ESSS Low Gloss Single Stage Polyurethane Enamel is an easy-to-use product designed to offer variable gloss levels in 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**

<table>
<thead>
<tr>
<th>Product</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Color</td>
<td>ESU480</td>
</tr>
<tr>
<td>Hardener</td>
<td>ESU449</td>
</tr>
<tr>
<td>Slow Activator (68° - 76°F)</td>
<td>ESX520</td>
</tr>
<tr>
<td>Very Slow Activator (76° - 88°F)</td>
<td>ESX530</td>
</tr>
<tr>
<td>Extra Slow Activator (&gt; 88°F)</td>
<td>ESX540</td>
</tr>
</tbody>
</table>

**Compatible Surfaces**

*ESSS may be applied over:*

- Property cleaned and sanded OEM enamels and cured finishes
- ESU400 Wash Primer*
- ESU410 Polyurethane Primer
- ESU420/ESU421 3.5 VOC Epoxy Primers White/Gray
- ESU430 Epoxy Primer
- ESU440 3.5 VOC Primer Surfacer
- ESU460/ESU461/ESU462 4.6 VOC Epoxy Primers Gray/White/Black
- ESU470 2.1 VOC Epoxy Primer
- ESU480/481/482 2.1 VOC Epoxy Primers Gray/White/Black

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 - ONECHOICE® Commercial CFX Cleaners

<table>
<thead>
<tr>
<th>Code</th>
<th>Product</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFX435LV</td>
<td>Low VOC Cleaner</td>
<td>Compliant cleaner suitable for removing dirt, grease or other contaminants before or during the painting process.</td>
</tr>
<tr>
<td>CFX436</td>
<td>Wax &amp; Grease Remover</td>
<td>Suitable for removing dirt, grease or other contaminants before or during the painting process.</td>
</tr>
<tr>
<td>CFX437</td>
<td>Heavy Duty Wax &amp; Grease Remover</td>
<td>Used to remove heavy milling oils and grease from bare substrates prior to the painting process.</td>
</tr>
</tbody>
</table>

Product Information Effective 02/2019

DFE-22 Technical Data Sheet ESSS Low Gloss Single Stage Polyurethane Enamel

Always Check for an Updated Copy at www.ppgcommercialcoatings.com
Application Guide

Preparation:

- Wash the area to be painted with soap and water, and then clean with CFX435LV, CFX436 or CFX437 cleaner.
- Sand with 180 – 240 grit on old finishes and body filler before priming, then re-clean with CFX436 or CFX437 cleaner.
- Prime all substrates immediately after cleaning.

Mixing Ratio:

6 : ESSS Low Gloss Topcoat
1 : ESU449 Hardener
1 : ESX520/530/540 activator

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

Pot Life:

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

2 hours @70°F (21°C)/50% RH

Spray Viscosity:

#2 EZ ZAHN: 20 – 30 seconds @ 77°F (25°C)

NOTE: High heat and humidity will shorten pot life of this material.

Additives:

N/A

Spray Gun Setup: HVLPCOMPLIANT

Fluid Tip 1.3 - 1.7 mm or equivalent 1.3 - 1.7 mm or equivalent
Air Pressure 8-10 PSI at the air cap 50-60 PSI at the spray gun

Pressure Pot Setup: Starting setup, adjust from here for best results

HVLPCOMPLIANT

Fluid Tip 1.0 - 1.4 mm 1.0 - 1.4 mm
Fluid Delivery 8-12 fluid ounces per minute 8-12 fluid ounces per minute

Number of Coats:

2 coats with 10 minutes flash between coats

Film Build: Wet Film (per coat) Dry Film (total)

Minimum 2.0 mils 2.0 mils
Maximum 4.0 mils 4.0 mils

Flash Time:

Between coats 5 – 10 minutes @ 70°F (21°C) before force drying

Dry Times:

To Touch: 30 - 60 minutes @70°F (21°C)
To Handle: 60 - 90 minutes @70°F (21°C)
To Tape: 2 - 4 hours@70°F (21°C)
Force Dry: 30 minutes@140°F (60°C)

Activator used in ESSS Min time before Recoat/Topcoat Max time before Recoat/Topcoat
ESX520 30 minutes 16 hours
ESX530 3 hours 72 hours
ESX540 4 hours 96 hours

After 72 hours, sand ESSS color with 400 grit (wet or dry) before applying another coat of color.

Note: Force drying times are for quoted surface temperature. Additional time should be allowed in the force-drying schedule to allow surface to reach recommended temperature.

Theoretical Coverage:

619 - 701 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)


Total Solids By Weight (RTS) 41.5% - 57.0% 37.6% - 52.7%
Total Solids By Volume (RTS) 38.6% - 43.7% 35.1% - 39.7%
<table>
<thead>
<tr>
<th>RTS Combinations:</th>
<th>ESSS color</th>
<th>ESSS : ESU449 : ESX5X0</th>
<th>ESSS : ESU449 : ESX5X0 : ESR3XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume Ratio</td>
<td>Package (as is)</td>
<td>6 : 1 : 1</td>
<td>6 : 1 : 1 + 10%</td>
</tr>
<tr>
<td>Applicable Use Category</td>
<td>Single-Stage Coating</td>
<td>Single-Stage Coating</td>
<td>Single-Stage Coating</td>
</tr>
<tr>
<td>VOC Actual (g/L)</td>
<td>153-183</td>
<td>146-169</td>
<td>133-153</td>
</tr>
<tr>
<td>VOC Actual (lbs/gal)</td>
<td>1.28-1.53</td>
<td>1.22-1.41</td>
<td>1.11-1.28</td>
</tr>
<tr>
<td>VOC Regulatory (less water less exempt) (g/L)</td>
<td>261-262</td>
<td>265-266</td>
<td>265-266</td>
</tr>
<tr>
<td>VOC Regulatory (less water less exempt) (lbs/gal)</td>
<td>2.18-2.19</td>
<td>2.21-2.22</td>
<td>2.21-2.22</td>
</tr>
<tr>
<td>Density (g/L)</td>
<td>1233-1684</td>
<td>1243-1583</td>
<td>1248-1559</td>
</tr>
<tr>
<td>Density (lbs/gal)</td>
<td>9.56-13.06</td>
<td>9.64-12.27</td>
<td>9.68-12.07</td>
</tr>
<tr>
<td>Volatiles wt. %</td>
<td>36.4-54.8</td>
<td>43.0-58.5</td>
<td>47.3-62.4</td>
</tr>
<tr>
<td>Water wt. %</td>
<td>0.0-0.1</td>
<td>0.0-0.1</td>
<td>0.0-0.1</td>
</tr>
<tr>
<td>Exempt wt. %</td>
<td>24.7-41.3</td>
<td>31.5-45.7</td>
<td>36.7-50.9</td>
</tr>
<tr>
<td>Water vol. %</td>
<td>0.0</td>
<td>0.0-0.1</td>
<td>0.0-0.1</td>
</tr>
<tr>
<td>Exempt vol. %</td>
<td>30.2-41.1</td>
<td>36.5-44.7</td>
<td>42.2-49.7</td>
</tr>
</tbody>
</table>
Health and Safety:

Safety Data Sheets (SDS) for the PPG products mentioned in this publication are available through www.ppgcommercialcoatings.com (Safety, SDS Search) or your PPG Distributor.

For additional information regarding this product, see the SDS and LABEL information.

EMERGENCY MEDICAL OR SPILL CONTROL INFORMATION (412) 434-4515; IN CANADA (514) 645-1320 AND IN MEXICO 01-800-00-21-400.

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