

## 2.1 VOC Clear

# ESC621

ESC621 is a cost-effective, 2.1 VOC, acrylic urethane clearcoat that delivers good gloss, DOI and buffability, while providing an added layer of durability and protection from the environment. Two new activators have been added to the line for this product, providing four reduction options for temperature control. Additionally, ESC621 may be used as an integrating clear.

### Additional Products

Urethane Clear	ESC621
Hardener	ESH200
Activator – Cold Weather	ESX711
Activator - Standard	ESX721
Exempt Reducer	ESR300
Exempt Reducer – Warm Weather	ESR310

### Compatible Surfaces

- ESC621 may be applied over:*
- ESSS Essential Color

### Selection of Substrate Cleaner

Code	Product	Purpose
DX436	Wax & Grease Remover	Suitable for removing dirt, grease or other contaminants before or during the painting process.
DX437	Heavy Duty Wax & Grease Remover	Used to remove heavy milling oils and grease from bare substrates prior to the painting process.

## Application Guide

### Preparation:



Allow the ESSS color to dry a minimum of 30 minutes before clearcoating.

When activators are used in the color coat, the clear must be applied before the maximum time shown below,



ESX500/ESX510	3 hours
ESX520	16 hours
ESX530/ESX540	72 hours



If the maximum time has expired the color must be sanded before the clear is applied.

### Mixing Ratio:



<b>ESC621</b>	:	<b>ESH200</b>	:	<b>ESX7XX or ESR3XX</b>	<b>Speed from fastest to slowest:</b>
4		1		1	ESX711>ESX721>ESR300>ESR310

### Pot life:



Pot life of this product is variable depending on temperature and on activator choice.

At 70°F, pot life ranges from 2 hours with ESX711 to 5 hours with ESR310.

### Spraygun set-up:



<b>Fluid Tip</b>	
Pressure Feed	1.1-1.4 mm
Conventional Feed/HVLP	1.3-1.7 mm

<b>Air Pressure</b>	
HVLP at air cap	10 PSI at the air cap max
Conventional at spray gun	35-45 PSI at the gun

*Consult the Fleet Training Manual Spray Equipment section for additional gun set-up requirements.*

### Minimum number of coats:



2 - 3 coats as an overlay clear  
1 – 2 coats as an integrating clear

### Total film build per coat:

	<b>Wet</b>	<b>Dry</b>
Minimum	2.25	0.75
Maximum	3.75	1.25

### Flash Time at 70°F (21°C):



Between coats 5 – 10 minutes

### Drying Times:



Between Coats:	5-10 minutes
Dust Free: 68°F / 20°C	20 to 50 minutes
Tack Free: 68°F / 20°C	90 minutes to 4 hours
Tape Time: 68°F / 20°C	5 hours
Air Dry: 68°F / 20°C	16 hours
Force Dry: 140°F / 60°C	30 minutes at 140°F
IR (Infrared): Short Wave	12-15 minutes
Polishing	
Air Dry	16 hours
Force Dry	2 hours
Repair and Recoat:	Recoat: 8 hours to overnight before sanding

## Application Guide

### Clearcoating Option as an Integrating Clear:

ESSS ready-to-spray color may be mixed with ready-to-spray ESC621 clear prior to applying the final coat of color. 25-33% of RTS ESC621 may be added to RTS color. The maximum level of 33% yields a mix ratio of 2 parts RTS ESSS color to 1 part RTS ESC621 clear

When adding up to the maximum 33% by volume of ready-to-spray ESC621 to ready-to-spray ESSS color, the ready-to-spray VOC of the final paint is less than 2.6 lbs/gal.

Note: Use of ESC621 as an integrating clear in metallic colors may result in a color shift.

Test Properties	ESC621 w/ ESH200 & ESX711/721 or ESR300/ESR310	Integrating Clear 2 parts RTS ESSS : up to 1 part RTS ESC621
Volume Ratio	4 : 1 : 1	As is
Applicable Use Category	Clear Coating	Uniform Finish Coating
VOC Actual (g/L)	144	190 - 243
VOC Actual (lbs/gal)	1.2	1.59 - 2.03
VOC Regulatory (less water less exempt) (gr/L)	247	272 - 311
VOC Regulatory (less water less exempt) (lbs/gal)	2.06	2.27 - 2.6
Density (g/L)	1053 - 1076	1018 - 1170
Density (lbs/gal)	8.8 - 8.99	8.51 - 9.78
Volatiles wt. %	55.2 - 56.2	40.3 - 51.2
Water wt. %	0.1	0.1 - 0.2
Exempt wt. %	41.3 - 42.6	19.2 - 31.9
Water vol. %	0.1	0.1 - 0.2
Exempt vol. %	40.8 - 40.9	21.5 - 33.2

## Health and Safety

Please refer to Material Safety Data Sheets (MSDS) for full health safety details and storage regulations.

### EMERGENCY MEDICAL OR SPILL CONTROL INFORMATION (412) 434-4515; in Canada (514) 645-1320.

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