



product
information

3P00 SERIES
1# WATERBORNE HYBRID
LOW CURE FOR PLASTICS

Cardinal's 3P00 series waterborne hybrid low cure for plastics is manufactured to meet strict air quality regulations. This product has an excellent balance of fast dry, tough film properties and economy. It can be applied to properly prepared plastic and wood substrates. Cardinal's 3P00 series contain limited organic co-solvents. Health, safety, fire and environmental risks and liabilities are therefore minimized.

Typical Uses:

- Top coat for decorative and protective use on plastic and wood
- Business machines
- General plastic finishing

Benefits:

- Low VOC content
- Low fire hazard
- Water clean up
- Ready to spray
- RoHS / WEEE Compliant

Cured Film Properties:

Testing conducted on 3P07-10 gloss white at 1.5 mils DFT (Dry Film Thickness) over 20 gauge Bonderite 1000® test panel, force dried 30 min. at 180°F then air dried for 14 days.

TEST	METHOD	PARAMETERS	RESULT
Impact:	ASTM D2794	Direct	30 in. lbs.
Flexibility:	ASTM D1737	1/8" mandrel	No cracking
Hardness:	ASTM D3363	Pencil	B - F
Abrasion:	ASTM D4060	CS-17 wheels, 1kg, 1000 cycles	Less than 100 mg loss

Surface Preparation and Priming: The most important steps in a successful coating process are cleaning, pretreatment and priming. The following is a brief outline of some basics for unpainted substrates. It is not intended to be all-inclusive. The proper preparation of various substrates will require specific attention.

Cleaning the substrate: All surfaces to be coated must be free of dirt, grease, oil, oxidation, mill scale, and all other contaminants. The surface must be thoroughly dry before painting.

Plastic — All mold release agents should be completely removed. Cardinal's 3P00 series low cure enamel is compatible with a variety of plastics, however, since there are numerous formulations of plastic, a trial sample should be painted and tested prior to production.

Wood – Because of the wide variety of woods and possible appearance variations, it is recommended that your particular application be discussed with a Cardinal sales representative or our in-house technical service staff.

For more information on your application, contact Cardinal.

FOR INDUSTRIAL USE ONLY
NOT FOR RESIDENTIAL USE

Type: Acrylic Emulsion

Components: One

Colors: Full color range and metallics.

Gloss: High 70° @ 60° ∠, semi and flat.

Coverage: At 1 mil DFT
625 ft²/gal at 100% transfer efficiency (TE)
330 ft²/gal at 65% transfer efficiency
Calculation: 1604 ft²/gal x % volume solids x TE ÷ DFT

VOC : (as supplied)
120 grams/liter (1.0 lbs/gal) less water.
48 grams/liter (0.40 lbs/gal) including water.

Volume Solids: 31% - 38%

Flash Point: >212° F TCC

SHELF LIFE: 6 months from date of manufacture in factory sealed container.

Application: See surface preparation and priming section. This material is designed for spray application. Brushing or rolling are not recommended.

Texturing: Apply smooth base coat and air dry 10-15 min. Apply texture by lowering air pressure, to spatter paint on the base coat. The lower the air pressure, the larger the texture.

Thinning: Ready for spray. Mix well. If thinning is necessary, use water, 1% - 5% by volume. Avoid over thinning.

Viscosity: 35 - 45 seconds, #3 Zahn cup at 78° F.

Recommended DFT: 1.0 – 1.5 mils

Cure:	<u>Force Dry</u>	<u>Air Dry</u>
Flash off	10 – 15 min.	Tack free 15 min.
Bake cycles:		Dry to handle 2 hrs.
	30 min. at 140°F	Full cure 7 – 10 days
	20 min. at 160°F	
	10 min. at 180°F	

(At 1.5 mils dry film thickness, 78° F, 50% RH)

Application Equipment: Electrostatic or high volume low pressure (HVLP) spray guns.
CAUTION: Electrostatic equipment requires proper isolation for waterborne use. Fluid and air hoses should be a minimum of 3/8" for fluid and 5/16" for air.

EQUIPMENT CLEAN-UP: Warm water. Water should always be used for primary cleaning. If something stronger is needed exempt solvents can be used for secondary cleaning, air quality regulations, in your area may have limited the allowable emissions from cleaning operations.

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Primer Selection:

PRODUCT NO.	DESCRIPTION	FUNCTION
3P60	W/B Plastic Primer	Adhesion and some filling for plastic.

Trouble Shooting:

PROBLEM	CAUSE	REMEDY
Too thin / low viscosity	Over reduced. pH too low (evaporation from open container).	Contact Cardinal representative
Dry spray	High atmospheric temperature. Over atomization Gun to part distance	Add SB-30 or SB-11 at rate of 1 oz./gal. Decrease air pressure. Decrease gun to part distance
Mudcracking	Over reduced Film build too high.	SB-09 at 1 oz./gal may help. Lower film build.
Craters	Contamination of substrate, application equipment or environment.	Find and eliminate source of contamination.
Poor adhesion	Improper surface preparation. Film too thin to coalesce properly.	See surface preparation section. Increase film build.

Product Limitations:

- AVOID FREEZING — Product contains water.
- Optimum film properties depend on force cure.
- See Cure section

Safety: Contains organic solvents. Use with adequate ventilation - do not breath vapors or spray mists. If component TLVs are exceeded, a NIOSH approved air supplied respirator is advised. See MSDS for TLV information. Keep from heat, sparks or open flame. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

First Aid:

Eye contact, flush immediately with plenty of water for at least 15 minutes, seek medical attention.
Skin contact, wash thoroughly with soap and water for 5 minutes.
If swallowed, do not induce vomiting, seek medical attention immediately.
Inhalation, remove to fresh air.

Product Identification

3 P 0 7 - 1 6 4 9 2 (example)
 _____ Color number
 _____ Gloss: 0 = flat; 1 = 10°; 2 = 20° . . . etc.; 70° - 90°+ = high gloss
 _____ Special: eg., 2 = metallic; 3 = hammer; 4 = texture; 6 = primer; 7 = clear
 _____ Product type