

EPS[®] 4203

SELF-CROSSLINKING POLYURETHANE DISPERSION

DATA SHEET

Description

EPS 4203 is a self-crosslinking polyurethane dispersion/acrylic polymer with excellent abrasion and stain resistance. Primary end uses are for wood substrates (except for commercial flooring), blending with acrylic emulsions, and plastics where alcohol and household stain resistance are important. This dispersion does not contain N-methyl pyrrolidone, or hydrazine.

- ✓ Excellent resistance to alcohol and household cleaners
- ✓ Excellent flexibility and abrasion resistance

Specifications

Weight Solids: 38.8 ± 0.7%

Weight/Gallon: 8.80 ± 0.10

pH: 7.5 – 8.5

Typical Properties

Volume Solids: 35.0 ± 0.7%

OH Value: 3

Acid Value: 15

Maximum Elongation 340%

Break Strength (psi) 3340

Solvent Composition: Water and TEA (≤1%)
(60.26%/ 0.94%)

Suggested Formulation

EPS 4203 CLR BT1 - High Gloss Clear Wood Finish

03-08-2019

Questions? Call EPS Technical Service @ 1-800-601-8111

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SUGGESTED FORMULATION

FORMULA: EPS 4203 CLR BT1 (12/02)

HIGH GLOSS CLEAR WOOD FINISH

<u>Pounds</u>	<u>Gallons</u>	<u>Raw Material</u>	<u>Supplier</u>	<u>Instructions</u>
686.0	77.95	EPS 4203	EPS	Premix the following items and add to the EPS 4203
138.0	16.57	Tap Water		
38.3	5.01	DPnB	Lyondell	
2.0	0.24	Byk 346	Byk	
1.0	0.13	DPM	Lyondell	
<u>1.0</u>	<u>0.11</u>	Tafigel PUR60	Ultra Additives Inc	
866.3	100.01	Totals		

Formulation Parameters

Weight Solids	30.60%
Volume Solids	27.42%
VOC Level	1.45 lbs/g 174 g/L
Weight/Gallon	8.66 lbs/g
pH	8.5-9.0
Viscosity, Zahn #2 cup	18-22 sec
Dry Times @ 77°F/50%RH	1 hr to handle or sand
Heat Stability	Passes 4 weeks
Low Temperature Cure	Passes 40°F
Application	Brush or mop

Resistance Properties

Taber Abrasion	46 mg loss/1000 cycles
Koenig Hardness	45 Oscillations
	(1 hour under glass)

Chemical Resistance

Tap water	5
Water Alcohol	4
409 Cleaner	3
Bleach	5
Vinegar	5

Formulation Guidelines

Cosolvents: DPnB at 15-20% on resin solids is recommended. Propylene glycol at 40-50 pounds per 100 gallons finish will give freeze/thaw stability. Butyl cellosolve, butyl carbitol, and hexyl carbitol will also work for applications where HAPS compliance is not an issue. Methyl pyrrolidone and Texanol are not good cosolvents for this dispersion.

Defoamers: Tego Foamex 845 has been found to work well with EPS 4203.

pH: For best package stability, maintain a formulated pH of 8.5-9.0

Flow and leveling aids: Byk 346 has been found to work well with EPS 4203.

Biocides: We recommend Nuosept 495 as the biocide (formaldehyde emitting types will discolor the liquid coating).

Exterior clear coatings: Reasonable (1-2 years) exterior durability can be achieved with EPS 4203 if transparent oxide tints and ultraviolet light absorbers are included in the formulation.

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