



THORITE® RAPID VERTICAL

Fast-setting, one-component, polymer-modified vertical patching mortar

Advantages

- Single component
- Easy to use – just add water
- Retains strength at temperatures up to 150°F (65°C)
- Protection against prolonged exposure to moisture
- Withstands freeze-thaw cycles

Where to Use Thorite® Rapid Vertical

- Restoration of architectural details
- Building restoration
- Bridges
- Tunnels
- Basements
- Concrete and masonry applications
- Vertical and overhead applications
- Interior or exterior

How to Apply Thorite® Rapid Vertical

Surface Preparation

Area to be repaired must be clean, structurally sound, and free of all loose, dirty, oily and scaly material or any material that may affect proper bonding. Repair area should have sawcut straight edges at a minimum depth of 1/4" (6 mm). All reinforcing steel must be cleaned to a white metal finish.

Mixing

1 Add 3 quarts (2.8 L) of potable water to a clean container. Gradually add powder while mixing at low speed until a lump-free consistency is obtained. Add up to 1/2 pint (0.24 L) of potable water only if needed for workability. Do not over-mix or beat air into the mix. Do not exceed 3.25 quarts (3.1 L) of liquid per 50 lb. (22.7 kg) bag, or 3.9 quarts (3.7 L) per 60 lb. (27 kg) pail. Mix only enough material that can be placed within 10 - 15 minutes. Maximum single lift recommendation is 1" (25 mm). Minimum placement is 1/8" (3 mm).

2 For applications exceeding the above recommendations, Thorite® Rapid Vertical must be extended with up to 15 lbs. (6.8 kg) of washed, graded SSD aggregate per 50 lb. (22.7 kg) bag. When extended, up to three 50 lb. (22.7 kg) bags of Thorite® Rapid Vertical can be used at once.

Application

Prewet the substrate to a saturated, surface dry (SSD) condition. Some substrates may require extended and even overnight soaking. Remove excess water from the surface before placing the scrub coat.

Scrub Coat

Apply the fresh mortar by brush to the properly prepared, prewetted substrate, vigorously scrubbing it into the exposed surface. Do not allow scrub coat to dry prior to placement of the trowel mix. If the scrub coat dries out before the wet mortar can be placed, it must be removed as if it were laitance.

Trowel

1 Immediately apply fresh mortar to the wet brush coat using firm trowel pressure. Completely fill all voids around steel reinforcement.

2 As Thorite® Rapid Vertical hardens, score material between layers to improve adhesion. After initial set apply second layer, building out the patch above the final profile required. Shave back the patch, working from the center towards the perimeter to achieve the final profile before the patch fully hardens. Use a wet sponge float for final shaping. Finishing with a straight edge may be required.

Curing

In normal conditions, keep patch moist by water mist/fog spray until final set. Refer to ACI 308 Practice for Curing Concrete. In hot, dry, windy conditions longer periods of moist curing may be necessary, or use an ASTM C 309 compliant curing compound.

Clean Up

Clean tools and equipment immediately with water. Cured material must be removed by mechanical means only.

For Best Performance

- Allow a minimum of 24 hours of cure/drying time from final layer before applying a decorative coating.
- Do not apply Thorite® Rapid Vertical to frozen or frost-filled surfaces or when surface or air temperature is below 40°F (4°C) or is expected to fall below 40°F (4°C) within 24 hours after application.
- Make certain the most current version of this data guide is being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by ChemRex® personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

Technical Data

Physical or Performance Property	Test Method	Typical Value
Compressive strength	ASTM C 109	1 day = 3500 psi (24.1 MPa) 7 days = 5000 psi (34.5 MPa) 28 days = 6500 psi (44.8 MPa)
Flexural strength	ASTM C 348	7 days = 980 psi (6.8 MPa) 28 days = 1230 psi (8.5 MPa)
Tensile strength	ASTM C 190	7 days = 600 psi (4.1 MPa) 28 days = 810 psi (5.5 MPa)
Modulus of elasticity	ASTM C 469	28 days = 2.18 x 10 ⁶ psi (1.5 x 10 ⁴ MPa)
Initial set	ASTM C 807	10 to 15 minutes at 70°F (21°C)
Final set	ASTM C 807	20 to 25 minutes at 70°F (21°C)

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

Order Information

Packaging

Thorite® Rapid Vertical

■ 50 lb. (22.7 kg) bags

■ 60 lb. (27 kg) pails

Shelf Life

Shelf life is typically one year when stored in unopened containers under normal conditions.

Colors

Dark gray

Coverage

Thoro® always recommends applying material to a test area to determine actual coverage. The coverage rate of Thorite® Rapid Vertical will vary depending on the amount (if any) of aggregate added. Mix 1 bag to desired mixture and apply to test area to determine job size coverage. For estimating purposes Thorite® Rapid Vertical will yield 0.4 - 0.5 cubic feet (.012 cubic meters).

Caution

Thorite® Rapid Vertical contains crystalline silica, Portland cement, calcium aluminate, calcium carbonate, acrylic polymer

Risks

Product is alkaline on contact with water and may cause injury to skin or eyes. Ingestion or inhalation of dust may cause irritation. Contains free respirable quartz, which has been listed as a suspected human carcinogen by NTP and IARC. Repeated or prolonged overexposure to free respirable quartz may cause silicosis or other serious and delayed lung injury.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Prevent contact with skin and eyes. Prevent inhalation of dust. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

For more information see Material Safety Data Sheet (MSDS) for this product.

Proposition 65

This product contains material listed by the state of California as known to cause cancer, birth defects or other reproductive harm.

VOC Content

0 g/L.

For medical emergencies only, call ChemTrec (1/800/424-9300).

Limited Warranty Notice

Every reasonable effort is made to apply ChemRex® exacting standards both in the manufacture of our products and in the information which we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, CHEMREX® MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and CHEMREX® shall have no other liability with respect thereto. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the ChemRex® Technical Manager.



ChemRex®

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