

Barrier Coat® II

Lead Encapsulant Coating

Benefits

- Meets ASTM E1795 – Interior/Exterior
- High Solids – 54% by volume
- 123 ft²/gal (3 m²/L) at 7 mils dry
- Cost-effective – one coat application
- Easy to apply – spray, brush or roller
- Water-based, non-toxic – environmentally safe
- Excellent impact/abrasion and UV resistance
- Excellent elastomeric adhesion and chemically resistant qualities
- Anti-ingestant (unpalatable)
- Mildew and fungal resistant
- Can be painted over with most latex paints

Product Description

Barrier Coat® II Encapsulant Coating is a co-polymer acrylic based coating that features 54% solids and meets or exceeds existing standards for lead encapsulants. In addition, this elastomeric coating features excellent film flexibility, superb adhesion and creates a tough surface with outstanding impact and abrasion resistance. It can be applied quickly by spray, roller or brush.

Barrier Coat II dries to a matte white finish and is available in 1 gal, 5 gal and 55 gal containers. Barrier Coat II contains Bitrex, a non-toxic ingestant.

Approvals

Barrier Coat II has been tested by a certified independent testing laboratory to ASTM E1795 Test Protocol, the standard for liquid coating encapsulant products for leaded paint and is approved for interior and exterior applications. Barrier Coat II also has the approval of HUD.

Pre-Application Procedures and Guidelines

We recommend that inspection and adhesion test (ASTM D3359) described on page 3 be performed on the substrates before Barrier Coat II Encapsulant Coating is applied. We also recommend the following tests be performed prior to application. After cleaning, examine area with a 5X magnifying glass or loupe for micro-cracks which may cause peeling after coating is applied, then dust with a rag of contrasting color to check for chalking, which could affect adhesion. These tests will determine the suitability of the surface for encapsulation.



Working with lead paint may generate lead residue dusting in some cases. Therefore, precautions should be taken when handling lead particles. Equipment and hygienic practices should be observed when handling hazardous materials in accordance with OSHA, NIOSH and EPA guidelines. Basic guidelines for surface preparation and application of Barrier Coat II must be as follows:

Surface Preparation

Remove all loose, peeling and blistered paint. Also remove oil, grease, wax, char or smoke residues and other contaminants by washing with a non-phosphate detergent. Follow detergent manufacturer's instructions. After cleaning, apply a water or oil based primer to areas of bare wood, fresh plaster or gypsum board. Allow primer to fully cure prior to encapsulation.

Airless Spray

Care should be exercised in selecting the proper equipment. All wetted parts of the spray pump should be specified to resist abrasion. The use of high density polyethylene seals in place of the standard PTFE seals will greatly extend the service life of the pump and reduce downtime. The following represents a typical unit suitable for use with this encasement coating:

Pump Set-up

- Titan – E20/G55 or larger
- Hose: 50 ft x $\frac{3}{8}$ in. (15.2 m x 9.65 mm) plus 6 ft x $\frac{1}{4}$ in. (1.8 m x 0.635 cm) whip
- Guns: LX 80 (or similar) – no filters
- Pressure: 2500-2800 psi
- Filters: None
- Tip Orifice Range: .021-.025 in.

Equipment Preparation

Remove inlet filter strainer. Remove outlet filter and filter support. Set pressure to minimum 1000 psi (6895 kPa) tip pressure, 100 ft of $\frac{3}{8}$ in. (30.5 m of 9.65 mm) airless hose is the maximum length. Minimum tip of .021 in., but a .023 or .025 in. can also be used depending upon desired finish.

NOTE: Use HEPA canister on respirator to avoid tasting the non-toxic anti-ingestant.

Roller: Use short size nap on smooth surfaces. Rough textured surfaces will require longer nap.

Brush: Use good quality nylon or polyester brush of appropriate size.

On Walls

1. Patch and seal voids, cracks or other damage with spackling compound or equivalent as needed and let dry. Fresh plaster, gypsum board, wood or any porous substrate should always be primed, following manufacturer's recommendations, including cure time.
2. When applying Barrier Coat II by hand or roller, product should be applied at a wet thickness of 13 mils to achieve a dry mil thickness of 7 mils for interior applications as per ASTM E1795. For exterior applications, Barrier Coat II should be applied at a wet mil thickness of 26 mils to achieve a 14 mils dry thickness in accordance with ASTM E1795. It is recommended that a measuring gauge be used to check wet mils. Barrier Coat II cures in approximately 7 days depending upon ambient conditions.

Product Specifications and Performance Data

Description	One component, ready-mixed water base, acrylic co-polymer lead encapsulant coating
Color	White
Finish	Matte/Flat
Surface Dust	None
Density	1.40
Viscosity (Brookfield)	50,000 cps \pm 5% at 77°F (21°C), 2 RPM, Spindle #5
Odor	Mild latex paint
Shelf Life	12 months at room temperature in original closed container
Storage	40°F to 90°F (5°C to 30°C), protect from freezing
Flash Point	None
Weight per Gallon (per liter)	11.5 lbs \pm 0.5 (5.27 kg)
Wet Thickness	13 mils (interior)
Dry Thickness	7 mils (interior)
Substrate Temperature Range	40°F to 95°F (5°C to 32°C)
Pot Life	Depending on temperature and humidity conditions
Cover per Gallon (3.8 L)	123 ft ² /gal (3 m ² /L) at 7 mils dry

Application Temperature/Substrate Temperature

Barrier Coat II should be applied at temperatures between 40°F and 95°F (5°C and 32°C). Substrate temperatures should not be below 40°F or above 95°F (5°C or above 32°C). Product dries to touch in less than 1 hour depending upon ambient conditions. Adequate air circulation is necessary to achieve proper drying and curing.

Coverage

ASTM E1795: 7 mils dry – yield is 123 ft²/gal (3 m²/L)

ASTM E1795: 14 mils dry – yield is 61 ft²/gal (1.5 m²/L)

(Yield is determined by % volume solids, not solids by weight.)

Barrier Coat II is not recommended for high or constant friction areas such as window sash liners or door frames with doors at door contact points.

Clean up

Clean up should be done with soap and water while Barrier Coat II is wet. When dry, use multiple applications of paint remover if necessary, such as Super-C-Lead Strip® ‘SS’.

NOTE: Follow EPA, HUD and/or local jurisdiction(s) for periodic inspections. Optional fiberglass reinforcement system is available. Contact your Grace sales representative for further details.

Measuring Adhesion by Tape Test (ASTM D3359 Leaded Paint Substrates, Section A)

Summary of Test Methods

An X-out is made in the film to the substrate, pressure-sensitive tape is applied over the cut and then removed, and adhesion is assessed qualitatively on the 5 to 0 scale:

- 5 No peeling or removal
- 4 Trace peeling or removal along incisions
- 3 Jagged removal along incisions up to 1/16 in. (1.6 mm) on either side
- 2 Jagged removal along most of incisions up to 1/8 in. (3.2 mm) on either side
- 1 Removal from most of the area of the X under the tape
- 0 Removal beyond the area of the X

Repeat the test in at least two other locations (or as many as necessary) to ensure that the adhesion evaluation is representative.

Materials

1. Cutting tool – sharp razor, blade, scalpel or knife
2. Cutting guide – steel or other hard metal straight-edge
3. Tape – 1 in. (25 mm) wide, semi-transparent, pressure-sensitive tape. Recommend 3M’s 600 (shiny tape), 2 in.² clear packing tape can also be used
4. Rubber eraser – on end of pencil
5. Illumination – a light source to determine whether the cuts have been made through the film

Procedure

- A. Select area with a clean and dry surface. Note that extremes in temperature or relative humidity may affect the adhesion of tape or the coating.
- B. Make 2 cuts in the film about 1½ in. (40 mm) long that intersect near the middle (X).
- C. Inspect the incisions with light to establish that the coating film has been penetrated. If not, make the X in a different location. DO NOT attempt to deepen a previous cut.
- D. Remove tape about 3 in. (75 mm) long at a steady (not jerked) rate off the roll.
- E. Place center of tape at the intersection of the cuts. Smooth tape into place with finger and rub firmly with the eraser on the end of the pencil.
- F. Within 90 seconds of application, remove the tape rapidly (not jerked) back as close to a 180° angle as possible.
- G. Inspect the X-cut area for removal of coating from substrate, then rate the adhesion in accordance to scale above 5 to 0.

Availability

Barrier Coat II is available through authorized Grace Construction Products distributors.

Product Availability

Barrier Coat II is available through authorized Grace Construction Product distributors in the following quantities:

Description	Part No.	Volume
premixed 1 gal (3.785 L)	26925	231 in. ³ (3,785 cm ³)
premixed 5 gal (19 L)	26923	1,155 in. ³ (18,927 cm ³)
premixed 55 gal (208 L)	29849	12,705 in. ³ (208,198 cm ³)

Warranty

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable. However, since the conditions of use and application are beyond our control, Grace Construction Products shall not be liable for any damage, direct or consequential, resulting from the use of this material or design.

Grace Construction Products only warranty shall be to replace any of its products found to be defective.

Technical Support

Grace Construction Products provides technical support for all of its products, including Barrier Coat II. Call toll free at 866-333-3SBM (3726) for assistance in product selections.

We provide engineering analysis for unique lead abatement applications. Material Safety Data Sheets are also available.