

ESSENTIAL R6010

SELF-CROSS-LINKING WATERBORNE URETHANE ACRYLIC

DESCRIPTION

Essential R6010 can be formulated into topcoats for wood flooring and furniture, as well as to protect decorative concrete.

R6010 can be formulated to pass MFMA criteria for water-based wood finishes. Essential R6010 has exceptional durability, chemical, mar and scuff resistance that rivals typical solvent-borne oil-modified urethanes.

R6010 formulations can pass the boiling water/ceramic mug test, so it is an ideal candidate as a wood furniture topcoat for industrial applications or the DIY market.

Lastly, R6010 can be formulated into a topcoat to protect decorative concrete from household chemical spills, wear due to foot traffic and protect against damage due to U.V. light.

Essential R6010 offers the ability to formulate coatings to less than 250 g/l VOC.

KEY BENEFITS

- One Package, Self Cross-Linking
- Exceptional Chemical Resistance
- Outstanding Mar and Scuff Resistance
- Excellent Water Resistance
- Hot Tire Pick-Up Resistance

TYPICAL PROPERTIES*

Appearance	Off-White Emulsion
pH	8.0
Solids, % by Weight	34.0
Solids, % by Volume	31.7
Viscosity, cP @ 25°C - Brookfield, LV2, 60rpm	25
Density, Lbs./Gal.	8.7
VOC Level (As Supplied)	
Lbs./Gal.	1.04
G/L	125
MFFT, °C	23
Freeze/Thaw Stable	Passes 3 Cycles

**These values should not be interpreted as specifications.*

Visit us on the web at www.essentialrmd.com

* DISCLAIMER: The information and recommendations contained herein are based on data believed to be correct. The information is offered solely for the customer's consideration, investigation and verification because of numerous factors beyond our control affecting the results of the use of products, Essential Industries, INC. makes no warranty of any kind, expressed or implied, including those of merchantability and fitness for a particular purpose, other than that the product conforms to its applicable current standard specification. The manufacturer's only obligation shall be to replace such quantity of the product proven to be defective.

F0509

TECHNICAL DATA

R6010

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STARTING POINT FORMULATIONS

Essential R6010 Gloss Formulation

<u>MATERIALS</u>	<u>POUNDS</u>	<u>GALLONS</u>
ESSENTIAL R6010	761.8	87.36
Premix Next Five Items:		
Water	40.0	4.80
Dowanol [®] DPM	27.0	3.40
Dowanol [®] DPnB	27.0	3.57
Tego [®] 800	4.5	0.52
Acrysol [®] RM-825	3.0	0.35
	863.3	100.00

Essential R6010 Semi-Gloss Formulation

<u>MATERIALS</u>	<u>POUNDS</u>	<u>GALLONS</u>
ESSENTIAL R6010	750.0	86.01
Water	48.5	5.82
Dowanol [®] DPM	27.0	3.40
Dowanol [®] DPnB	27.0	3.57
Acematt [®] TS-100	4.0	0.22
Tego [®] 800	4.5	0.52
Acrysol [®] RM-825	4.0	0.46
	865.0	100.00

Formulation Attributes:

Solids, % by Weight	30.1
Solids, % by Volume	27.6
Viscosity, Seconds Z#2	30
pH	8.0
Density	8.6
Calculated VOC (Excluding Water)	
Lbs./Gal.	2.25
G/L	269

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PERFORMANCE INFORMATION

All tests were performed on coatings kept at 77°F and 50% RH for seven days.

Tensile Strength, PSI	1600
Elongation at Break, %	200

Tests Performed on Aluminum Panels (1-Mil Dry Films)

Konig Hardness (Seconds) 1 Day, 7 Day	54, 83
Grit Feed Taber Abrasion (Mg Loss, 500 Cycles, 1000g)	28

Tests Performed on Maple Veneer (3 Coats, 1-Mil Dry Per Coat) 1 Hour Covered Spot Test

Water	No Effect
Soda	No Effect
Beer	No Effect
Formula 409	Slight Film Damage
100% Ethanol	Softening, Full Recovery
50% Ethanol	Slight Softening, Full Recovery
70% Isopropyl Alcohol	Softening, Full Recovery

Test performed on Oak panel (3 coats, 1 Mil Dry Per Coat). Water at 100°C is dripped on panel and ceramic coffee mug containing water initially at 100°C is placed on top of water spot for 20 minutes.

Boiling Water/Hot Ceramic Mug.....No visual damage.

SUPPLIER INFORMATION

<u>Product</u>	<u>Description</u>	<u>Supplier</u>
Essential R6010	Polyurethane Dispersion	Essential Industries
Acrysol® RM -825	Thickener	Rohm & Haas
Dowanol® DPM	Solvent	Dow Chemical
Dowanol® DPnB	Solvent	Dow Chemical
Tego® 800	Defoamer	Tego
Acematt® TS-100	Matting Agent	Degussa