

Single Stage Polyurethane Enamel

ESSS

ESSS Single Stage Polyurethane Enamel is an easy-to-use product designed to offer good gloss and a wide array of solid and metallic colors. It is available as a 2.8 VOC topcoat and can be used over all properly prepared OEM finishes, cured air-dried finishes, as well as any *Delfleet®* Essential primer.

Additional Products

- | | |
|------------------------------------|--------|
| • Essential Color | ESSS |
| • Hardener | ESH200 |
| • Fast Activator (50° - 60°F) | ESX500 |
| • Standard Activator (60° - 68°F) | ESX510 |
| • Slow Activator (68° -76°F) | ESX520 |
| • Very Slow Activator (76° - 88°F) | ESX530 |
| • Extra Slow Activator (> 88°F) | ESX540 |

Compatible Surfaces

ESSS may be applied over:

- Properly cleaned and sanded OEM enamels and cured finishes
- ESU400 - Wash Primer*
- ESU410 - Polyurethane Primer
- ESU420/ESU421 - 3.5 Epoxy Primer White/Gray
- ESU430 – Epoxy Primer
- ESU440 – 3.5 Primer Surfacer
- ESU460/ESU461/ESU462 – 4.6 Epoxy Primer Gray/White/Black
- ESU470 – 2.1 Epoxy Primer

When sanding prior to the application of ESSS topcoat, use 220 – 320 grit wet or dry.

*Wash and Etch primers must be sealed before applying topcoat for optimum performance.

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

Mixing Ratio:



6 ESSS
1 ESH200
1 ESX500/510/520/530/540

If additional thinning is needed, up to 10% of ESR300 or ESR310 may be added.

Pot Life:



2 hours @ 70°F (21°C) / 50% RH

NOTE: High heat and humidity will shorten pot life
Data obtained using ESX510

Pressure Pot Set-up:



HVLP	Conventional
1.0-1.4 mm with 8-12 fluid ounces per minute	1.0-1.4 mm with 8-12 fluid ounces per minute

Flash Off:



5 - 10 minutes @ 70°F (21°C) before stoving

Total Film Build:

	Wet	Dry
Minimum	2.0 - 4.0 mils per coat	2.0 - 4.0 mils total DFT

Theoretical Coverage:

712-943 sq. ft. (Color formula dependent)

Theoretical coverage in sq. ft. / US gal. Ready-to-spray (RTS), giving 1mil. (25µm) dry film thickness (Assuming 100% Transfer Efficiency)

RTS Combinations:	ESSS color	ESSS : ESH200 : ESX5X0	ESSS : ESH200 : ESX5X0 : ESR3XX
Volume Ratio:	Package (as is)	6 : 1 : 1	6 : 1 : 1 + 10%
Applicable Use Category	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating
VOC Actual (g/L)	248 - 317	223 - 304	203 - 276
VOC Actual (lbs/gal)	2.07 - 2.65	1.86 - 2.54	1.7 - 2.31
VOC Regulatory (less water less exempt) (g/L)	317 - 337	10 - 335	310 - 335
VOC Regulatory (less water less exempt) (lbs/gal)	2.65 - 2.81	2.59 - 2.80	2.59 - 2.80
Density (g/L)	968 - 1812	1006 - 1656	1012 - 1614
Density (lbs/gal)	8.08 - 15.12	8.39 - 13.81	8.44 - 13.46
Volatiles wt. %	17.5 - 46.7	22.6 - 49.9	27.3 - 55.1
Water wt. %	0.0	0.0 - 0.4	0.0 - 0.3
Exempt wt. %	0.0 - 22.2	4.2 - 27.6	10.0 - 35.2
Water vol. %	0.0	0.0 - 0.4	0.0 - 0.4
Exempt vol. %	0.0 - 26.2	5.1 - 29.3	13.7 - 35.7

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.

Materials described are designed for application by professional, trained personnel using proper equipment and are not intended for sale to the public. Products mentioned may be hazardous and should only be used according to directions, while observing precautions and warning statements listed on label. Statements and methods described are based upon the best information and practices known to PPG Industries. Procedures for applications mentioned are suggestions only and are not to be construed as representations or warranties as to performance, results, or fitness for any intended use, nor does PPG Industries warrant freedom from patent infringement in the use of any formula or process set forth herein.



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PPG Industries
19699 Progress Drive
Strongsville, Ohio 44149
1-800-647-6050

PPG Canada Inc.
2301 Royal Windsor Drive Unit # 6
Mississauga, Ontario L5J 1K5
1-888-310-4762

Spray Viscosity:



#2 ZAHN CUP = 20-30 seconds

Spray gun Set-up:



	HVLP	Conventional
Fluid Tip	1.3-1.7 mm	1.3-1.7 mm
Air Pressure	8-10 PSI at the cap	50-60 PSI

Number of Coats:



Two coats with 10 minute flash between coats

Dry Times



Dust-free:	30-60 minutes
Tape Time:	2-4 hours @ 68°F (20°C) 30 minutes @ 140°F (60°C)
Overcoat/Recoat:	Min 30 minutes Max 72 hours @ 70°F (21°C) before sanding is required

Dry time data obtained using ESX510

Physical Characteristics:

	6:1:1 ESSS : ESH200 : ESX5X0	6:1:1+10% ESSS : ESH200 : ESX5X0 : ESR3XX
Total Solids		
By Weight (RTS)	50.1% - 77.4%	44.9 - 72.7%
Total Solids		
By Volume (RTS)	44.4% - 58.8%	40.4% - 53.5%