

# ESSENTIAL R4289

## ALIPHATIC SOLVENT-FREE POLYURETHANE DISPERSION

### DESCRIPTION

Essential R4289 is a 33% solids solvent-free PUD designed to have excellent adhesion to flexible substrates; such as flexible PVC. R4289 also offers film flexibility, elasticity and toughness. Essential R4289 maintains its flexibility and toughness below 0° C.

For added chemical and water resistance properties, Essential R4289 can be cross-linked using water dispersible trimers; such as Rhodia's Rhodocoat EZ D803.

### KEY BENEFITS

- Excellent Adhesion to Flexible PVC
- Low VOC - < 150 g/l
- Low Temperature Flexibility
- Toughness

### TYPICAL PROPERTIES\*

Appearance	Opaque White
pH	9.0
% Solids	33%
Viscosity	< 300
Density, lbs./gal.	8.5
VOC Level (As Supplied),	1.23 lbs./gal.
	< 150 g/l
Particle Charge	Anionic

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

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F0509

TECHNICAL DATA

R4289

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## ESSENTIAL R4289 FILM PROPERTIES

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

Tensile Strength, PSI	2315
Elongation at Break, %	308
Tests Performed on Aluminum Panels (1-Mil Dry Films)	
Konig Hardness (Seconds) (1 day, 7 day)	87, 92
Grit Feed Taber Abrasion (Mg Loss, 500 Cycles, 1000g)	7.8 mg

## STARTING POINT FORMULATION

### ESSENTIAL R4289 Clear 2-K Formulation

<u>MATERIALS</u>	<u>POUNDS</u>
<b>Part A</b>	
ESSENTIAL R4289	600.0
30% Emulsion PED 191	33.0
<b>Premix Next Items:</b>	
Water	148.0
Zonyl® FSP	1.2
Surfynol 104BC	4.0
Tego Foam X 815	0.12
<b>Part B</b>	
Rhodacoat® EZ-D803	<u>78.8</u>
	100 gallons
<b>Formulation Attributes:</b>	
Solids, % by Weight	30.0%
pH	8.75%
Weight, Lbs./Gal.	8.66

## PERFORMANCE INFORMATION

Adhesion profile - Excellent adhesion to flexible PVC & polypropylene

### CHEMICAL RESISTANCE:

10% NH <sub>4</sub> OH .....	No Effect	70% IPA .....	No Effect
Formula 409 .....	No Effect	5% Bleach .....	No Effect
50% Ethanol .....	No Effect	5% HCl .....	No Effect
10% H <sub>2</sub> S <sub>2</sub> O <sub>4</sub> .....	No Effect	Vinegar .....	No Effect