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.

This coating complies with USDA FSIS regulatory sanitation performance standards for food establishment facilities. This coating is impervious to moisture and easily cleaned and sanitized.

PRODUCTS

SKU	DESCRIPTION
CFEXU10101GAL	Colorfast EX Clear Matte
CFEXU10103GAL	Colorfast EX Clear Satin
CFEXU10109GAL	Colorfast EX Clear Gloss
CFEXU10178GAL	Colorfast EX Pre-Mixed Silver Gloss
CFEXU1000032	Colorfast EX Activator

COMPANION PRODUCTS

SKU	DESCRIPTION
CFEXA1060132	Colorfast EX Accelerator
CFEXR1000132	Urethane/Epoxy Primer Reducer
355396	High Temperature Reducer

COLORFAST EZ ZERO VOC COLORANTS

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 PRIMER

Colorfast EX Epoxy Mastic Primer

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.

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.

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.

Form: ARJ-1626
Rev.: 040124

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PRODUCT APPLICATION (cont.)

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Brush & Roll Application: Depending upon the application environment, there may be times where reduction/thinning 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 CFEXR1000132 Urethane/Epoxy Primer Reducer or 355396 High Temperature Reducer 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 Urethane/Epoxy Primer Reducer 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

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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.