



The Chemical Company

THORO[®] ACRYL 60

Acrylic Polymer Liquid Additive for Cementitious Mixes

Description of Product

THORO[®] ACRYL 60 is an acrylic polymer liquid additive for cement mixes, designed to enhance their physical characteristics, ease application and increase wear and weather resistance.

Fields of Application

In a Bonding Slurry Coat

- To adhere new concrete to old
- To bond thin polymer screeds or toppings to substrates
- To bond screeds and renders to dense substrates such as THOROSEAL[®]

For Polymer Flooring

- To provide an economic-wearing floor surface where a higher resistance to wear, abrasion, impact, dusting and/or to improve resistance to mild chemicals is required
- To correct inaccuracy in a floor slab level

In a Render Key Coat

- To provide a mechanical key prior to rendering on dense strong 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 of 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

As an Admixture For THORO[®] Products

THORO[®] ACRYL 60 is a necessary component of:

THORO[®] PATCH

THORO[®] STRUCTURITE

THORO[®] ACRYL 60 is recommended for use with:

THOROSEAL[®]

THOROSEAL FC[®]

THOROSEAL[®] SPM

THORO[®] QUICKSEAL

THORO[®] DRYJOINT

EMACO[®] T320

THORO[®] THORITE

THORO[®] ACRYL 60 should not be used where the application is likely to be in prolonged contact with hydrocarbons such as fuel oils, diesel oil and petrol.

Features and Benefits

- Durable
- Unaffected by ultraviolet light or contact with water, so giving enhanced durability under all conditions
- Improved workability of cement mixes
- Aids the ease of application
- Improved physical characteristics of cement mixes
- Increases resistance to wear and weather

Typical Properties^(a) / Technical Data

Typical physical properties ^(a)		
Specific gravity	1.035	
Solids content % w/w	28	
Maximum dilution	1:3	
Strength comparison for 3:1 sand:cement mortar	Water only	THORO [®] ACRYL 60: Water (1:1)
Compressive strength, N/mm ²		
7 days	26.1	27.9
28 days	27.9	30.3
Flexural strength, N/mm ²		
28 days	7.3	12.13
Tensile strength, N/mm ²		
7 days	1.45	2.31
28 days	1.52	2.35
Shear strength, N/mm ²		
7 days	0.44	0.52
28 days	0.53	1.16

^(a) Typical values at 20°C

Application Procedure

Do not apply mixes modified with THORO[®] ACRYL 60 to frozen substrates or if the ambient temperature is below 5°C or when the temperature is expected to fall below 5°C within 24 hours.

As a Bonding Slurry,

Blend Ordinary Portland Cement with neat THORO[®] ACRYL 60 in a clean container at a ratio of 1½ - 2 parts cement to 1 part THORO[®] ACRYL 60, by volume, until a smooth lump free consistency is achieved. This may be achieved by hand mixing or by slow speed power drill with paddle attachment.

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

For Polymer Flooring

Dry mix sand and cement ensuring that the materials and proportions conform to the recognised flooring standards. Prepare the mixing liquid by blending equal parts of THORO[®] ACRYL 60 and water together. Stir gently to avoid foaming. For large areas, use a forced-action mixer of the rotating drum, pan or trough type, adding the mixing liquid to the dry-mixed mortar until the consistency is as dry as practicable but consistent with good compaction. Do not overmix. Small quantities can be thoroughly mixed by hand.

Apply the bonding slurry as described earlier in this datasheet. Never allow it to dry out. The mixed material should be spread out between temporarily placed screeding laths or bars to ensure a minimum depth of 10mm throughout. The maximum depth must not exceed 20mm but it is recommended that compaction takes place in layers not exceeding 15mm. The mix must be well compacted to obtain the maximum strength and benefits from the finished product.

Flat level surfaces are best obtained using a narrow aluminium screeding bar. The final smooth finish is achieved with a stainless steel trowel which must be kept clean. Do not over trowel; only sufficient trowelling to close the surface and eliminate pinholes is required.

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 THORO[®] ACRYL 60 and water until a slurry consistency is obtained.

Ensure that the surface has been prepared to a clean, sound condition free from any surface coating, algae, foreign matter or any other product that could affect the bond adversely. Brush the slurry vigorously into the pre-dampened surface. All pores and voids are filled with the mix and stippled or heavily textured. The best results are obtained with a stiff broom. Leave to harden overnight (at 20°C) before rendering.

For Modifying Renders

Using materials in proportions that conform to recognised external rendering standards, dry mix the sand and cements. Add 1 part of THORO[®] ACRYL 60 to 3 parts of water to provide the mixing liquid. Stir gently to avoid foaming. For large areas, use a forced-action mixer of the rotating drum, pan or trough type, adding the mixing liquid to the dry-mixed mortar until a cohesive mass suitable for trowel application is obtained. Do not overmix. Avoid adding too much liquid. Small quantities can be thoroughly mixed by hand.

Always apply the mix to a prepared surface that has been dampened. 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.



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For Patching and Repair Mortars

Dry mix 3 parts of clean sharp sand with 1 part Ordinary Portland Cement. Prepare the mixing liquid by blending equal parts of THORO[®] ACRYL 60 and water together. Stir gently to avoid foaming. For large areas, use a forced-action mixer of the rotating drum, pan or trough type, adding the mixing liquid to the dry-mixed mortar until the consistency is as dry as practicable but consistent with good compaction. Small quantities can be thoroughly mixed by hand. Do not overmix.

Apply the bonding slurry, as described above, to the prepared patch or repair areas ensuring there is no free-standing water. If there is steel reinforcing in the repair, this must also be coated with 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 15mm. The maximum layer per coat is 20mm; successive layers can be placed once the initial set has taken place. This mix is not suitable for feather edging since the minimum recommended depth required is 10mm.

Curing

The best results from mortars modified with THORO[®] ACRYL 60 are obtained if they are damp cured for 24 hours and allowed to dry out gradually. Do not use curing compounds.

Packaging

THORO ACRYL[®] 60 is available in 5 and 20 litre plastic containers.

Storage

Store in unopened containers in cool, dry conditions at ambient temperatures between +5 to +35°C.

Shelf Life

Rotate stock in order not to exceed the shelf life of 12 months.

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Spillage

Chemical products can cause damage; clean spillage immediately.

Disclaimer:

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.