

# Eastman CP 377W

## waterborne chlorinated adhesion promoter

### Features and benefits

- Promotes adhesion to polypropylene and TPO plastics
- Useful for stir-in, one-step system, or primer formulas
- Useful for adhesives, inks, and coatings
- APEO-free formulation

CP 377W is an alkylphenol ethoxylate-free, oil-in-water type emulsion based on Eastman CPO and 2-amino-2-methyl-1-propanol. It is mainly used as an adhesion promoter for polypropylene-based substrates.

**Table 1. CP 377W typical properties<sup>a</sup>**

Solids, wt%	25
Wt/vol, g/L	1,020
Wt/vol, lb/gal	8.5
pH @ 25°C	9.5
Brookfield viscosity, cP	10
CPO solids, wt%	20
% Chlorination <sup>b</sup>	20.5
Water, wt%	73
Organic solvents, wt% <sup>c</sup>	2
Amine	AMP

<sup>a</sup>Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given. <sup>b</sup>Applies to the base CPO polymer solids, not the dispersion itself <sup>c</sup>Contains ethylene glycol to aid in freeze-thaw stability and lower surface tension

### How to use

CP 377W can be used as the main component of a water-reducible adhesion-promoting primer. It may also be used as a stir-in additive in some water-reducible paint systems. Brief descriptions for primer and additive applications follow.

#### Primer applications

Prepare primer by reducing with water to the desired application solids (5%–10%), and spray apply a thin film (5–10 microns) as is or with flow and wetting additives, e.g., *n*-propyl alcohol (50% on solids) or BASF DSX® 1514 polyurethane rheology modifier (10% on solids). Air dry the primer at room temperature or force dry 10 minutes at 74°C (165°F) before applying the topcoat.

#### Stir-in additive applications

Add 10%–20% CP 377W solids based on resin solids to water-reducible paint or ink prior to application. Adjust CP 377W level for optimum performance.

## Performance data

**Table 2. Initial % adhesion<sup>a</sup>**

Adhesion promoter	Waterborne base coat 2K UHS clear	Solventborne base coat 2K UHS clear	2K PU monocoat
CP 377W	95	95	100
Control <sup>b</sup>	100	95	95

<sup>a</sup>ASTM D3359B, 24 hours post-cure. Percent adhesion of paint over adhesion promoter primer left on substrate (polypropylene plaques) after applying and removing tape over scribed area. <sup>b</sup>CP 347W water-based primer (reduced to 10% solids in water) selected as control due to CP 377W being an APEO-free alternative option that exhibits similar performance properties.

**Table 3. Water immersion,<sup>a</sup> 150 hours at 38°C (100°F)**

Adhesion promoter	Waterborne base coat 2K UHS clear		Solventborne base coat 2K UHS clear		2K PU monocoat	
	1 hour	24 hours	1 hour	24 hours	1 hour	24 hours
CP 377W	Improved	Improved	Improved	Improved	Improved	Improved
Control <sup>b</sup>	Comparable	Comparable	Comparable	Comparable	Comparable	Comparable

■ Improved  
■ Comparable

<sup>a</sup>ASTM D3359B, 7 day post-cure; comparison of adhesion retained over polypropylene plaques between CP 377W and control at 1 hour and 24 hours after water immersion removal. <sup>b</sup>CP 347W water-based primer (reduced to 10% solids in water) selected as control due to CP 377W being an APEO-free alternative option that exhibits similar performance properties.

## Storage and handling

Water-reducible adhesion promoter dispersions generally exhibit good stability properties. However, if freezing occurs, thaw and mix before using.

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### Eastman Corporate Headquarters

P.O. Box 431  
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)  
Other Locations, +(1) 423-229-2000

[www.eastman.com/locations](http://www.eastman.com/locations)

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