

ESSENTIAL R6025

SELF CROSS-LINKING URETHANE / ACRYLIC POLYMER

R6025 uses our proprietary self cross-linking urethane/ acrylic technology. It can be formulated to pass MFMA criteria for water-based wood finishes. These coatings exhibit outstanding durability and gloss retention because of the polycarbonate backbone in the polyurethane component of the polymer. It also can be formulated into topcoats for wood furniture and kitchen cabinets because of its excellent chemical and stain resistance properties.

KEY BENEFITS

- n-MP-free and APEO-free
- Outstanding gloss retention
- < 250 g/l VOC topcoats
- Excellent chemical resistance
- Mar and scratch resistance

TYPICAL PROPERTIES*

Appearance	Translucent White to Tan
pH.....	8.0
Solids, % by Weight.....	33.0
Viscosity, cps @ 25°C	< 25
Density, lbs/gal	8.7
% VOC	3.7
Tg °C	23
Acid Number	26
Freeze/Thaw Stability ...	Passes 3 cycles
Konig Hardness (secs).....	149

*These values should not be interpreted as specifications.



The Spark of Innovation

Visit us on the web at
www.essentialpolymers.com

28391 Essential Road • P.O. Box 12
Merton, WI 53056-0012
(262) 538-0091 • FAX: (262) 538-1354

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Starting Point Formulation ALQ028

Water-Based Clear Coating

MATERIALS	POUNDS
Essential R6025	830.00
Pre-blend water and solvents, then add slowly:	
Water	43.00
Ethylene Glycol Monobutyl Ether	27.00
Propylene Glycol	32.50
Ethylene Glycol	9.00
PE Wax Emulsion J91G35	17.00
Tributoxy Ethyl Phosphate	12.50
Tego® Twin 4100	1.00
Chemguard S550	1.00
Pre-blend water and defoamer:	
Water	22.90
Tego® Foamex 825	<u>4.10</u>
Total	1000.0

Formulation Attributes

Solids, % by Weight.....	29.44
pH	8.0
Viscosity.....	< 100 cps
Weight per Gallon	8.65
Calculated VOC (Excluding Water)	
Lbs./Gal.....	2.18
G/L	261.7

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Performance Information

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

Konig Hardness (Seconds) 1 Day, 7 Day	121, 149
Taber Abrasion (CS-10 wheels, 250 Cycles, 500g)	5.9 mg

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

1 Hour Covered Spot Test

Water.....	No Effect
50% Ethanol	Slight swelling, fully recovered
70% IPA.....	Slight swelling, fully recovered
Formula 409	Slight swelling, fully recovered
10% Ammonia Hydroxide	Slight swelling, fully recovered
10% NaOH	Slight swelling, fully recovered
5% HCl	No Effect
5% Bleach	No Effect

Boiling Water/Hot Ceramic Mug*

No visual damage

*Boiling water is dripped on panel and ceramic mug containing water initially at 100 C is placed on top of water spot for 20 mins.