

# Flattening Additive

## for Polyurethane Topcoats

Technical Data Sheet: 499-50  
**A5023**

- 1. Introduction** ALEXSEAL<sup>®</sup> Flattening Additive is a matting paste for ALEXSEAL<sup>®</sup> Premium Topcoat 501. This product varies the degree of gloss without reducing the mechanical properties of the topcoat. ALEXSEAL<sup>®</sup> Flattening Additive is ideal to use when a lower gloss level is desired to minimize glare and surface defects.
- 2. Range of application** ALEXSEAL<sup>®</sup> Flattening Additive may be added to any ALEXSEAL<sup>®</sup> Premium Topcoat 501 color base. This product is designed for spray application. Brush application may result in an uneven flat or semi gloss finish.
- 3. Color** Off White paste which turns to the color choice of Premium 501 Topcoat Base when mixed.
- 4. Coverage** Same as ALEXSEAL<sup>®</sup> Premium Topcoat 501, see TDS T series for details.
- 5. Substrate pre-treatment** Same as for ALEXSEAL<sup>®</sup> Premium Topcoat 501, see TDS T series for details.
- 6. Trade name** ALEXSEAL<sup>®</sup> Flattening Additive
- 7. Mixing ratio** ALEXSEAL<sup>®</sup> Flattening Additive varies the degree of gloss. For optimum results a trial application is recommend on a small area beforehand.

Thoroughly mix ALEXSEAL<sup>®</sup> Premium Topcoat 501 with ALEXSEAL<sup>®</sup> Flattening Additive until one homogeneous mixture is achieved. Add the appropriate quantity of ALEXSEAL<sup>®</sup> Topcoat Converter and mix thoroughly. Add the appropriate ALEXSEAL<sup>®</sup> Topcoat Reducer and mix thoroughly. Strain the mixture through multiple paint strainers, maximum 50 – 100 microns (3 - 5 mils, 170 - 325 mesh) before application.

**Matte Finish**  
Spray: 1 part by volume T.... ALEXSEAL<sup>®</sup> Premium Topcoat 501 (Base Color)  
1 part by volume A5023 ALEXSEAL<sup>®</sup> Flattening Additive  
1 part by volume C5051 ALEXSEAL<sup>®</sup> Topcoat Converter Spray  
½ part by volume 16 % (vol) R... ALEXSEAL<sup>®</sup> Topcoat Reducer (Choose from list)  
Example: 1 : 1 : 1 : ½ = 16 % reduction

**Eggshell Finish**  
Spray: 1 part by volume T.... ALEXSEAL<sup>®</sup> Premium Topcoat 501 (Base Color)  
¾ part by volume A5023 ALEXSEAL<sup>®</sup> Flattening Additive  
1 part by volume C5051 ALEXSEAL<sup>®</sup> Topcoat Converter Spray  
½ part by volume 10 % (vol) R... ALEXSEAL<sup>®</sup> Topcoat Reducer (Choose from list)  
Example: 1 : ¾ : 1 : ½ = 10 % reduction

**Semi Gloss Finish**  
Spray: 1 part by volume T.... ALEXSEAL<sup>®</sup> Premium Topcoat 501 (Base Color)  
½ part by volume A5023 ALEXSEAL<sup>®</sup> Flattening Additive  
1 part by volume C5051 ALEXSEAL<sup>®</sup> Topcoat Converter Spray  
½ part by volume 20 % (vol) R.... ALEXSEAL<sup>®</sup> Topcoat Reducer (Choose from list)  
Example: 1 : ½ : 1 : ½ = 20 % reduction

**Notes:** When using non-skid, add non-skid after straining.

Flattening additive may be used in ALEXSEAL<sup>®</sup> Premium Topcoat 501 Clear but clouding may occur during some applications. Test trials should be done to determine if the results meet expectations.

Application and mixture including reduction, acceleration, film thickness, application technique, and environmental conditions can effect finish outcome and gloss level. When doing multiple applications for the same project, a consistent process is recommended.

Matte finishes may be more difficult to clean than glossy finishes.

Mixed material must be filtered before application.

**Professional Use Only**

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### 8. Application

Viscosity	Zahn #2: ≈ 15 - 18 sec, DIN 4 cup 4mm: ≈ 12 - 16 sec
Nozzle Size Gravity Gun	1.0 to 1.4 mm (0.040 to 0.050) - Conventional & HVLP
Nozzle Size Siphon Cup	1.6 mm (0.060) - Conventional & HVLP
Fluid Nozzle Size Pressure Pot	1.0 to 1.3 mm (0.040 to 0.050) - Conventional & HVLP
Atomizing Pressure	3.0 to 5.0 bar (42 to 70 PSI) - Conventional & HVLP
Pot Pressure	0.7 to 1.5 bar (10 to 20 PSI) - Conventional & HVLP
Airmix Equipment	0.18 to 0.28 mm (0.007 to 0.011) Inlet pressure 3.0 to 5.0 bar (42 to 70 PSI)

Application by Spraying: Apply 2 to 3 cross hatch coats to a wet film thickness (WFT) of 50 - 75 microns (2 - 3 mils) per coat. Allow 20 - 60 minutes flash time between coats. This will achieve a dry film thickness (DFT) of 50 - 75 microns (2 - 3 mils) for a 2 coat application. For a 3 coat application, this will achieve a dry film thickness (DFT) of 75 - 112 microns (2 - 4.5 mils). Maximum recommended film thickness during a spray application is 3 coats totalling 225 microns (9 mils) WFT, or 112 microns (4.5 mils) DFT.

Accelerator: A5035 ALEXSEAL® Topcoat 501 Accelerator is used to reduce the drying time of ALEXSEAL® Premium Topcoat 501. Per each mixed (catalyzed and reduced) 2 quarts of ALEXSEAL® Premium Topcoat 501, a maximum of 1 cap or 10 ml (1/3 ounce) of A5035 ALEXSEAL® Topcoat 501 Accelerator may be added.

Additional quantities of accelerator reduce pot life, and are not recommended.

If ALEXSEAL® Flattening Additive is used, application by cross hatch or cross spray pattern is recommended for each coat or vary direction of spray pattern for each coat or pass. An even paint film application is important to achieve a uniform finish.

Application by Brush: Friction caused by brushing or rolling may lead to an uneven finish especially on larger surfaces. In most situations, spraying is recommended over brushing.

### 9. Pot life and Drying

Optimal application environment range - min. 15°C (60°F) 40% RH, up to max. 30°C (85°F) 80% RH

Temperature for minimum time	15°C (60°F)	20°C (68°F)	25°C (77°F)	30°C (85°F)	Max Time
Pot Life - approx.	8 hrs	8 hrs	6 hrs	4 hrs	N/A
Pot Life - with ALEXSEAL® Topcoat 501 Accelerator	4 hrs	4 hrs	3 hrs	2 hrs	4 hrs
Dust Free	90 min	60 min	45 min	30 min	N/A
Tape Dry - without accelerator	36 hrs	30 hrs	24 hrs	18 hrs	N/A
Tape Dry - with ALEXSEAL® Topcoat 501 Accelerator	30 hrs	24 hrs	18 hrs	12 hrs	N/A
Fully Cured - without accelerator	21 days	18 days	14 days	10 days	N/A
Recoat after tack up with ALEXSEAL® Premium Topcoat 501	90 min	60 min	45 min	30 min	16 hrs
Overcoat with another product. Preparation including sanding is required	24 hrs	24 hrs	18 hrs	12 hrs	N/A

Note The above chart reflects approximate minimum and maximum time. Surface temperature, air flow, direct or non-direct sunlight, quantity and or choice of reducer, and film thickness will effect actual tack up, recoat, overcoat, and drying times during application. During the drying phase the minimum temperature is 15°C (60°F). Ideal temperature: 25°C (77°F). The minimum application condition should be 3°C (5.4°F) above dew point.

### 10. Packaging

A5023 ALEXSEAL® Flattening Additive 1 QT & 1 Gallon

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