



Raven 541

Technical Data Sheet

MANUFACTURER

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DESCRIPTION

Raven 541 is an ultra-high solid, 1K Moisture Cure Urethane (MCU) that is self-leveling and provides a waterproofing membrane base coat that displays a “soft feel” and good elongation. Raven 541 is designed for pedestrian use and light vehicle traffic on balcony decks, stadiums, pool decks parking garages and many other structures that require a flexible waterproofing membrane. Raven 541 can be broadcast with many different aggregates (such as rubber granules or sand) to help prevent slipping when wet. Raven offers several different topcoat options to “lock-in” the aggregate and provide color stability. Contact Raven for primer recommendations for various substrates.

PHYSICAL PROPERTIES (7 Day Cure-Typical)

<u>Description</u>	<u>Method</u>	<u>Result</u>
Tensile Strength	ASTM D412/ 638	3,134 psi
Elongation	ASTM D412/ 638	349 %
100% Modulus	ASTM D412/ 638	1493 psi
200% Modulus	ASTM D412/ 638)	2069 psi
300% Modulus	ASTM D412/ 638)	2402 psi
Taber Abrasion, CS-17 wheel, 1KG, 1000 Revs	ASTM D4060	25 mg lost
Die “C” Tear	ASTM D624	291 pli
Hardness, Shore A	ASTM D2240	75-80
Hardness, Shore D	ASTM 2240	25-30
Viscosity (72°F)	Brookfield	1000-1300 cps
Viscosity B-side (75°F)	Brookfield	500-800 cps
Moisture Vapor Tran.	ASTM D1653	25 Grams/m2
<u>Processing Properties:</u>	<u>Units</u>	<u>Result</u>
Tack Free Time (72°F, 50%RH)	Minutes	4-8 hrs
Recoat Time (Minimum)	@ 72° F	At Tack Free
Recoat Time (Maximum without preparation)	@ 72° F	24 hrs

COLOR

The standard colors: Light Gray, Industrial Tan

TYPICAL USES

- Pedestrian Balcony Decks-Wood, Concrete or Steel
- “Soft Feel” Flooring Membrane
- Swimming Pool Deck Base Coat
- Stadium Waterproofing
- Light Duty Traffic Membrane
- Parking Garage Decks

SURFACE PREPARATION

Raven 541 adheres well to properly prepared substrates such as steel, aluminum, wood, and concrete. Some substrates exhibit much better long term performance if a primer is used prior to application. For example, a steel substrate coated with Raven 541 performs much better in corrosion conditions testing if the steel is treated prior to coating with the proper preparation method (i.e. shot blasting), proper primer (i.e. that includes rust resistant additives), and then top coated with Raven 541. Please contact the manufacturer for specific primer recommendation for particular substrates and conditions.

PRIMER RECOMENDATIONS

Raven recommends the following primers prior to installing Raven 541:

Substrate	Product
Concrete	Raven 155, 171, 171FS, 175, 160, 162, 163
Steel (Media Blasted)	Multiple-Contact Raven
Raven 541 (Re-coating Past Recoat Window)	Raven 161

APPLICATION RECOMMENDATIONS

Prior to application, repair or treat all joints or spalls. Prepare edges to prevent run-off if necessary. Bond breaker tape is recommended prior to coating over expansion joints. It is best to apply this material in temperature above 50°F. Raven 541 can be applied at lower temperatures, however, cure times will be great affected. Humidity will also effect cure times

Mix with a drill and a minimum 3” “jiffy” mixer capable of until homogenous. Pour material on primed substrate and use a “gauge” rake, and/or 1/8” nap “low fuzz” roller for application. Do not apply more than 30 mils WFT per application. Make sure substrate is dry before applying Raven 541. When first application has become tack-free, apply another coat of Raven 541 that has “non-skid” media broadcast into it. In some cases, two coatings of non-skid may be required.

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Applying “non-skid” is best completed by allowing the coating to cure to tack free then applying a thin film topcoat of either 541 or a UV-stable aliphatic topcoat to broadcast non-skid throughout. After desired non-skid is achieved, it is recommended to apply a final “lock-down” coat of UV-stable to hold the aggregate in the coating.

UV-STABLE TOPCOAT RECOMENDATIONS

Raven recommends the following topcoats for UV-Stability Raven 541:

Product	Brief Description
Raven 520	100% Solids Polyaspartic, Some Flexibility, Application Temperature Range 35°F to 120°F
Raven 545	H2O-based Polyurethane, Excellent Elongation, Maintain “Soft Feel”, Excellent For Bare Feet, Application Temperature Range 50°F to 120°F

CLEAN UP

Cured product may be disposed of without restriction. The un-cured isocyanate and resin portions should be mixed together and disposed of in a normal manner. “Drip free” containers should be disposed of according to state, local, and federal laws.

SAFETY

Consult the Safety Data Sheet for this product concerning health and safety information before using. Strictly follow all notices on the Safety Data Sheet and container label. If you do not fully understand the notices and procedures provided on the SDS or if you cannot strictly comply with them, do not use this product. Actual safety measures are dependent on application methods and work environment. Keep uncured product away from children at all times. Contact Raven Lining Systems to obtain a copy of the Safety Data Sheet at 800-324-2810.

SHELF LIFE AND STORAGE

The product can be stored for six months in factory delivered, unopened drums. Keep away from extreme heat, freezing, and moisture. Proper storage temperature is between 60°F and 90°F. Ideal material storage temperature is between 60°F and 80°F.

LIMITATIONS

This product is an aromatic polyurethane and is not UV-stable for color or gloss retention. Discolorations and yellowing can and will occur upon exposure to UV (exterior applications). Discoloration or down-glossing does not affect performance. If you require a UV color stable product, please contact your sales representative.

AVAILABLE PACKAGES

Raven 541 is available in 1 gallon pails and 5 gallon pails

Warranty and Disclaimer: Raven Lining Systems, Inc. (“Raven”) warrants its products to be free of manufacturing defects in accord with applicable Raven quality control procedures and that they meet the formulation standards of Raven. To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. If, within one year from purchase, any product is proven defective, Raven, at its sole option, will either replace the defective product or refund the purchase price. This warranty is void if the product is used contrary to Raven’s written directions.

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