

ROOF MATE CERAMIC

HEAT REFLECTIVE ROOF COATING SYSTEM

Technical Data & Application Instructions

PRODUCT DESCRIPTION

ROOF MATE CERAMIC is a high solids, water-based acrylic elastomer coating incorporating heat reflective, borosilicate ceramic spheres. This specialized ceramic additive increases the heat reflectivity of **ROOF MATE CERAMIC** beyond that of typical white reflective coatings. The brilliant white pigments protect the substrate by reflecting in excess of 90% of the sun's solar heat from the roof surface. **ROOF MATE CERAMIC** provides elastomeric waterproofing protection over a wide variety of roofing substrates. In utilizing the latest advances in acrylic technology, acrylic emulsion polymers are combined with reinforcing laminar pigments, powerful biocides and non-migrating fire retardants resulting in excellent physical properties, adhesion, durability, weatherproofing, mildew resistance and fire retardancy. The fire retardant chemicals are permanently locked into the cured coating and will not leach out upon extended weathering. **ROOF MATE CERAMIC** is a "breathing" membrane, allowing moisture vapor to pass through the film while remaining impervious to mass water penetration.

BASIC USES

ROOF MATE CERAMIC was especially developed for extending the life of metal, conventional built-up, modified bitumen, single-ply, concrete, board-stock and sprayed-in-place polyurethane foam, and composite shingle roof substrates. **ROOF MATE CERAMIC** forms a monolithic, waterproof elastomeric seal, uniformly covering the textured profile of these substrates, providing protection from weathering, aging and ultraviolet exposure.

COLORS

ROOF MATE CERAMIC is available in standard **White, Tan, Light Tan** and **Solar Gray** colors, which are certified to meet ENERGY STAR[®], Cool Roof Rating Council (CRRC) and LEED reflectance and emissivity criteria. **White** and **Light Tan** also meet California Title 24 requirements. All other colors are custom matched by UNITED for the specific application. Color chips or samples must be furnished to UNITED for all custom colors. It is recommended that dark colors be tinted in **KYMAX** topcoat only.

TYPICAL PROPERTIES

- Solids by Weight:**
61% (±2) [ASTM D1644, D6083]
- Solids by Volume:**
55% (±2) [ASTM D2697, D6083]
- Weight per Gallon:**
11.2 lbs. (5.1 kg) (± .2) [ASTM D1475]
- Tensile Strength:**
200 psi (1.38 MPa) [ASTM D2370, D6083]
- Elongation:**
200% [ASTM D2370]
- Reflectance Rating:**
93% [ASTM E805]
- Dry Time (@ 75°F (24°C), 50% RH):***
Recoat: 4 to 6 Hours
Water Resistance: 6 Hours
Cure: 24 Hours [ASTM D1640]
**For White at 16 wet mils (406 microns)*
- Accelerated Weathering:**
No cracking, checking or other deleterious effects after 3,000 hours in a Xenon Arc Weather-Ometer. [ASTM D4798, D6083]
- Cold Temperature Flexibility:**
Passes ½" mandrel bend at 0°F (-18°C) [ASTM D522, D6083]
- Fungi Resistance:**
Zero rating, no growth [ASTM G21]
- Code Approval:**
UL 790 Class A

PACKAGING & MIXING

ROOF MATE CERAMIC is a single-component material available in 5-gallon (19 liter) pails and 55-gallon (208 liter) drums. Use a power mixer capable of uniformly mixing the entire container prior to use.

ROOF MATE CERAMIC is easily pumped and sprayed at material temperatures of 60°F (16°C) or greater. **Reducing the mixture is not recommended**, as it affects the coating's ability to achieve a heavy film build with excellent vertical hold and hide.

SURFACE PREPARATION

All surfaces must be clean and dry, and free of any dirt, dust, oil, surface chemicals or other contaminants that may interfere with optimum adhesion. All loose gravel, if present, shall be removed by power sweeping and/or vacuuming. Remaining gravel shall be power spud to achieve the smoothest surface possible. Any unsound areas in the roof, i.e. blisters, delamination, deterioration, moisture saturation, severe corrosion, sharp projections, ridges, etc. shall be repaired or replaced. New asphalt shall be exposed to ambient conditions for 45 to 60 days before coating.

Deteriorated or badly corroded metal shall be replaced. Light to medium rusted areas shall be mechanically abraded to remove all loose rust and then primed with UNITED'S **Acrylex 400**. Heavy areas of sound rust should be primed with UNITED'S **Lock-Down** primer. New metal roofs exhibiting any type of surface film shall be washed with a vinegar or muriatic acid solution, or equivalent, to totally remove this film.

Low areas that hold excessive ponding water must be brought into conformance by installing additional drains or adding additional slope to existing drains.

Surfaces that are contaminated with oil, grease, embedded dirt, loose paint or coating, etc. shall be cleaned using **United Cleaning Concentrate (UCC)**. High-pressure power washing may be necessary to remove tightly adhering contaminants. Rinse thoroughly with clean water to remove all traces of the UCC cleaner. If roof does not require chemical cleaning, thoroughly sweep, vacuum, or blow down roof to remove any dirt, dust or other loose contaminants. Contact UNITED'S Technical Service Department for additional surface preparation procedures on the specific substrate being coated.

APPLICATION

Reinforce all "moving" cracks, seams, splits, control joints, vertical/horizontal interfaces, roof termination points, openings, transition areas, around the base of all vents, pipes and other protrusions, as well as around HVAC units and other roof mounted equipment with **ROOF MATE Mesh**, embedded into a base coat of **ROOF MATE CERAMIC**. Light or Medium Gray is normally used as the base coat color.

If incorporating **ROOF MATE Fabric** for reinforcement of the entire roof, roll the fabric over a strip-coat of wet **ROOF MATE CERAMIC**, allowing the fabric to conform to the surface contours. Do not allow the **ROOF MATE CERAMIC** to surface skin prior to rolling out the fabric. Work the **ROOF MATE CERAMIC** evenly throughout the fabric so that it is totally saturated, eliminating any air pockets, wrinkles or gaps. Apply an additional coat of **ROOF MATE CERAMIC** over the top of the saturated fabric taking extra care to ensure that edges of the fabric are well saturated and adhered. Overlap consecutive passes of **ROOF MATE Fabric** a minimum of 2" (5 cm) on each side.

APPLICATION (Continued)

ROOF MATE CERAMIC may be applied by airless spray equipment or roller. Brush or roller may be used for touch-up and edging work, or for small areas that are not practical for spray application. Airless spray is best suited for field application.

ROOF MATE CERAMIC must be applied in two or more separate coats to ensure proper coverage and cure rate, and to achieve a pinhole-free continuous film. It is recommended that Gray be used for the first coat(s), thus making it easier to visually control the application of the final coat in White or specified custom color.

Each coat of **ROOF MATE CERAMIC** shall be applied in a direction perpendicular to the previous coat except when coating metal roof panels. On metal roofs, each coat of **ROOF MATE CERAMIC** shall be applied parallel to the vertical ribs, taking care to coat both sides of each rib. Edges of flat roof areas shall be pre-coated in a "picture frame" configuration.

ROOF MATE CERAMIC shall extend up and over all roof substrates on vent pipes, walls, parapets and other protrusions to terminate a minimum of 3" (8 cm) above the substrate, creating a self-terminating flashing. Extend coating under all counter-flashings where utilized.

Typical application rate is 2 to 4 gallons per 100 sq. ft. (.8 to 1.6 l/m²), depending on the existing substrate and desired warranty. Contact UNITED'S Technical Service Department for dry film thickness requirements. **All surfaces must be uniformly coated and free from voids, pinholes or blisters.**

LIMITATIONS & PRECAUTIONS

ROOF MATE CERAMIC should generally not be used over cold storage tanks or buildings where a vapor barrier is required. It will freeze and become unusable at temperatures below 32°F (0°C), or when there is a possibility of temperatures falling below 32°F (0°C) within a 24-hour period after application.

ROOF MATE CERAMIC requires complete evaporation of water to cure. Cool temperatures and high humidity retard cure. **Do not apply if weather conditions will not permit complete cure before rain, dew, fog or freezing temperatures occur.** Do not apply in the late afternoon if heavy moisture condensation may appear during the night.

Avoid breathing of vapor or spray mist. For exterior applications, approved (MSHA/NIOSH) chemical cartridge respirator must be worn by applicator and personnel in vicinity of application. If used indoors, provide mechanical exhaust ventilation. During indoor spray operations, air line masks or positive pressure hose masks must be worn. Avoid contact with eyes and skin. For specific information on safety requirements, refer to OSHA guidelines and **ROOF MATE CERAMIC** Material Safety Data Sheet.



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