



PRODUCERS OF
FLOORING AND SEALER PRODUCTS
SINCE 1923

Desert Brand

ROOF TILE SEALER

RTS Series

TECHNICAL BULLETIN

Description

Desert Brand Roof Tile Sealers are low V.O.C. (volatile organic compounds), water borne state of the art nano-particle size acrylic clear sealers designed specifically to control efflorescence upon concrete roofing tile surfaces. Secondary advantages are to slow moss or mildew growth, give water resistance, and UV protection.

RTS Series sealers have been specifically formulated to provide a deep penetration into the concrete tile yet leaving a non-yellowing, semi-gloss, and highly water-resistant film upon the surface. This resulting film will provide primary and secondary protection from the unsightly effects of efflorescence. These sealers have been successfully used over a range of concrete tiles from the least difficult such as Slate or S-tiles to the more difficult simulated shake or shingle.

RTS-300 is a high solids sealer designed for use where the concrete roofing tile is exposed to a high degree of humidity during both its manufacturing phase and use. Since exposure to humidity promotes the initial effects of efflorescence more rapidly, RTS-300 is the preferred sealer to use.

RTS-200 is designed for use where the concrete roofing tile is exposed to a lesser degree of humidity during manufacturing and ultimate use. Custom blend RTS products are also available such as RTS-250.

RTS Zero VOC has been formulated with the latest technology to satisfy the requirement of a high quality sealed tile without the limitations concerning excess volatile organic compounds.

RTS Series sealers are primarily formulated to be applied upon the concrete tile surface after curing. In some instances application of the sealer can be utilized upon the pre-cured concrete tile (wet concrete), depending upon temperature, curing time, and humidity of the kiln.

Application and Use

RTS sealers are applied during the manufacturing of the concrete roofing tile by means of spray equipment and at no less than 40°F.

Most concrete roofing tile manufacturing facilities utilize a recirculation spray booth unit in conjunction with conveyors prior to or after curing.

In most facilities, sealer is supplied in bulk quantities and is delivered to the spray units by way of low pressure delivery lines.

For further information on application procedures and recommended parameters contact Hill Brothers Technical Services Department or your local representative. See Technical Bulletin #TB121 on "Application Testing Procedures".

Precautions

Do not allow Desert Brand Roof Tile Sealer to freeze. If allowed to freeze, product will not thaw to a usable product.

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ROOF TILE SEALER
Application Testing Procedures

Purpose

Clear sealer is applied to the tile surface to improve the appearance and control efflorescence. The following steps are recommended by the manufacturer to ensure proper application.

Recommended Parameters

Wet film thickness: 3 to 4 mils. This industry standard for wet film thickness will provide optimum protection and visual aesthetics. Lower wet film thickness will compromise the quality of the finished product.

Resulting dry film thickness will be 0.5 to 1.2 mils. depending on type and porosity of the tile.

Preparation

1. TO CHECK WET FILM THICKNESS:

- a) Use a piece of glass or plexiglass approximately the same size as a roof tile. Run the glass/plexiglass through the spray booth.
- b) Place a wet film thickness gauge on the glass/plexiglass at 90° angle. Do not drag or twist the gauge, simply press it onto the glass and withdraw it. Note the deepest tooth having sealer on it and the next higher tooth that does not have sealer. The film thickness lies between these two readings.
- c) Quickly clean the gauge with clean water and dry after each use. Repeat test on several locations on the glass sheet to determine uniformity.
- d) Clean the glass/plexiglass and store for future use.

2. TO CHECK FOR EVEN DISPERSION:

- a) Place a piece of cardboard on top of a tile. Run through the spray booth.
- b) Check cardboard for uniformity in color. Darker areas have more sealer, lighter areas have less. If uneven, follow instructions for cleaning spray heads (Step 3a.)

3. TO CORRECT UNEVEN SPRAYING:

- a) Spray heads should be soaked daily in suitable solvent such as M-Pyrol (N-Methyl-2-Pyrrolidone) or Desert Brand Stripper.
- b) If equipment is shut down the spray heads must be changed or re-cleaned if sealer has dried.
- c) Check the pressure of the lines.

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RTS200-0V

Description

Desert Brand RTS200-0V is a water-based zero volatile organic compound (VOC) pure acrylic clear sealer developed with the state of the art core-shell technology, designed for the long-lasting protection of concrete or clay roof tiles. This sealer guards against the effects of efflorescence, humidity, moisture absorption, acid rain, and mildew growth. This formula provides equal or higher protection than many high VOC sealers available in the market today. RTS 200-0V can be applied to create a subtle matte look to a more protective semi-gloss finish with higher dosage rates. This coating is made for protection against the elements, so it will not flake, chip, or peel. As a zero volatile organic compound formula, RTS 200-0V not only protects one of a building's most important assets, but is a safe and environmentally friendly alternative to higher VOC products.

Applications

Factory manufactured concrete and clay roof tiles to prevent efflorescence and achieve aesthetic beauty. Restoration of pre-existing tiled roofs.

Packaging

Desert Brand RTS200-0V is available in bulk deliveries. Drum packaging available upon request.

Handling Recommendations

Product is generally sprayed over hot tile, fresh from the kiln. Do not allow Desert Brand RTS220-0V to freeze; once frozen it will not return to a useful product. For further information on sealing concrete or clay roofing tile, contact your authorized Hill Brothers Chemical representative

Typical Properties

VOC:	Zero	Boiling Point:	~212°F
%Solids	19.5 – 20.5	pH:	8.0 – 8.5
Density:	~8.53	Viscosity:	~20cP @ 77°F
Appearance	Opaque to milky white	Odor:	Acrylic
Coverage:	320 sq.ft/gal @ 1 mil dry		

* Recommended coverage: 9.0 – 12 grams per tile

* Tile porosity and desired final gloss will affect the sealer amount per tile.

Drying Time 15 – 30 sec @ 140°F (Surface temperature of tile).

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