1

3

1

GRIP-GARD EFx LV For Professional Use Only



Description

Grip-Gard EFx LV-LV is a high solid polyurethane topcoat developed to meet signage needs. The intermix toner system matches thousands of solid and metallic colors in any gloss level at 3.5 and 2.8 lbs/gal.

Satin Mix Ratio

- 5 GG EFx LV Mixed Color and AkzoNobel Stock Colors 1
 - GG EFx LV Hardener or Hardener Exempt
 - GG EFx LV Reducer or Reducer Exempt

High Gloss Mix Ratio



- GG EFx LV Mixed Color
- GG EFx LV Hardener or Hardener Exempt 1
 - GG EFx LV Reducer or Reducer Exempt



Use the Measuring Stick #23 (Purple) for Satin Gloss Use the Measuring Stick #106 (Purple) for High Gloss

High / Semi / Satin / Low Gloss Finishes **Gloss Blends**

Refer to mixing information in this TDS for B60SG Satin Blender and B60HG High Gloss Blender

	Spray gun set-up:	Application pressure:
	Gravity: $1.3 - 1.5$ mm	30–40 psi (2-3 dar) at the air inlet
		HVLP max 10 psi (0.7 bar) at the air cap
	Application – Solid Colors	Application – Metallic Colors
Ţ,	Apply 2 medium wet coats	Apply 2 medium wet coats followed by orientation coat (mist coat)
$)_{t})_{t})$	Flash between coats – Straight Shades	Flash between coats – Metallic
	3 - 5 minutes at 70°F (21°C)	3 - 5 minutes at 70°F (21°C) between coats 1 – 2 minutes at 70°F (21°C) before orientation coat
$\overline{}$	Dry to exposure	
(\checkmark)	5 - 6 hrs. at 70°F (21°C)	
	30 min. at 140°F (60°C)	
	Accelerated: 1.5 hrs. at 70°F (21	°C)
	Use suitable respiratory prote AkzoNobel Sign Finishes recom	ction mends the use of a fresh air supply respirator

GRIP-GARD EFx LV For Professional Use Only



Description

Grip-Gard EFx LV is a high solid polyurethane topcoat developed to meet signage application needs. It is an intermix toner system to match thousands of solid and metallic colors in any gloss level at both 3.5 and 2.8 lbs/gal.

GG EFx LV Environmental Statement

All Grip-Gard EFx LV toners, hardeners, reducers and additives are lead and chrome free. No products from AkzoNobel Sign Finishes, including the lead and chrome free primers contain heavy metals such as manganese, nickel and cadmium in amounts high enough to reach the MSDS reportable threshold.

Suitable substrates

- All Grip-Gard primers and surfacers.
- Most existing finishes, degreased and sanded with #P320 to #P400 grit paper dry

For detailed information on the use of primers and surfacer, refer to the following Technical Data Sheets (TDS)

- TDS Colorbuild Plus 250 Urethane Primer
- TDS LV Epoxy360 2.1 VOC
- TDS Grip-Gard White Washprimer, Light Enhancing
- TDS Grip-Gard Epoxy Sealer White and Gray
- TDS Grip-Gard Epoxy 2.8/3.5

- TDS Grip-Gard Epoxy 4.6
- TDS Grip-Gard Brite White HF Primer
- TDS Grip Gard Sealer Surfacer
- TDS Grip-Gard HB Surfacer

Products and additives

MAIN PRODUCTS: Grip Gard EFx LV Intermix t	oners	
STOCK COLORS:		
GG EFx LV RM 312 DUR BRONZE MED		ltem # 509645
GG EFx LV RM 313 DUR BRONZE DAR	К	ltem # 509644
GG EFx LV RM 313E DUR BRONZE		ltem # 509645
GG EFx LV RM SATIN WHITE		ltem # 509634
GG EFx LV RM SATIN BLACK		ltem # 509630
GG EFx LV RM BR ALUMINUM		ltem # 509631
BLENDERS / BINDERS		
GG EFx LV-LV B60HG HIGH GLOSS BL	ENDER	ltem # 483921
GG EFx LV-LV B60SG SATIN GLOSS BI	LENDER	ltem # 483922
GG EFx LV SATIN RED ACTIVATOR		ltem # 484222
HARDENER:		
GG EFx LV Hardener		ltem # 483923
GG EFx LV Hardener Exempt		Item # 509632
REDUCERS:		
GG EFx LV REDUCER Exempt	All temperature	ltem # 484216
GG EFx LV REDUCER FAST	Cool, 65 - 75°F	ltem # 483924
GG EFx LV REDUCER MEDIUM	Warm, 75°F - 85°F	ltem # 484198
GG EFx LV REDUCER EXTRA SLOW	Hot, 85°F - 105°F	ltem # 484291
ADDITIVES:		
SuperTop Plus: An accelerator to speed cure time	with minimal impact on pot life	ltem # 395714

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
Grip-Gard Plus Brushing and Rolling Additive (See B/R TDS for instruction)	Item # 390909

Basic raw materials

GG EFx LV GG EFx LV Hardeners: Grip-Gard Plus Accelerator: Acrylic resins, solvents Polyisocyanate resins & Catalyst Catalyst with pot-life extender

Note: GG EFx LV Hardener once opened should be stored in cool & dry place to avoid moisture contamination. Do not leave the container open. Close the lid immediately after use. Clean the lip of the container with a solvent soaked rag to prevent skinning/flaking.

Mixing Instructions; Step 1 For Mixing Your Own Color If Using a Standard Color from Color Manager proceed to step 2

Own Colors

Own Color
MixingTo make a custom or own color, please follow the guidelines below. A custom or own color is any color that is not in
Color Manager.

Satin Colors:

Solid and Metallic Colors containing Reds B622, B625, B647

Color	Satin Red Activator	B60SG
45	5	50

Solid Colors without Reds B622, B625, B647

Color	B60SG
45	55

Metallic Colors without Reds B622, B625, B647

Color	B60SG	B60HG
45	50	5

High Gloss Colors:

Metallic Colors

Color	B60HG
60	40

Solid Colors

Color	B60HG
70	30

Alternate Gloss Levels

Gloss level required	Amount of Color Toner (wt)	Amount of Satin Blender (wt)
		· · · · · · · · · · · · · · · · · · ·

	. ,	. ,
Semi-Gloss	50	50
Flat	40	60

• These recommendations are intended as a guideline as gloss levels will vary from color to color. Additionally environmental conditions such as heat and humidity can affect gloss.

When making a custom satin color containing any amount of red toner B622, B625, or B647 5% Satin Red

Gloss Notes:

- Activator must be added before adding the B60SG Satin Binder.High amounts of Blender may lower coverage
 - Gloss range may vary according to the amount of film build and cure conditions of the topcoat.
 - Amount of Satin Blender may vary from color to color. Spray a test panel to verify desired gloss.

STEP 2: Make the color Ready to Spray





Spray Gun	Fluid Tip set-up	Application Pressure
HVLP Gravity	1.3 - 1.4 mm	Max 10 psi at air cap
RP	1.3 – 1.4mm	Max 35 psi inlet

Pot-life		
Satin	1 hour at 70°F (20°C)	
Satin accelerated with SuperTop Plus	30 minutes at 70°F (20°C)	
High Gloss	1 hour at 70°F (20°C)	
High Gloss accelerated with SuperTop Plus	30 Minutes at 70°F (20°C)	

Application process

Satin Solid Colors:

Apply 2 single medium wet coats with 2-3 minutes flash between coats. Additional coats may be required if applying clean vibrant bright colors. Always make certain you have a uniform even wet film at application to ensure a smooth even satin finish.

Satin Metallic Colors:

- When spraying metallic colors, heavy or excessive coats can cause mottling or uneven distribution of aluminum flake.
- Metallic colors should be sprayed using medium wet coats with 3-5 minutes flash time between coats.
- A light or dust coat (50% trigger) may be required immediately after final coat to even out the metallic pattern. Lighter coats in most instances produce a lighter color while heavier coats will be darker.
- Always make certain you have a uniform even wet film at application to ensure a smooth even satin finish.
- In VOC restricted areas, use only GG EFx LV Exempt Reducer as additional solvent for metallic colors.

High Gloss Solid Colors:

Apply 2 single medium wet coats with 2-3 minutes flash between coats. Additional coats may be required if applying clean vibrant bright colors.

High Gloss Metallic Colors:

- When spraying metallic colors, heavy or excessive coats can cause mottling or uneven distribution of aluminum flake.
- Metallic colors should be sprayed using medium wet coats with 3-5 minutes flash time between coats.
- A light or dust coat (50% trigger) may be required immediately after final coat to even out the metallic pattern. Lighter coats in most instances produce a lighter color while heavier coats will be darker.
- Always make certain you have a uniform even wet film at application to ensure a smooth even satin finish.
- In VOC restricted areas, use only GG EFx LV Reducer Exempt as additional solvent for metallic colors.
- **Touch up:** Grip-Gard Plus 1K Touch up additive can be used to touch up small areas or cover scratches in the field. See 1K Touch up additive TDS

Film thickness

By recommended application; GG EFx LV

1.0 -1.2 mils per single coat.

Recoatability

GG EFx LV can be recoated with itself at:

- Same day without sanding
- More than 24 hrs: sanding will be required

Curing time



Curing at 70° F: Dust Free: 30 Minutes Without Accelerator Dry to Exposure: 5 - 6 Hours

Curing at 100° F: Dust Free: 15 Minutes Dry to Exposure: 1.5 Hours Curing at 70° F With Accelerator: Dust Free: 20 Minutes Dry to Exposure: 2 Hours



Curing at 140° F: Dust Free: 5 - 10 Minutes Dry to Exposure: 30 Minutes

Notes: Vinyl graphics can be applied after 48 hours at 70^oF (20^oC). 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.

Striping or lettering on GG EFx must be applied within 24 hours to obtain good adhesion. After 24 hours, scuff with a gray scuffing pad.

Adding retarder or using slower reducers in cooler temperatures will extend dust free time, may cause sagging and adversely affect overall appearance. In Satin Gloss systems, the gloss may be increased.

Material usage

Approximate square foot coverage per gallon at 1 mil/gallon:

At Transfer Efficiency		Gloss RTS	Satin RTS
	100% (Theoretical)	700 - 775	600 - 650
	65% (HVLP/RP)	450 - 490	390 - 425
	35% (Conventional)	240 - 265	210 - 230

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

Cleaning of equipment

Clean equipment with Cleaning Solvent LV Ite

ltem# 391000

VOC

GG EFX LV with EFx LV Hardener

GG EFX LV with EFx LV Hardener Exempt

>3.5 lb/gal or 420 g/lt with Grip-Gard EFx LV Hardener

>2.8 lb/gal or 336 g/lt with Grip-Gard EFx LV Hardener Exempt

Product storage

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

 Shelf life:
 GG EFx LV Satin Blender: One year if stored unopened at room temperature.

 GG EFx LV High Gloss Blender: One year if stored unopened at room temperature.

 GG EFx LV Toners:
 Two years if stored unopened at room temperature.

 GG EFx LV Hardener:
 6-months if stored unopened at room temperature.

 GG EFx LV 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. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Coatings brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.

Head Office, AkzoNobel SignFinishes Inc., 3785 Parkway Lane, Norcross, GA 30092, North American Techline: 1-800-618-1010 ON THE WEB AT: www.signfinishes.com