Description

Grip-Gard Plus Clearcoats are high solids, two-component, polyurethane clears, designed to enhance the longevity of Grip-Gard Plus solid and metallic topcoats. Grip-Gard Plus Clearcoats can also be used directly over Grip-Gard Basecoat. The use of Grip-Gard Plus Clearcoats can extend the lifetime of the topcoat for up to 3-5 additional years and is particularly useful over metallic finishes where low gloss finishes are needed with minimal effect on the color.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Grip Gard Plus Clear, Satin Clear or Low Gloss Clear</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Grip-Gard Plus Hardener</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Grip-Gard Plus Reducer</td>
<td></td>
</tr>
</tbody>
</table>

Use the Measuring Stick #101 (Black)

Spray gun set-up:
- Gravity: 1.3 – 1.5 mm
- Siphon: 1.6 – 1.8 mm

Application pressure:
- 30–40 psi (2-3 bar) at the air inlet
- HVLP max 10 psi (0.7 bar) at the air cap

Application

Apply 2 medium wet coats

Flash between coats

2 – 3 minutes at 70°F (20°C)

24 hrs. at 70°F (20°C)
- 1.5 hrs. at 100°F (38°C)
- 30 min. at 140°F (60°C)

Accelerated: 1.5-2.5 hrs. at 70°F (20°C)

Use suitable respiratory protection

Akzo Nobel Sign Refinishes recommends the use of a fresh air supply respirator
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Suitable substrates

- Grip-Gard Plus Clearcoats can be applied over Grip-Gard Plus solid topcoats wet-on-wet and up to 24 hours without sanding.
- Grip-Gard Plus Clearcoats can be applied over Grip-Gard Plus Metallic topcoats after 8 hours and up to 24 hours without sanding.
- After 24 hours the surface should be sanded with #P320 to #P400 grit paper dry or #P500 to #P600 grit wet.
- Grip-Gard BC Basecoat after 15 – 20 minutes
- Properly prepared existing finishes

Products and additives

PRODUCTS:

CLEARS:
- Grip-Gard Plus Gloss Clear Item # 395707
- Grip-Gard Plus Satin Clear Item # 398877
- Grip-Gard Plus Low Gloss Clear Item # 390466
- Grip-Gard Plus Hardener Item # 390873

HARDENER:
- Grip-Gard Plus Reducer: A standard reducer for most climate temperatures Item # 398318
- Grip-Gard Plus Accelerator Reducer: A standard reducer with catalyst for faster cure times Item # 395715
- Grip-Gard Plus Retarder: A slow reducer for use in warmer temperatures Item # 395716
- Grip-Gard Plus Extra Slow Retarder: Extra slow reducer for high temperatures Item # 391219
- Grip-Gard Plus Exempt Reducer: A standard reducer with VOC exempt solvents Item # 395709

REDUCERS:

- Grip-Gard Plus Reducer: A standard reducer for most climate temperatures Item # 398318
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- Grip-Gard Plus Exempt Reducer: A standard reducer with VOC exempt solvents Item # 395709

ADDITIVES:

- SuperTop Plus: An accelerator to speed cure time with minimal impact on pot life Item # 395714
- Grip-Gard Plus 1K Touch Up Additive Item # 390948

Basic raw materials

- Grip-Gard Plus Clearcoats: Acrylic resins, solvents
- Grip-Gard Plus Hardener: Polysicyanate resins
- Grip-Gard Plus Reducers: Solvents
- Grip-Gard Plus Accelerators: Solvents containing a catalyst
Mixing

100 parts by volume Grip-Gard Plus Clear or Low Gloss Clear
50 parts Grip-Gard Plus Hardener
25 parts Grip-Gard Plus Reducer

Use Mixing Stick #101 (Black)

Stir after mixing
Grip-Gard Plus Clear must be stirred thoroughly directly after mixing the components

ACCELERATOR
MIXING RATIO:

Supertop Plus Accelerator can be added to Grip-Gard Plus Clear or Grip-Gard Plus Low Gloss Clear at a level of ½ to 1 ounce per ready-to-spray quart, or 2 - 4 ounces per ready-to-spray gallon. Accelerator is not recommended above 80° F.

For additional viscosity reduction while maintaining the required VOC, Grip-Gard Plus Exempt Reducer may be added. In VOC restricted areas, it is required that compliant products be used.

In non-VOC restricted areas additional Grip-Gard Plus Reducer, Retarder or Accelerator Reducer can be added for additional viscosity reduction.

MIXING NOTE:

Any gloss level can be achieved by using the appropriate blend of Grip-Gard Plus Clear and Grip-Gard Plus Low Gloss Clear. Then mix blend at 100:50:25 as stated above

Recommended Mix Ratios for Gloss Levels (by Volume)

<table>
<thead>
<tr>
<th>%Gloss Range @60° angle</th>
<th>Gloss Clear</th>
<th>Low Gloss Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (90+)</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>High / Semi (60-80)</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>Semi / Satin (40-59)</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>Satin / Low (20-39)</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Low / Matte - (0-19)</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

NOTE: Gloss range may vary according to the amount of film build of clearcoat and cure time of topcoat before applying clear.

Viscosity

The proper viscosity achieved using the recommended mixing ratio.
Grip-Gard Plus Clear 17 - 24 sec. EZ Zahn Cup #2 at 70°F (20°C).

Spray gun set-up / application pressure

<table>
<thead>
<tr>
<th>Spray gun</th>
<th>Fluid tipset-up</th>
<th>Application pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Transfer Gravity</td>
<td>1.3 – 1.5 mm</td>
<td>35 psi</td>
</tr>
<tr>
<td>High Transfer Pressure Feed</td>
<td>1.0 – 1.2 mm</td>
<td>35 psi</td>
</tr>
<tr>
<td>HVLP Pressure Feed</td>
<td>0.8 – 1.0 mm</td>
<td>Max 10 psi (air cap)</td>
</tr>
<tr>
<td>HVLP Siphon</td>
<td>1.8 – 2.2 mm</td>
<td>Max 10 psi (air cap)</td>
</tr>
<tr>
<td>HVLP Gravity</td>
<td>1.3 – 1.5 mm</td>
<td>Max 10 psi (air cap)</td>
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</table>
Grip-Gard® Plus 3.5 Polyurethane Clearcoats

Pot-life

Mixture with Grip-Gard Plus 2.8 Hardener & Reducers: 1.5 - 2 hours at 70°F (20°C)
Mixture with Accelerator Reducer or SuperTop Plus: 1.5 hours at 70°F (20°C)

Application Process

Spray: Spray 2 medium wet coats with 2 – 3 minutes flash off between coats.
Touch Up: Grip-Gard Plus 1K Touch up additive can be used with Grip-Gard Plus topcoats to touch up small areas or cover scratches in the field. See 1K Touch up additive TDS

Film thickness

By recommended application; Grip-Gard Plus Clear 1.0 – 1.2 mils per single coat.

Recoatability

Grip-Gard Plus Clear can be recoated with itself up to 48 hours without sanding. After 48 hours, sanding will be necessary.

NOTE:
Vinyl graphics can be applied after 48 hours at 70°F (20°C). Or after 24 hours when Supertop Plus has been added. Reflective vinyl graphics require additional time (contact manufacturer for recommendation) before applying to avoid bubbling.

NOTE: Striping or lettering with Grip-Gard Plus Clear must be applied within 24 hours to obtain good adhesion. After 24 hours, scuff with a gray scuffing pad.

Curing Time

Curing at 70°F: Dust Free: 50 Minutes Without Accelerator
Dry to Exposure: 24 Hours
Curing at 70°F With Accelerator: Dust Free: 30 – 45 Minutes
Dry to Exposure: 1.5 – 2.5 Hours

Curing at 100°F: Dust Free: 30 Minutes
Dry to Exposure: 1.5 Hours

Curing at 140°F: Dust Free: 15 Minutes
Dry to Exposure: 30 Minutes

Note: Adding retarder or slower reducers can extend dust free time in cooler temperatures.
Material usage

Approximate square foot coverage per gallon at 1 dry mil:

<table>
<thead>
<tr>
<th>Transfer Efficiency</th>
<th>Gloss Clear RTS</th>
<th>Low Gloss Clear RTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% (Theoretical)</td>
<td>844</td>
<td>788</td>
</tr>
<tr>
<td>65% (HVLP)</td>
<td>548</td>
<td>512</td>
</tr>
<tr>
<td>35% (Conventional)</td>
<td>295</td>
<td>276</td>
</tr>
</tbody>
</table>

NOTE: >2.0 mils dry film thickness is recommended for warranty purposes.

Cleaning of equipment

Clean equipment with Cleaning Solvent LV Item# 391000

VOC

Grip-Gard Plus Clear Grip-Gard Plus Clear (RTS per this TDS): >3.5 lb/gal. >420 g/liter

Product storage

Store products unopened, and used products with closed lids preferably between 70°F-95°F (10°C-35°C)
Avoid too much temperature fluctuation, optimal storage temperature approximately 70°F (20°C)

SHELF LIFE:
- Grip-Gard P Clearcoats: Two years if stored unopened at room temperature.
- Grip-Gard Plus Hardener: One year if stored unopened at room temperature.
- Grip-Gard Plus Reducers: Two years if stored unopened at room temperature.

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE: The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available.

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