

EPS[®] 2570

<100 g/L
DTM Polymer

BENEFITS

Hardness development

Chemical resistance

Block and mar resistance

Good corrosion resistance

Adhesion to ferrous and non-ferrous metals

No APEO containing raw materials

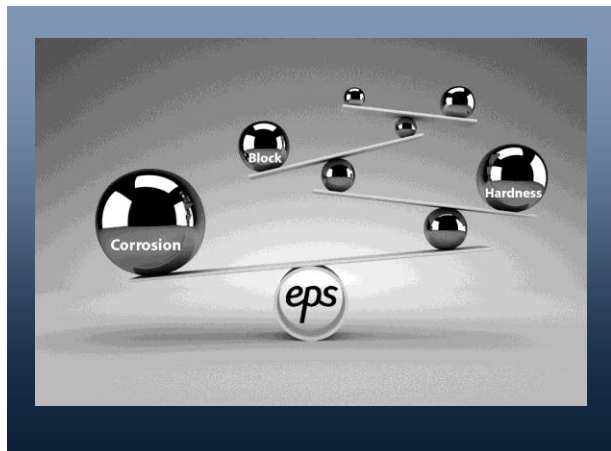
MARKET SEGMENTS

Industrial

CHEMISTRY

Styrenated Acrylic Polymer

Technical Data Sheet



EPS 2570 is a self-crosslinking, styrenated acrylic emulsion offering excellent gloss, corrosion and chemical resistance, as well as early water resistance and rapid hardness development. EPS 2570 provides the capability to formulate coatings at <100g/L VOC.

Specifications

Weight Solids	48.0 +/- 0.7%
Weight/Gallon	8.60 +/- 0.1
pH	8.0 - 9.0

Typical Properties

Volume Solids	46.0 +/- 0.7%
MFFT	42° C
Volatile(s)	Water

Suggested Coalescing Solvent(s)

(% Solvent on Binder Solids – Pass 40° F LTC Test)

DPnB	10-15%
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Suggested Formulations

EPS@ 2570 WHT SP-1 - White High Gloss Enamel

EPS@ 2570 WHT SP-2 - White High Gloss Enamel

Excellent balance of properties

- Early hardness development
- Early hot block resistance
- Adhesion to ferrous and non-ferrous metals
- Corrosion resistance
- Chemical resistance
- Abrasion and scrub resistance
- UV resistance
- Mandrel bend flexibility
- Forward and reverse impact resistance
- No APEO containing raw materials

EPS® 2570

TECHNICAL SUPPORT

The following guidelines are offered to assist the paint formulator in achieving the high performance properties offered by EPS® 2570

SDS

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Formulating Guidelines

Co-Solvents:

2570 has good compatibility with most standard coalescing solvents. For early and final property development and performance, DPnB has proven to be the best all-around coalescent in laboratory testing. Butyl Carbitol (DB) and Hexyl Cellosolve (EH) also give generally good performance. While compatible with Texanol, this solvent is not recommended as the König hardness will be negatively impacted. 2570 does not have good formulation stability with Butyl Cellosolve (EB).

Low VOC plasticizers may also be used with 2570 if desired. EPS 9147 and Dioctyl Maleate showed best overall performance. 2570 is also compatible with Optifilm 400 and Velate 368.

Dispersants:

Disperbyk 190 and Tamol 681 have given the best overall performance and optimal corrosion and water resistance properties.

Defoamers:

A variety of foaming agents were found effective in formulations using 2570. Among those most effective were the Byk series (022, 024, 028, etc). Airex 901W is not recommended due to its tendency to lower the initial gloss of the polymer.

Flash Rust Inhibitors:

The use of a flash rust inhibitor in DTM paints is strongly recommended. EPS recommends Halox 570 at a loading of 10-15 pounds per 100gal of a 30% solution. Alternatively, the use of Sodium Nitrite at a maximum level of one solid pound per 100gal may be used.

Neutralizers:

Ammonia is the preferred neutralizer at a level of 1-2 pounds per 100gal. AMP-95 and other organic amines may also be used but may cause a drop in early block resistance.

Rheology Modifiers:

For optimal corrosion and water resistance properties, the use of HEUR thickeners is recommended. Typical examples shown to work well with 2570 are Acrysol RM-2020 and RM-8W. Ultimately, rheology modifier type, level and combinations will depend on the desired viscosity, application type, formulation and flow and leveling characteristics. In general a high shear and low shear thickener combination is recommended. For certain formulations where HEURs are not efficiently thickening the formulation, the use of HASE thickeners may be employed. The UCAR Polyphobe 116 and 117 have shown the best performance in laboratory testing. The Rheolate series, particularly Rheolate 1, may also be used.

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Suggested Formulation

Formula: EPS® 2570 WHT SP-1 DTM (04/16)

Pounds	Gallons	Raw Material	Supplier	Instructions
60.00	7.20	Water		HSD the following:
2.00	0.27	28% Ammonium Hydroxide	Angus	
4.00	0.55	Surfynol 104A	Air Products	
4.00	0.46	BYK 028	BYK	
9.00	1.02	Disperbyk 190	BYK	
155.00	4.54	R-706	Chemours	
3.00	0.33	Acrysol RM-2020	Dow	
235.0	14.10	Grind Total		Grind to 7H
617.0	71.79	EPS® 2570	EPS	Add grind to resin with mixing
4.00	0.44	Proxel AQ	Lonza	
55.90	6.71	Water		
35.00	4.62	DPnB	Dow	Premix and add slowly with good agitation
10.00	1.14	30% Halox 570	Halox	
7.50	0.87	Acrysol RM-2020	Dow	
1.00	0.11	Acrysol RM-8W	Dow	Adjust viscosity
967.7	100.0	Total		

Formulation Parameters

Weight Solids	48.23%
Volume Solids	39.18%
Pigment Volume Conc.	12.08%
Pigment/Binder	0.52
VOC Level	100 g/L
Weight/Gallon	9.68 lb/gal

Typical Properties

Viscosity	90 – 100 KU
pH	8.0 – 9.0
Color	White

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Suggested Formulation

Formula: EPS® 2570 WHT SP-2 DTM (04/16)

Pounds	Gallons	Raw Material	Supplier	Instructions
48.20	5.79	Water		Add in order with mixing
617.00	71.79	EPS® 2570	EPS	
1.00	0.13	28% Ammonium Hydroxide		
203.00	10.25	Kronos 4311	Kronos	Mix in slurry ~15 min
4.00	0.46	BYK 028	BYK	
1.00	0.14	Surfynol 104A	Air Products	
34.55	4.15	Water		Premix and add
4.00	0.44	Proxel AQ	Lonza	
35.00	4.62	DPnB	Dow Chemical	
10.00	1.14	30% Halox 570	Halox	
9.00	0.98	Acrysol RM-2020	Dow Chemical	Adjust viscosity
1.00	0.11	Acrysol RM-8W	Dow Chemical	
967.80	100.00	Totals		

Formulation Properties

Weight Solids	47.69%
Volume Solids	38.66%
Pigment Volume Conc.	12.26%
Pigment / Binder	0.52
VOC Level	98 g/L 0.82 lb/gal
Weight/Gallon	9.68 lb/gal

Typical Properties

Viscosity	90 – 100 KU
pH	8.0 – 9.0