



Product Technical Data Sheet

MIRATHANE APU 100

1. PRODUCT DESCRIPTION

A. COMPOSITION

APU 100 Clear Gloss and APU 100 Pigmented Matte represent the next generation of urethane topcoats. They are a blended aliphatic polyester urethane, which is ultraviolet light stable. In addition, they provide high chemical, abrasion and UV resistance and VOC's of less than 100 grams per liter and are compliant with current AQMD Industrial Maintenance Coating Guidelines.

APU 100 Clear Gloss Aliphatic Polyester Urethane Topcoat has a high gloss finish and APU 100 Matte Aliphatic Polyester Urethane Topcoat has a matte finish. Both systems are highly durable, chemical resistant floor topcoat and finish coat designed for use in aircraft hangars, service bays, manufacturing areas, etc. and as a high-performance finish coat for many Miracote systems. APU 100 has excellent cleanability and superior long-term appearance.

They conform to all requirements of U.S. General Services Administration Specification A-A-50542 (Coating System: Reflective, Slip Resistant, Chemical-Resistant Urethane for Maintenance Facility Floors).

APU 100 is applied over an epoxy primer coat. For additional skid resistance it is also available in four moderate to aggressive skid resistant profiles that are created by broadcasting into a pre-engineered aluminum oxide blended aggregates.

The South Coast Air Quality Management District (SCAQMD) Rule 1113, affected July 1, 2006, restricts the allowable volatile organic content (VOC) of coatings and sealers in the following California Counties: Los Angeles, Orange, Riverside and San Bernardino only. APU 100, as currently formulated, meets the new standards.

This product can be used in both interior and exterior service. APU 100 possesses excellent resistance to ultraviolet light including freedom from color change or degradation.

B. TYPICAL USES

APU 100 Clear Gloss and APU 100 Pigmented Matte Urethane Coating are high performance aliphatic polyester urethanes that are designed for use in manufacturing areas, automobile service bays, aircraft hangars, etc. and as a high-performance finish coat for many Miracote systems.

C. ADVANTAGES AND LIMITATIONS

ADVANTAGES

1. Excellent cleanability and abrasion resistance.
2. Resists wide range of service area chemicals.
3. Complies with VOC regulations.
4. Convenient 1 to 1 mix ratio.
5. Installed only by Professional Factory Trained Miracote Contractors.

LIMITATIONS

1. Substrate must be above 50°F (10°C), dry and free of excessive water vapor transmission with a relative humidity below 85% at time of installation.
2. Moving cracks in concrete may reflect through finish. A waterproofing and crack isolation membrane can be installed prior to system application.
3. Moisture vapor transmission (MVE) in excess of 3.0 lbs./1000 sq ft per 24 hr. period per ASTM F1869-04, may result in delamination, discoloration or improper curing. Use Miracote ML Primer vapor control membrane over substrates, which have MVE emissions that exceed these limits. Consult with Crossfield prior to using ML Primer if moisture vapor transmission exceeds 15 lbs/1000 sq/ft/per 24 hr period per ASTM F1869-04.

2. TYPICAL PHYSICAL PROPERTIES at 75°F (24°C)

A. Cured System Thickness

Primer and Two Coats 13 mils dry
(WFT Primer 7 mils and Urethane 4 mils each)

B. Pencil Hardness ASTM D3363-05 3H

C. Impact Resistance ASTM D2794, Direct..... 160 in/lbs Reverse 160 in/lbs

D. Flexibility ASTM D522 Passes (180° Bend, 1/8" Mandrel)

E. Coefficient of Friction-Rubber Shoe Surface (MIL D-3134H Test Procedure)

Profiles	Static Friction Saltwater Solution on surface	Static Friction Oil on surface	Sliding Friction Saltwater Solution on surface	Slide Friction Oil on surface
Fine	0.85	0.65	0.79	0.40
Medium	0.93	0.70	0.85	0.45
Coarse	0.99	0.75	0.95	0.50

F. Chemical Resistance ASTM D1308

(See Chemical Resistance Chart)

Gasoline	No Effect	Isopropyl Alcohol	No Effect
Kerosene	No Effect	Hydrogen Peroxide 50%	Slight Stain
Skydrol	No Effect	Hydrochloric Acid 25%	No Effect

G. Gloss, 60 degrees ASTM D523, Clear..... 95+ Matte..... 40-50

H. Tensile Strength ASTM D882 8,600 psi

I. Elongation ASTM D882 10%

J. Abrasion Resistance ASTM D4060..... 30 mg/loss 1000g/1000 cycles, CS-17 Wheel

K. Microbial Resistance ASTM G21 Passes

3. OVERVIEW OF INSTALLATION STEPS

1. Prepare surface by careful and thorough removal of laitance, grease, and foreign matter.
2. Apply epoxy primer coat, filling existing cracks or voids in the concrete.
3. Spread bodycoat by squeegee and backroll in two coats to achieve a uniform thickness.
4. Optional: For additional skid resistance broadcast one of Miracote's pre-engineered, skid-resistant, blended aggregates into the primecoat. Topcoat the primecoat prior to placement of APU 100.

4. PRODUCT AVAILABILITY

Crossfield Products Corp. maintains offices and/or factories at all addresses listed below. Factory Trained Contractors are established in all major trading areas in the United States, Canada and various European, Latin American and Far East nations.

5. SKID RESISTANCE and CLEANABILITY

In general the more aggressive the finished surface the greater the coefficient of friction and corresponding skid resistance, the more difficult to clean. The smoother the finished texture the easier the surface is to clean, but there is a loss of skid resistant properties.

6. CLEANING

Cleaning and disinfecting compounds and cleaning techniques can affect the color, gloss, texture and performance of the system. As a precautionary step, Crossfield recommends that the end-user test their cleaning and disinfecting compounds on a sample or on a small, out of the way finished area, utilizing the intended cleaning technique prior to cleaning the entire surface area. If no deleterious effects are observed, the procedure can be continued. If the cleaning and disinfecting compounds or cleaning techniques damage the system, modification of the cleaning material or techniques will be required. Contact your Representative for additional information.

7. SPECIFICATION ASSISTANCE

Consult Crossfield Products Corp. for specification assistance, detailing, etc. This consultation is highly recommended prior to specification.

8. CHEMICAL RESISTANCE

See Crossfield Products Corp's., Chemical Resistance Guidelines for chemical resistance of a product or system, as well as the types of test performed:

- ASTM C868 Standard Test Method for Chemical Resistance of Protective Lining.
- ASTM C267 Standard Test Method for Chemical Resistance of Mortars, Grouts, and Monolithic Surfacing and Polymer Concretes.
- ASTM D1308 Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes
- Crossfield Products Corp. Proprietary Testing

Note: Chemical resistance is a functional test, usually limited to changes in weight or thickness measured in loss or gain and does not evaluate subject aesthetic issues. To determine aesthetic issues, Crossfield recommends testing the products or system in accordance with intended end use.

9. TESTING

The technical data contained herein is the result of tests made in Crossfield's laboratories or in independent laboratories using small scale equipment, following generally accepted trade practices. Although this information is believed to be true and accurate, the use of different equipment for testing under dissimilar conditions or the testing of samples produced under dissimilar conditions may develop substantially different results.

LIMITED WARRANTY

NO WARRANTY SHALL BE EFFECTIVE UNTIL THE TERMS AND CONDITIONS OF SALE SET FORTH IN CROSSFIELD PRODUCTS CORP. INVOICES ARE MET.

Crossfield Products Corp. warrants to the purchaser of its products that such products are free from manufacturing defect. Crossfield does not warrant or guarantee the workmanship performed by any person or firm installing its products. Crossfield's obligation under this warranty is limited solely to the original purchaser and solely to the remedy of replacement in kind of any product which Crossfield sold which may prove defective in manufacture within one year from date of installation, provided said product was stored correctly and installed within the product's shelf life, by the original purchaser and which Crossfield's examination shall disclose to Crossfield's satisfaction to be thus defective.

IN NO EVENT SHALL CROSSFIELD PRODUCTS CORP. BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. THIS WARRANTY IS EXPRESSLY GIVEN IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND ALL OTHER OBLIGATIONS OR LIABILITIES ON CROSSFIELD'S PART, AND WE NEITHER ASSUME NOR AUTHORIZE ANY PERSON OR PERSONS TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH SALE OF A CROSSFIELD PRODUCT. THIS WARRANTY SHALL NOT APPLY TO ANY OF CROSSFIELD'S PRODUCTS, WHICH HAVE BEEN SUBJECT TO ADULTERATION, ALTERATION ABUSE OR MISUSE. CROSSFIELD PRODUCTS CORP. MAKES NO WARRANTY WHATSOEVER IN RESPECT TO ACCESSORIES, PARTS OR MATERIAL NOT SUPPLIED BY CROSSFIELD PRODUCTS CORP., WHICH ARE USED IN CONNECTION WITH ITS PRODUCTS. THE TERM "ORIGINAL PURCHASER" IN THIS WARRANTY MEANS THAT PERSON, CORPORATION OR ENTITY TO WHOM CROSSFIELD PRODUCTS CORP. SOLD ITS PRODUCTS. ANY ACTION TO ENFORCE ANY WARRANTY OR FOR BREACH OF CONTRACT OR ARISING OUT OF ANY CLAIM AGAINST CROSSFIELD PRODUCTS CORP. SHALL BE COMMENCED AND MAINTAINED ONLY IN A COURT OF COMPETENT JURISDICTION IN THE CONTINENTAL UNITED STATES OF AMERICA. THE PURCHASER ACCEPTS THESE TERMS AND CONDITIONS, AND HEREBY EXPRESSLY WAIVES ANY CLAIM TO ADDITIONAL DAMAGES.

CAUTION: ALWAYS KEEP OUT OF THE REACH OF CHILDREN.



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