

Kappa Clear - Fast & Slow

Technical Data Sheet (TDS)

Product Description

Kappa Clear Fast or Slow are two components, highly cross-linked high-performance acrylic modified polyester polyurethane clear coats.

Product features:

- High gloss
- Extra protection for color coats
- Easy to spray.
- Smooth automotive finish
- Excellent polishing qualities
- Exceptional ultraviolet light protection

Recommended Uses

Kappa Clear is intended for industrial applications, either new build or maintenance. It is suitable for application on all Endura topcoats and existing two component finishes.

Industries:

- Automotive applications
- Oilfield & Energy Services
- Cranes and Construction Equipment
- Waste and Recycling Industry
- Trailers and Rolling Stock
- Marine (above the water line)

Kappa Clear [Slow] is designed for large surface areas.
Kappa Clear [Fast] is designed for small parts and small surface areas.

Product Characteristics

Gloss: High: 90+ GU at 60°	
Kappa Clear Fast Volume Solids Mixed: (Unreduced) FUA0132: FUB0132 (4:1)	30% ± 1%
Kappa Clear Slow Volume Solids Mixed: (Unreduced) FUA0143:FUB0132 (4:1)	33% ± 1%
Pot Life: (77°F (25°C) and 50% RH)	4 Hours
Kappa Clear Slow Pot life is reduced when Super Catalyst II is used. The use of Super Catalyst II is not recommended in Kappa Clear Fast.	
Kappa Clear Fast VOC Mixed (Unreduced): EPA Method 24 FUA0132: FUB0132 (4:1)	584 g/l 4.875lb /gal
Kappa Clear Slow VOC Mixed (Unreduced): EPA Method 24 FUA0143:FUB0132 (4:1)	535 g/l 4.426 lb /gal
Shelf Life: For unopened product (77°F (25°C))	
Component A	3 years
Component B	2 years

Surface Prep

Kappa Clear 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.

Cure Time of EX-2C	Sanding grit
24 - 48 hours	600 grit sandpaper
After 48 hours	320 – 400 grit sandpaper

- Do not sand metallic or pearl colors.
- Do not mix Kappa Clear with metallic color for final coat.
- Do not mix Kappa Clear into final color coat on solid colors. This may cause matching and repeatability issues.

Mix Ratio

Kappa Clear Fast:

4 parts by volume of component A [FUA0132]
1 part by volume of component B [FUB0132]

Kappa Clear Slow:

4 part by volume of component A [FUA0143]
1 part by volume of component B [FUB0132]

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

Application Method

Kappa Clear Fast or Slow can be applied using most spray-painting systems. After application of EX-2C Topcoat wait for the following times before application of Kappa Clear:

Solid Colors	Metallic Colors
8 – 10 hours	8 – 10 hours

Kappa Clear can be applied as soon as the surface has cured enough to wipe with a tack cloth. Apply 2-3 wet coats of Kappa Clear Slow or Fast with a 15–20-minute flash off between coats.

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

The use of Super Catalyst II is not recommended in Kappa Clear Fast.

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	40-50 psi	
Pressure Feed	< 1.4 mm	30-40 psi	12-14 oz/min
Air Assist Airless	9 -13 Thou	1,000-1,800 psi	
Airless	11 -13 Thou	1,700-3,000 psi	

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Suggested Viscosity Ranges Ford 4 Viscosity Cup at 68°F (20°C)	
Airless	17 - 20 secs
Air Assist Airless	16 - 19 secs
Conventional	14 - 17 secs

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

Film Build

Kappa Clear has a recommended film build thickness of:

Wet: WFT Unreduced	3.0 – 6.0 mils	75– 138 microns
Dry: DFT	1.0 – 2.0 mils	25 – 50 microns

Theoretical coverage at 1.0 mil (25 microns) . Average DFT: 510 ft² per gallon at 100% transfer efficiency.

Dry Times

Kappa Clear Fast			
	68°F(20°C)	86°F(30°C)	104°F(40°C)
Dust Free	2 Hours	1 Hour	30 Minutes
Polish	24 Hours	18 Hours	12 Hours
Full Cure	7-14 Days		
Kappa Clear Slow			
	68°F(20°C)	86°F(30°C)	104°F(40°C)
Dust Free	4 Hours	2 Hour	60 Minutes
Polish	24 Hours	18 Hours	12 Hours
Full Cure	7-14 Days		

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.

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.

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)

Kappa Clear Fast		5 mixed quarts (4.73 l)
Comp A	FUA0132-030	1 gallon (3.78l)
Comp B	FUB0132-020	1 quart (946 ml)

Kappa Clear Slow		5 mixed quarts (4.73 l)
Comp A	FUA0143-030	1 gallon (3.78l)
Comp B	FUB0132-020	1 quart (946 ml)

Other custom sizes may be available.

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	80 in. lbs; NO failure
Abrasion Resistance (1000 cycles CS-17)	ASTM D4060	50 mg loss
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.