



product  
information

**3660-WHE20988**  
WATERBORNE ACRYLIC  
WHITE MDF PRIMER

**Cardinal's 3660-WHE20988** waterborne acrylic low cure MDF primer is manufactured to meet strict air quality regulations. Although this product will air dry, force dry is recommended to fully develop the physical properties.

**Type:** Acrylic Emulsion

**Components:** One

**Colors:** White

**Gloss:** Flat 0-5° @ 60° ∠ angle.

**Typical Uses:**

- Primer for decorative and protective use on MDF and plastic

**Benefits:**

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

**Cured Film Properties:**

Testing conducted on 3660-WHE20988 gloss white at 1.5 mils DFT (Dry Film Thickness) over MDF, force dried 30 min. at 180°F then air dried for 14 days.

TEST	METHOD	PARAMETERS	RESULT
Impact:	ASTM D2794	Direct	30 in. lbs.
Hardness:	ASTM D3363	Pencil	F - H

**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.

**MDF** — The substrate can be sanded prior to applying our 3660-WHE20988. Apply a uniform film, allow to dry prior to sanding the topcoat. not possible, a vinyl acid wash pretreatment primer, Cardinal's 4860 series is recommended.

For more information on your application, contact Cardinal.

**Coverage:** At 1 mil DFT

645 ft<sup>2</sup>/gal at 100% transfer efficiency (TE)  
420 ft<sup>2</sup>/gal at 65% transfer efficiency  
Calculation: 1604 ft<sup>2</sup>/gal x % volume solids x TE ÷ DFT

**VOC:** (as supplied)

262 grams/liter (2.20 lbs/gal) less water.  
121 grams/liter (1.00 lbs/gal) including water.

**Volume Solids:** 41.3%

**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.

**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 – 2.0 mils

**Cure:** Force Dry

Air Dry

Flash off 10 – 15 min.

Tack free 15 min.

Bake cycles:

30 min. at 140°F

20 min. at 160°F

10 min. at 180°F

Dry to handle 1 hour

Dry to Sand 2 hours

Full cure 7 – 10 days

(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.

FOR INDUSTRIAL USE ONLY  
NOT FOR RESIDENTIAL USE

(Continued on page 2)

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**Topcoat Selection:**

PRODUCT NO.	DESCRIPTION	FUNCTION
3600	W/B Acrylic enamel	Durability and hardness
6300	2K Polyurethane	Exterior durability
6400	2K Polyurethane	Performance properties

**Related Products:**

PRODUCT NO.	DESCRIPTION / FUNCTION
SB-11	Slow waterbase co-solvent
SB-09	Medium waterbase co-solvent, coalescing agent
AMON	Raises pH of paint
A-60	Flash rust additive

**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
Flash rusting	Cold and/or humid weather. Cold substrate. Over reduced.	Warm paint and parts to 70° - 80°F. SB-09 at 1 oz./gal may help.
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**

**3660 - WHE 20988** (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

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