

Kymax™ Coating Product Data Sheet

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North America's Largest Roofing Manufacturer!™*



Kymax™ Coating

Product Data Sheet



PRODUCT DESCRIPTION

United Coatings™ Kymax™ Coating is a PVDF fluoropolymer top coat designed to deliver superior durability and performance. A water-based product, it cures at ambient temperatures. **Kymax™ Coating** is a low build elastomeric finish coat that provides the ultimate in reflectivity, color stability, algae resistance, and weatherability over new or existing roof surfaces. Although it is highly flexible, it exhibits a tough, enamel-like finish that resists abrasion, biological growth, dirt, oil, and all types of weather extremes.

PACKAGING & SHELF LIFE

Kymax™ Coating is a single-component, ready-to-use material.

- 5-gallon (18.9 liter) pail
- 55-gallon (208 liter) drum

Shelf Life: 18 months from date of manufacture in unopened containers, if stored properly in a clean and well-ventilated area at 40°F – 70°F (4°C – 21°C). Storage outside this temperature range may shorten shelf life. Keep containers covered when not in use. Do not allow coating to freeze.

*Kynar®, Kynar®500, and Kynar Aquatex® are registered trademarks of Arkema Inc.

GAF Liquid-Applied

September 2016, supercedes January 2016

For technical, system, and warranty information, visit gaf.com or call 1-800-766-3411.

BASIC USES & ADVANTAGES

United Coatings™ Kymax™ Coating was specifically designed for application as a thin-build finish coat over acrylic top coats, such as **United Coatings™ Roof Mate™ Top Coat, HydroStop® PremiumCoat® Finish Coat, United Coatings™ Diathon® Roof Coating, and United Coatings™ Acron 60 Roof Coating.** **Kymax™ Coating** is used to increase reflectivity, dirt pick-up and algae/mildew resistance.

Typical substrates include metal roofs, sprayed-in-place polyurethane foam, modified bitumen, BUR, PVC, KEE, TPO, Hypalon®, and EPDM. **Kymax™ Coating** is an excellent barrier to plasticizer migration, and is also effective in preventing asphalt bleed-through. **Kymax™ Coating** is recommended whenever exceptional weatherability and/or reflectivity are required, whether the threat is algae, mildew, dirt, or industrial fallout. It also provides exceptional UV and color stability.

Advantages:

- **High Reflectivity/Emissivity – Kymax™ Coating** is Cool Roof Rating Council (CRRC) rated, having a Solar Reflectance of 87% and a Thermal Emittance of 89%. An independent test report performed by Atlas Material Testing Solutions calculated the Total Emittance at 94%. The Solar Reflectance Index (SRI) is 110 per ASTM E1980, which is among the highest of any roof coating.
- **Reduced Energy Costs – Kymax™ Coating** has the ability to repel dirt, biological growth, pollution

fallout, and other contaminants, as well as resist degradation from UV and weather exposure. This enables the white top coat to effectively reflect the sun's heat over long-term exposure, unlike dark-colored roofing materials that retain heat and are subject to ultraviolet degradation. Roof temperatures can be reduced in excess of 70°F (21°C), which significantly reduces air-conditioning loads and helps lower cooling costs. Independent studies show a reduction of over 20% in air-conditioning use.

- **Microbiological Resistance – Kymax™ Coating** was independently tested for fungal resistance as per ASTM G21-96. After exposure to *Aspergillus niger*, *Aureobasidium pullulans*, *Chaetomium globosum*, *Penicillium funiculosum*, and *Trichoderma virens* for 4 weeks at 82.4°F (28°C), the **Kymax™ Coating** test panels showed no growth.
- **Color and Gloss Stability – Kymax™ Coating** is manufactured using Kynar Aquatex® resin, which is based on proven Kynar 500® technology. This PVDF homopolymer is universally known as the world's most weatherable coating resin, and is virtually immune to UV degradation. The mixed metal oxide pigments used for tinting **Kymax™ Coating** provide ultimate color stability and gloss retention, and are able to provide relatively high reflectivity values, even in darker colors.

PHYSICAL PROPERTIES

| KYNAMAX™ COATING | |
|-------------------------------|---|
| Solids by Weight | 52% (±2) [ASTM D1644] |
| Solids by Volume | 36% (±2) [ASTM D2697] |
| Weight per Gallon | 11 lb/gal (1.32 kg/L) [ASTM D1475] |
| Dry Time for Water Resistance | 6 hours @ 75°F (24°C) at 5 wet mils (0.13 mm) |
| VOC | <200 g/L (coating) [per EPA 23] |
| Tensile Strength | 1,000 psi (± 100) (6.9 MPa) [ASTM D2370] After 1,000 hours accelerated weathering: 1,050 psi (7.2 MPa) |
| Elongation | 120% (± 20) [ASTM D2370] After 1,000 hours accelerated weathering: 150% |
| Permeance | >3 @ 3 mils Dry Film Thickness (0.08 mm) [ASTM D1653] |
| Flexibility | Passes ¼" (6 mm) mandrel bend @ -15°F (-26°C) [ASTM D6083 / ASTM D522] |
| Hail Resistance | FM Severe Hail rated |

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|--------------------------------|---|
| Water Absorption | 5.2% = Pass [ASTM D570] |
| Tear Resistance | >200 PLI (14.4 kN/m) [ASTM D1004] |
| Abrasion Resistance | 30 L/mil Falling Sand Test [ASTM D968] |
| Accelerated Weathering | 4,000 hours = Pass [ASTM D4798/G155 or G154 UVB 313] |
| Florida Weathering G7 – 1 Year | Gloss Retention: >80% [ASTM D523] Fade: ΔE<3.0 CIE units [ASTM D2244] Chalking: 9 minimum [ASTM D4214] Adhesion: 100% [ASTM D3359] |
| Standard Colors | Kymax™ Coating is available in standard White. All other colors are custom matched by GAF for the specific application. Color chips or samples must be furnished to GAF for all custom colors (other than White). |

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APPROVALS

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|---|--|
| UL 790 Class A | Kymax™ Coating is UL Classified as a Class "A" Fluid Applied Coating System as outlined in the <i>UL Roofing Materials & Systems Directory</i> and UL website. |
| Factory Mutual (FM) | Listed in RoofNav for the full FM 4770 protocol including wind, hail, leakage, weathering, impact, corrosion, and fire ratings. Kymax™ Coating is also an FM 4470 Maintenance Coating for use over existing FM-approved roof systems. |
| CRRC (Cool Roof Rating Council) coolroofs.org | <i>Kymax™ Coating White</i> Initial Solar Reflectance 0.87 Initial Thermal Emittance 0.87 Initial SRI 110 Product ID 0614-0036 |
| Department of Energy, ENERGY STAR™ (U.S. only) | ENERGY STAR® Certified (USA Only) |
| California Title 24 | Rated by the Cool Roof Rating Council (CRRC) for use in Title 24 Projects |

APPLICATION INSTRUCTIONS, CONT'D.

SUBSTRATE PREPARATION: Clean and prepare surfaces to receive coating by removing all loose and flaking particles, grease, and laitance with the use of a stiff-bristle push broom and/or pressure washing. Be sure that the substrate is dry before applying the coating. See gaf.com for more details.

MIXING: Thoroughly mix using a power mixer for a minimum of 5 minutes prior to application. For 5-gallon (18.9 L) pails, use a 3" (76 mm) minimum diameter mixing blade; for 55-gallon (208 L) drum, use a 6" (152 mm) minimum diameter blade.

APPLICATION: Apply product with an airless sprayer, covering the surface at an even rate. Use an airless spray pump with a 3/4" gallon-per-minute (2.8 L/minute) output and 1,500 psi (10,345 kPa) pressure capability. Use a reversible, self-cleaning tip with orifice size 0.027" – 0.039" (0.69 – 0.99 mm) and a fan angle of 40° to 50°. Filter screens should be 60 mesh or

larger. Use a 3/8" (9.5 mm) minimum inside diameter, nylon high pressure-type hose for lengths up to 75 ft. (23 m) from pump. For 75 ft. – 200 ft. (23 – 61 m), use 1/2" (12.7 mm) inside diameter hose added to pump side of existing 3/8" (9.5 mm) hose to maintain pressure and delivery. Apply at a rate of 0.40 gal/100 ft² (1.6 L/10 m²) per coat. Total coverage depends on substrate. Rough substrates will require more. Minimum two coats required.

APPLICATION NOTE: Requires complete evaporation of water to cure. Cool temperatures and high humidity will slow curing.

For Application Questions: Contact GAF Technical Services at 1-800-766-3411 or visit gaf.com.

Applicable Standards: ASTM D1653, ASTM D2370, ASTM D522, ASTM D570.

LIMITATIONS & PRECAUTIONS

United Coatings™ Kymax™ Coating should generally not be used over cold storage tanks or buildings where a vapor barrier coating is required. **Kymax™ Coating** shall not be used for interior applications in place of a thermal barrier.

Kymax™ Coating will freeze and become unusable at temperatures below 32°F (0°C). Do not ship or store unless protection from freezing is available. **Kymax™ Coating** requires complete evaporation of water to cure. Cool temperatures and high humidity slow cure. Do not apply if weather conditions

will not permit complete cure before rain, dew, or freezing temperatures occur. Do not apply in the late afternoon if heavy moisture condensation can appear during the night.

Do not apply **Kymax™ Coating** at temperatures below 60°F (15°C), or when there is a possibility of temperatures falling below 32°F (0°C) within a 24-hour period after application.

Kymax™ Coating is slippery when wet. Exercise caution when walking on roof under these conditions.

SAFETY & HANDLING

For specific information regarding safe handling of this material, please refer to the Safety Data Sheet (SDS).

CLEAN-UP

Thoroughly rinse application equipment with clean water.



GAF

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See applicable warranties and guarantees for complete coverage and restrictions.