



**MODERN MASTERS® COLORFAST™
EX ZERO VOC ACRYLIC POLYURETHANE**

DESCRIPTION AND USES

Modern Masters® Colorfast™ EX Zero VOC Acrylic Polyurethane is a high performance, two component polyurethane product line designed to provide excellent exterior performance and minimal emissions of regulated Volatile Organic Compound (VOC) and Volatile Hazardous Air Pollutants (VHAP's).

Colorfast EX can be used as a clear topcoat or as a Tinting Base to create bold and vibrant paint colors when used with Colorfast EX Zero VOC Colorants for any project. This system is specifically formulated with ingredients that are resistant to ultraviolet degradation combined with fade resistant pigments. Application properties allow architects and contractors to complete projects with a durable paint finish that will last for years. Colorfast EX Bases are available in multiple sheen levels.

PRODUCTS

| 96 Oz. SKU | DESCRIPTION |
|---------------|-------------------------------------|
| CFEXU10101GAL | Colorfast EX Clear Matte |
| CFEXU10103GAL | Colorfast EX Clear Satin |
| CFEXU10109GAL | Colorfast EX Clear Gloss |
| CFEXU10178GAL | Colorfast EX Pre-Mixed Silver Gloss |

COMPANION PRODUCTS

| QT. SKU | DESCRIPTION |
|--------------|------------------------------------|
| CFEXU1000032 | Colorfast EX Activator |
| CFEXR1000132 | Colorfast EX Reducer |
| CFEXA1060332 | Colorfast EX Brush & Roll Additive |
| CFEXA1060132 | Colorfast EX Accelerator |

COLORFAST EZ ZERO VOC COLORANTS

| GAL. SKU | DESCRIPTION |
|-------------|--------------------------------|
| CFX10701GAL | Colorfast EX Tinting Black |
| CFX10702GAL | Colorfast EX Red Oxide |
| CFX10704GAL | Colorfast EX Phthalo Blue GS |
| CFX10705GAL | Colorfast EX Shading Black |
| CFX10706GAL | Colorfast EX Phthalo Green BS |
| CFX10707GAL | Colorfast EX Phthalo Blue RS |
| CFX10709GAL | Colorfast EX Bright Red |
| CFX10711GAL | Colorfast EX Jet Black |
| CFX10713GAL | Colorfast EX Magenta |
| CFX10715GAL | Colorfast EX Yellow Oxide |
| CFX10716GAL | Colorfast EX White |
| CFX10728GAL | Colorfast EX Organic Yellow GS |
| CFX10729GAL | Colorfast EX Organic Yellow RS |
| CFX10742GAL | Colorfast EX Quin Red BS |
| CFX10769GAL | Colorfast EX Orange |

RECOMMENDED PRIMERS

Rust-Oleum Sierra Griptec

Substrates: previously painted surfaces, galvanized metal, unfinished drywall, vinyl siding & shutters, masonry & brick, cured stucco, cast concrete, Hardiboard & Hardiplank, unfinished plywood, particle board and direct to clean metal.

Rust-Oleum Sierra S-70 System

Substrates: Aluminum and ferrous metals.

Rust-Oleum Sierra Metalmax

Substrates: ferrous metals, DTM direct to metal and window and door mullions.

SC9100 DTM Epoxy Mastic

Substrates: DTM or to concrete.

ROC Prime 100

Substrates: All surfaces

Note: Lower temperature and higher humidity will lengthen the dry and cure times of primers.

PRODUCT APPLICATION

SURFACE PREPARATION

All surfaces to be painted must be entirely free of dust, dirt, oil, grease, and other contaminants. Completely remove all loose, flaking, or chalking paint from the surfaces. Use a NIOSH approved respirator when sanding and when working with old, loose paint particles. Provide adequate ventilation. Properly prime the clean, dry surface with a primer from our recommended list and allow the surface to dry completely—preferably overnight.

Warning! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1- 800-424-LEAD or log on to www.epa.gov/lead.

APPLICATION CONDITIONS

Do not apply in temperatures below 50°F/10°C. Note: Lower temperatures and/or higher humidity will lengthen the dry and cure times. Higher temperatures and/or lower humidity will speed up the dry and cure times.

MIXING

Mix three (3) parts Colorfast EX Base (Component A) with one (1) part Activator CFEXU1000032 (Component B) by volume. Mix well (Hand Stir). No induction time required. Pot Life- 2-3 hours at 75° ± 5°F.



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PRODUCT APPLICATION (cont.)

APPLICATION

Colorfast EX can be brushed, rolled, or sprayed onto any paintable surface. Stir the paint thoroughly before using.

BRUSHING: Use a high-quality brush recommended for solvent or oil based paints. Usually, no reduction is required for brush or roll application.

ROLLING: Use a high-quality roller recommended for solvent or oil based paints. When rolling, work in approximately 4-foot wide sections, keeping a wet edge.

Brush & Roll Additive: Depending upon the application environment, there may be times where the Brush & Roll Additive is needed to promote flow, leveling and air release for pre-mixed and activated Colorfast EX ZERO VOC Acrylic Polyurethane. If needed, add 2-6 ounces of Brush & Roll Additive to 1 gallon of pre-mixed and activated Colorfast EX Base. Note: Do not exceed 6 ounces per gallon ratio as sagging and running may occur.

Accelerator Additive: Properly mixed and activated Colorfast EX ZERO VOC Acrylic Polyurethane is ready to apply by brush, roller or spray equipment. The initial viscosity is 25-35 seconds Zahn #2 Cup. Sprayable pot-life is 2-3 hours @ 77°F (25°C). If a reduced dry time is desired add 1/2 ounce to 3 ounces of Accelerator to the pre-mixed and activated Colorfast EX ZERO VOC Acrylic Polyurethane base. The chart below approximates the addition levels of Accelerator to obtain a 3-4 hour tape time and maintain a 60-90 minute pot life. This will vary slightly depending on color and gloss of formulation.

| TEMPERATURE RANGE | AMOUNT ADDED |
|-------------------|--------------------|
| 55°-62°F | 2.5-3 Oz. |
| 63°-70°F | 2 Oz. |
| 71°-78°F | 1.5 Oz. |
| 79°-86°F | 1 Oz. |
| 87°-94°F | 0.5 Oz. |
| 95+°F | Add only as needed |

SPRAYING: Use an HVLP, Airless spray unit or an Air Assisted Airless spray unit. Use equipment manufacturer's recommended tip sizes for solvent borne paint. Thin as needed—but carefully—as over thinning may result in loss of hide and a reduction of the desired appearance. Typically, 10-25% reduction with CFEXR1000132 will provide maximum atomization and flow characteristics. When spraying, use a properly-fitted NIOSH approved respirator per the manufacturer's instructions.

DRY TIMES

Dry times at 75° ± 5°F and RH 50% ± 10%

ASTM D1640-03

| | |
|-------------|------------|
| Tack Free | 2-4 hours |
| Dry Hard | 6-10 hours |
| Dry to Tape | 8-12 hours |
| Recoat Time | 2-48 hours |
| Full Cure | 7 days |

PRODUCT APPLICATION (cont.)

FORCE DRY

For dry to stack conditions only. Allow a minimum of 15 minutes flash off time at ambient temperatures prior to exposing painted parts to elevated temperatures. Complete testing should be done prior to use. Below are suggested starting points. Other variables may affect these cure schedules.

| TEMPERATURE | TIME |
|-------------|------------|
| 120°F | 45 minutes |
| 140°F | 30 minutes |
| 160°F | 20 minutes |
| 180°F | 15 minutes |

CLEAN UP

Clean brushes, rollers, tool, and equipment with compliant wash solvent immediately after use. Do not reuse containers and properly dispose of empty containers. As these products have a 2-3 hour pot-life, all application equipment, spray guns, pressure pots, etc. should be cleaned up immediately after use. Only activate enough material to be used within 2 hours of mixing.

PERFORMANCE CHARACTERISTICS

NOTE: Typical Properties after one week air dry, tested on Bonderite 1000 CRS. Properties may vary by color.

SALT SPRAY RATINGS

Method : ASTM B117
Result: (650 hours) <1.5 mm creep from scribe

CROSS HATCH ADHESION

Method: ASTM D3359
Result: 5B

SOLVENT DOUBLE RUB

Method: ASTM D4752
Result: MEK and IPA- Pass 100 rubs

60° SPECULAR GLOSS

Method: ASTM D523
Results: Gloss Bases- 90 units minimum
Semi-Gloss- 45-60 units
Matte- <10 units

IMPACT RESISTANCE

Method: ASTM D2784
Results: Forward 60 in. lb., Reverse 30 in. lb.

PENCIL HARDNESS

Method: ASTM D3363
Result: 2H-5H

QUV-3000 hrs

Method: ASTM D4587/D154 Cycles 1 and 2
Results: DDE cmc & DE = 1.0 (Gloss White)
Gloss Loss 60° <2% Gloss Loss 20° <3.6%

MANDRILL BEND

Method: ASTM D522
Result: 1/8" Pass, No cracking, flaking or adhesion loss

| | | |
|---|--|---------------|
| | TECHNICAL DATA | MDM-10 |
|  | MODERN MASTERS® COLORFAST™ EX ZERO VOC ACRYLIC POLYURETHANE | |

PHYSICAL PROPERTIES

| | | COLORFAST EX ZERO VOC ACRYLIC POLYURETHANE |
|---|-------------------|--|
| Resin Type | | Solvent-based Polyurethane |
| Pigment Type | | Aluminum, Fumed Silica |
| Solvents | | Acetone, Oxsol |
| Weight | Per Gallon | 9.77-10.30 lbs. |
| | Per Liter | 1.17-1.24 kg |
| Solids | By Weight | 45.12-47.45% |
| | By Volume | 45.6-49.2% |
| Volatile Organic Compounds | | 0 g/l |
| Mixing Ratio | | 3:1 Component A:Component B |
| Pot Life | | 2-3 hours @ 75°F |
| Recommended Dry Film Thickness (DFT) per Coat | | 2 mils |
| Wet Film to Achieve DFT (Unthinned material) | | 4.0-4.5 mils |
| Practical Coverage at Recommended DFT (assume 15% material loss) | | 300-390 sq.ft./gal. |
| Dry Times at 77°F (25°C) and 50% Relative Humidity | Touch | 1-3 hours |
| | Handle | 6-10 hours |
| | Recoat | 2-48 hours |
| | Full Cure | 7 days |
| Shelf Life | | 4 years |
| Flash Point | | -4°F (-20°C) |
| Safety Information | | For additional information, see SDS |

Calculated values are shown and may vary from the actual manufactured material.

The technical data and suggestions for use contained herein are correct to the best of our knowledge, and offered in good faith. The statements of this literature do not constitute a warranty, express, or implied, as to the performance of these products. As conditions and use of our materials are beyond our control, we can guarantee these products only to conform to our standards of quality, and our liability, if any, will be limited to replacement of defective materials. All technical information is subject to change without notice.