

UltraFlex Topcoat

Technical Data Sheet (TDS)

Product Description

UltraFlex Topcoat is a two component highly cross-linked, high performance polyester polyurethane coating providing exceptional flexibility.

Product features:

- Exceptional flexibility
- Outstanding chemical resistance
- Outstanding abrasion resistance
- Outstanding impact resistance
- Adds extra protection against mechanical damage
- High gloss
- A library of over 40,000 colors

Recommended Uses

UltraFlex Topcoat is intended for industrial applications; either new build or maintenance. UltraFlex Topcoat is suitable for application on all Endura primers.

Industries:

- Oilfield & Energy Services
 - Well Service Vehicles
 - Drilling
 - Tanks
- Cranes and Construction Equipment
- Waste and Recycling Industry
 - Garbage Trucks
- Trailers and Rolling Stock

Mix Ratio

1 part by volume of component A [**CLRFXXXXX**]
(Part Number varies with color)
1 part by volume of component B [**FUB0022**]

The recommended temperature when mixed is 68-77°F (20-25°C).

Product Characteristics

Gloss:	High: 90+ GU at 60°
Slight gloss variations will occur depending on color.	
Volume Solids Mixed: (Unreduced) FUA0820: FUB0022 (1:1)	50% ± 4%
Volume solids will vary by color	
Pot Life: (77°F (25°C) and 50% RH)	8-10 Hours
Note: Pot life is reduced when Super Catalyst II is used	
VOC Mixed (Unreduced): EPA Method 24 FUA0820: FUB0022 (1:1)	411 g/l 3.431 lb /gal
VOC content will vary with each color	
Shelf Life:	
Component A	3 years
Component B	2 years
For unopened product (77°F (25°C))	

Surface Preparation

UltraFlex Topcoat can be applied over all Endura primer sealers and primer surfacers without sanding during their topcoat window. The topcoat window varies with each primer; see the relevant primer technical data sheet for the specific topcoat window data.

If the primer topcoat window has been surpassed; the primer should be sanded with 240 – 280 grit sandpaper to achieve inter-coat adhesion. All sanding dust must be blown off prior to application of the topcoat.

Application Method

UltraFlex Topcoat can be applied using most spray painting systems.

UltraFlex Topcoat can be used as a topcoat or it can be topcoated with UltraFlex Clear.

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Note: Ensure that any solvent absorbent primer surfacers are properly sealed with a primer sealer prior to application of the topcoat.

Solid Colors:

Apply two single wet coats allowing up to 30 minutes flash time between coats. It is recommended that a thinner first coat be applied at 1.5 – 2.0 mils wet, followed by a second wet coat of 2.0 - 3.5 mils wet. Allow up to 30 minutes between coats.

Metallic Colors:

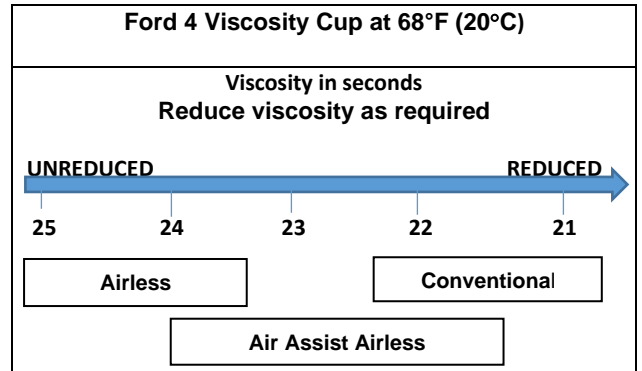
Three coats are recommended for metallic colors. Apply two medium coats. Allow up to 30 minutes flash off time between coats. Immediately following the second wet coat apply a third “mist coat” to achieve a uniform finish.

When a high-hide version of any solid or metallic color is used it must be clear coated to realize full gloss and UV stability.

Spray Gun Setup

Feed Type	Fluid Tip	Application Pressures (heel of gun)	Fluid Delivery
Siphon Feed	1.6-1.8 mm	40-50 psi	
Gravity Feed	1.3-1.4 mm	30-40 psi	
Pressure Feed	1.0-1.4 mm	50-60 psi	10-14 oz/min
Air Assist Airless	9 -17 Thou	1,000-1,800 psi	
Airless	11 -13 Thou	1,700-3,000 psi	

Spray Viscosity



Note: Spraying viscosity and thinning will depend on ambient conditions, spray equipment used, and the desired surface finish.

If required, recommended spraying viscosity is achieved by reducing with one of the desired Endura topcoat thinner/ reducer.

FTH0086 – EX-2C Thinner
FTH0090 – Slo EX-2C Thinner
FTH0014 – Medium Topcoat Reducer

Film Build

UltraFlex Topcoat has a recommended film build thickness of:

UltraFlex Colors:

Wet: WFT Unreduced	4.0 – 8.0 mils	100 – 200 microns
Dry: DFT	2.0 – 4.0 mils	50 - 100 microns

Poor hiding colors film build may be higher.

UltraFlex Clear:

Wet: WFT Unreduced	6.0 – 12.0 mils	150 - 300microns
Dry: DFT	3.0 – 6.0 mils	75 - 150 microns

Higher film builds will require multiple coats. Contact your Endura Representative for more information.

Theoretical coverage at 1.0 mil (25 microns)
Average DFT: 790 ft² per gallon at 100% transfer efficiency.

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Dry Times

	68°F (20°C)	86°F (30°C)	104°F (40°C)
Dust Free	2 Hours	1 Hour	30 Minutes
Full Cure	7-9 Days	5-6 Days	3-4 Days

Note: Dry Times are subject to ambient conditions (temperature and humidity), good airflow and film build of the topcoat.

For best results surface temperature must be 86°F (30°C) or less before topcoating.

Maximum re-coat window without sanding is 18 hrs at 68°F (20°C). After 18 hours UltraFlex Topcoat must be sanded to achieve inter-coat adhesion. Mechanical sanding with 220 – 320 grit is recommended before topcoating.

The use of Super Catalyst II with Endura topcoats will accelerate drying times.

Important Note: Ensure that no more than three coats of paint are applied in a 12-hour shift. This includes primer, mid-coat, topcoats, and clear coat. If more than three coats have been applied wait 10-12 hours to allow for proper solvent evaporation.

For questions about scheduling please contact your Endura Representative.

Clear Coating

If UltraFlex is going to be clear coated the following minimum times before application of the clear coat are recommended:

Solid Colors	Metallic Colors
3 Hours	6 hours

The minimum clear coat times are based on based on recommended film build at 68°F (20°C) and 50% RH. The use of Supercatalyst I or II in the UltraFlex will reduce these minimum times.

Maximum re-coat window without sanding is 18 hrs at 68°F (20°C). After 18 hours UltraFlex Topcoat must be sanded to achieve inter-coat adhesion. Mechanical sanding with 400 grit is recommended before clear coating.

Metallics and pearls must be clear coated within this re-coat window as sanding is not recommended.

For questions about scheduling please contact your Endura Representative.

Clean Up

Clean all equipment immediately after use with Endura High Strength Gun Wash, or Endura EX-2C thinner. Follow manufacturer's safety recommendations when using any solvent.

Ordering Information (sizing)

Available in Pints, Quarts, Gallons and 5 Gal Pails
Other custom sizes may be available.

1 Mixed Quart		
Comp A Part numbers vary by color	CLRFXXXXX-010	1 Pt.
Comp B	FUB0022-010	1 Pt.

2 Mixed Quarts		
Comp A Part numbers vary by color	CLRFXXXXX-020	1 Qt.
Comp B	FUB0022-020	1 Qt.

2 Mixed Gallons		
Comp A Part numbers vary by color	CLRFXXXXX-030	1 Gal.
Comp B	FUB0022-030	1 Gal.

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10 Mixed Gallons		
Comp A Part numbers vary by color	CLRFXXXXX-050	5 Gal.
Comp B	FUB0022-050	5 Gal.

Environmental Conditions

For optimum coating performance product, substrate and ambient temperature should be between 68°F-77°F (20°C-25°C). To prevent condensation during application the surface temperature must be 5°F (3°C) or more above the dew point at all times.

For use outside this range please contact your Endura Representative.

Specifications

Hardness	ASTM D3363	2H
Solvent Resistance	ASTM D4752	100 MEK Rubs; No Failure
Abrasion Resistance (1000 cycles CS-17)	ASTM D4060	<10 mg loss *varies by color
Impact Resistance	ASTM D2794	100 in. lbs; Direct, Reverse NO failure
Flexibility	ASTM D522	1/8" mandrel bend: NO failure
Service Temp	-40°F to 360°F	-40°C to 182°C

Safety Precautions

Please refer to all Safety Data Sheets (SDS) before using this product. SDS sheets can be found on our website at www.endurapaint.com.