

## EX-2C Clear 221

### Technical Data Sheet (TDS)

#### Product Description

**EX-2C Clear 221** is a ready to spray, two component highly cross-linked, polyester polyurethane automotive clear coating.

#### Product features:

- Excellent protection against acids and alkalis
- Formulated to maximize UV resistance
- Will increase service life of solid, metallic, pearl colors and fluorescent coatings
- Available in high gloss

#### Recommended Uses

EX-2C Clear 221 is intended for industrial applications; either new build or maintenance. EX-2C Clear 221 is suitable for application on EX-2C Topcoat.

#### Industries:

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

#### Mix Ratio

2 parts by volume of component A **[FUA0221]**  
1 part by volume of component B **[FUB0100]**

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

#### Product Characteristics

<b>Gloss:</b>	High: 90+ GU at 60°
<b>Volume Solids Mixed: (Unreduced) FUA0221:FUB0100 (2:1)</b>	28% ± 1%
<b>Pot Life:</b> (77°F (25°C) and 50% RH)	8-10 Hours
<b>Note: Pot life is reduced when Super Catalyst II is used</b>	
<b>VOC Mixed (Unreduced):</b> EPA Method 24 FUA0221:FUB0100 (2:1)	634 g/l 5.286 lb /gal
<b>VOC content will vary with each component B used</b>	
<b>Shelf Life:</b>	
<b>Component A</b>	3 years
<b>Component B</b>	2 years
<b>For unopened product (77°F (25°C))</b>	

#### Surface Preparation

EX-2C Clear 221 can be applied on EX-2C Topcoat colors without sanding during their topcoat window.

Ensure that surfaces to be clear coated are free of flaws, surface contaminants and other surface imperfections.

If the EX-2C Topcoat has been allowed to cure longer than 24 hours, sanding will be required to achieve inter-coat adhesion.

Sand the topcoat lightly with 400 grit sandpaper or maroon/grey scuff pads.

#### Note:

- **Do not sand metallic or pearl colors.**
- **Do not mix Clear 221 with metallic color for final coat.**
- **Do not mix clear into final color coat on solid colors.** This may cause matching and repeatability issues. Ensure opacity is achieved in previous coat.

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#### Application Method

EX-2C Clear 221 can be applied using most spray painting systems.

After application of EX-2C Topcoat wait for the following times before application of EX-2C Clear 221:

Solid Colors	Metallic Colors
3-18 Hours	6-18 hours

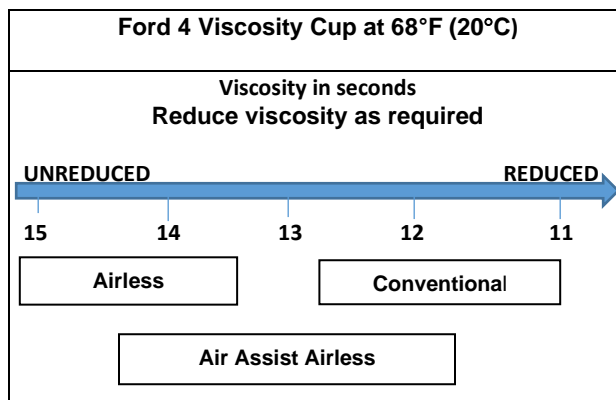
Apply two wet coats of EX-2C Clear 221, allowing up to 30 minutes between coats.

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

#### 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	1.3-1.8 mm	30-40 psi	
Pressure Feed	1.0-1.4 mm	50-60 psi	10-14 oz/min
Air Assist Airless	9 -11 Thou	1,000-1,800 psi	
Airless	9 -11 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

EX-2C Clear 221 has a recommended film build thickness of:

<b>Wet: WFT Unreduced</b>	<b>3.5 – 5.5 mils</b>	<b>89 – 135 microns</b>
<b>Dry: DFT</b>	<b>1.0 – 1.5 mils</b>	<b>25 – 50 microns</b>

Theoretical coverage at 1.0 mil (25 microns)  
DFT: 449 ft<sup>2</sup> per gallon at 100% transfer efficiency.

#### Dry Times

	68°F (20°C)	86°F (30°C)	104°F (40°C)
<b>Dust Free</b>	2 Hours	1 Hour	30 Minutes
<b>Full Cure</b>	7-14 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.

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 3 coats have been applied wait 10-12 hours to allow for proper solvent evaporation.**

For questions about scheduling please contact your Endura Representative.

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#### 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 Gallons.  
Other custom sizes may be available.

1.5 Mixed Gallons		
Comp A	FUA0221-030	1 Gal.
Comp B – 2X	FUB0100-020	1 Qt.

#### 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	4H
Solvent Resistance	ASTM D4752	100 MEK Rubs; No Failure
Impact resistance	ASTM D2794	100 in. lbs; NO failure
Abrasion Resistance (1000 cycles CS-17)	ASTM D4060	25 mg loss
Flexibility	ASTM D522	1/8 mandrel bend: NO failure
Service Temp	-40°F to 360°F	-40°C to 182°C