCE DATA

Strength comparison for 3:1 sand/cement mortar		Water only N/mm^2	Water : **MASTERSEAL 600** 1:1 by volume N/mm^2
Compresive (ASTM C109)	7 days	26.1	29
	28 days	27.9	31
Flexural (ASTM C 348)	28 days	7.23	12
Tensile (ASTM C109)	7 days	1.45	2.42
	28 days	1.52	2.47
Shear bond	7 days	0.44	0.55
	28 days	0.53	1.30

PROPERTIES

Density	:	1.035 kg/L
Solids content	:	28% w/w
Maximum dilution	:	1:3 by volume
Colour	:	Milky white solution

APPLICATION

Do not apply mixes modified with **MASTERSEAL 600** to frozen substrates or if the ambient temperature is below 5^{o}C or expected to fall below 5^{o}C within 24 hours.

Avoid application in direct sunlight.

Do not use **MASTERSEAL 600** where the application is likely to be in prolonged contact with hydrocarbons such as fuel oils, diesel oil and petrol.

In a bonding slurry coat

Blend ordinary Portland cement into neat **MASTERSEAL 600** and mix with a trowel or wing paddle mixer attachment in a slow speed drill (400-600 rpm) until a smooth lump-free slurry is produced. Do not overmix.

Apply the mix only to a clean, prepared, sound surface, which has been pre-dampened but has no free - standing water. Apply the mortar / concrete whilst the slurry is still wet. Work the slurry well into the surface with a stiff brush or broom. Do not allow the slurry to dry out.

Dry screeds

Mix 1 part of cement with 3 parts of sand. Prepare mixing liquid comprising 1 part of **MASTERSEAL 600** to 2 parts of water. Mix the materials together to the required consistency. Do not overmix. Apply and cure

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screed according to local specifications and site practice. **MASTERSEAL 600** will aid the curing of the screed, prevent drying shrinkage and stop dusting.

In a render key coat

Dry mix 2 parts of coarse sharp sand to 1 part of ordinary Portland cement. Add the mixing liquid of equal parts **MASTERSEAL 600** and water until a slurry consistency is obtained. Do not overmix.

Ensure that the surface has been prepared to a clean, sound condition free from any surface coating, algae, foreign matter or any other products that could affect the bond adversely. The slurry should be brushed vigorously into the pre-dampened surface after removing any free- standing water. All pores and voids must be filled with the mix and stippled or heavily textured. The best results are obtained with a stiff broom. Leave to harden overnight before rendering.

For modifying renders

Dry mix 1 part of cement with 2 parts of render sand (0-4 mm). Prepare mixing liquid of 1 part of **MASTERSEAL 600** to 3 parts of water. For larger areas, use a forced-action mixer of the rotating drum, pan or trough type, adding the dry-mixed mortar to the mixing liquid until a cohesive mass suitable for trowel application is obtained. Do not overmix.

Small quantities can be thoroughly mixed by hand. Do not overmix.

Always apply the mix to a prepared surface, preferentially a render key coat, which has been dampened but has no freestanding water. Apply the mix using standard plastering techniques; avoid exceeding the maximum designed depth of application. For a smooth finish, the best results are obtained with a stainless steel trowel. Do not over trowel.

For patching and repair mortars

Dry mix 3 parts of clean sharp sand (0-6 mm) with 1 part of ordinary Portland cement. Prepare the mixing liquid by blending equal parts of **MASTERSEAL 600** and water together. For large areas, use a forced-action mixer of the rotating drum, pan or trough type adding the dry-mixed mortar to the mixing liquid until a dry consistency is obtained. Small quantities can be thoroughly mixed by hand. Do not overmix.

Apply the bonding slurry as described earlier in this publication to the prepared patch or repair areas. If there is steel reinforcing in the repair, this must also be coated with the slurry. Never allow the slurry to dry out. This mixed material must be firmly pushed into place and compacted with a trowel or float in layers not exceeding 20 mm. Successive layers can be placed once the initial set has taken place.

Note : This mix is not suitable for feather edging since the minimum recommended depth required is 10 mm.

CURING

The best results are obtained from mortars modified with **MASTERSEAL 600** if they are damp-cured for 24 hours and allowed to dry out gradually.

Do not use curing compounds.

ESTIMATING DATA

	MASTERSEAL 600/ Potable water (by volume)
Bonding slurry coats	1/0
Dry screeds	1/2
Key coats	1/1
Renders	1/3
Repair mortars	1/1

PACKAGING

MASTERSEAL 600 is available in 20L plastic carboys and 205L drums.

SHELF LIFE

MASTERSEAL 600 can be kept for 12 months if stored in original unopened packaging.

MASTERSEAL 600 should be stored under cover and clear of the ground and stacked not more than 4 x 25 litre carboys high. Protect from freezing.

PRECAUTIONS

For detailed Health, Safety and Environmental recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.

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