

ESSENTIAL R4242

WATERBORNE POLYURETHANE DISPERSION

Essential R4242 is a 33% solids aliphatic polyurethane dispersion specifically designed to be block resistant up to 70°C and maintain its flexibility and toughness below 0°C. Because of its excellent adhesion to flexible PVC, Essential R4242 is an excellent candidate to make clear top coats for vinyl.

For added chemical resistance properties, Essential R4242 can be cross-linked using a water-dispersible trimers; such as Rhodia's Rhodocoat EZ D 401 or 803 at a 5 – 10% level.

KEY BENEFITS

- Excellent adhesion to flexible PVC
- Block resistant
- Low temperature flexibility
- Toughness

TYPICAL PROPERTIES*

Appearance	Translucent Off-White
pH	8.8
Solids, % by Weight.....	33.0
Density lbs./gal.....	8.6
Viscosity, cP @ 25°C -	
Brookfield, LV2, 60rpm	< 100
VOC Level (As Supplied)	
Lbs./Gal.	1.6
G/L	186.1
Particle Charge	Anionic
Particle Size	Colloidal

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

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.



The Spark of Innovation

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Film Properties

All tests were performed on coatings kept at 77°F and 50% RH for 7 days before testing.

Tensile Strength, PSI 2090

Elongation at Break, % 250

Tests Performed on Aluminum Panels (1-mil Dry films)

Konig Hardnesss (seconds) 1 Day, 7 Day 96, 113

Starting Point Formulation

<u>MATERIALS</u>	<u>POUNDS</u>
R4242	675.70

Pre-mix the following ingredients:

Water	170.40
Zonyl® FSP	2.40
Surfynol® 104BC	4.50
Tego® X815	0.40
DSX® 1514	<u>7.20</u>
	860.60

Formulation Attributes:

% Solids	26
Viscosity	300 cps
Calculated VOC (excluding water)	< 200 g/l

Properties

Adhesion to Flexible PVC	5B
Block resistant temperature	70°C

Supplier Information

<u>Product</u>	<u>Description</u>	<u>Supplier</u>
Essential R4242	Polyurethane Dispersion	Essential Polymers
Zonyl® FSP	Leveling agent	DuPont
Surfynol® 104BC	Wetting agent	Air Products
Tego® Foamex 815	Defoamer	Evonik
DSX® 1514	Thickener	Cognis



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