

Black Diamond Series

Low-VOC Primer Surfacer / Primer Sealer



TECHNICAL DATA SHEET

The all new Black Diamond Low-VOC line from Kirker is designed to meet even the most stringent VOC standards. This versatile primer system can be mixed and applied either as a High-Build 2K Urethane Primer Surfacer or as a premium-quality Wet-on-Wet Urethane Primer Sealer.

Used as a High-Build Primer Surfacer, this system delivers maximum film build with excellent filling capabilities and superior sandability (wet or dry). Used as a Primer Sealer, it features exceptional throughput efficiency with maximum color and gloss holdout. Creates a super smooth foundation for basecoats. Resists sand scratch swelling, dries quickly and features exceptional flexibility.

COATING TYPE:

2- Component Urethane Primer

PRODUCT CODE:

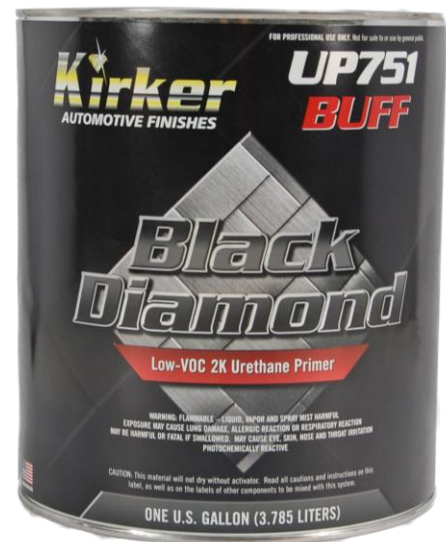
UP-751 (Buff)
UP-752 (Gray)

ACTIVATORS:

LVA-365 (Fast / 60-75° F)
LVA-375 (Medium / 70-85° F)
LVA-385 (Slow / 80-95° F)
LVA-395 (Super slow / Above 90° F)

REDUCERS:

LVR-565 Low-VOC Reducer – Fast (Low temp)
LVR-575 Low-VOC Reducer – Medium (Mid temp)
LVR-585 Low-VOC Reducer – Slow (High temp)
LVR-595 Low-VOC Reducer – Super Slow (Very high temp)



PHYSICAL PROPERTIES:

Appearance:	Viscous liquid, buff or gray in color
Package Measure:	1 U.S. Gallon (3.785 Liters)
Actual VOC (as supplied):	76.1 - 84.6 g/l (0.64 - 0.71 lbs/gal)
Regulatory VOC (as supplied):	167 - 169.6 g/l (1.39 - 1.42 lbs/gal)
Material Density:	1,492 - 1,567 g/l (12.45 - 13.08 lbs/gal)
Weight % Total Volatiles:	42.6% - 57.4%
Weight % Exempt Volatiles:	42.6% - 46.4%
Weight % Water:	0%
Volume of Exempt Volatiles:	50.1% - 54.5%
Volume of Water:	0%
Dry mils per coat:	1 - 1.5 mils per coat
Theoretical coverage (1 dry mil):	595-657 square feet

READY FOR USE

Mix ratio:
Material density:
Actual VOC:
Regulatory VOC:
Volume % water, exempts:

HIGH-BUILD PRIMER SURFACER

4:1 (with LVA Activator)
1,402 - 1,486 g/l (11.7-12.4 lbs/gal)
73.1 - 124.8 g/l (0.61 - 1.04 lbs/gal)
174.1 - 239.5 g/l (1.45 - 2.0 lbs/gal)
47.9% - 51.7%

WET-ON-WET PRIMER SEALER

4:1:1 (with Activator and Reducer)
1,342 - 1,462 g/l (11.2 - 12.2 lbs/gal)
60.1 - 256.8 g/l (0.5 - 2.1 lbs/gal)
171.8 - 456.9 g/l (1.4 - 3.8 lbs/gal)
43.8% - 65%



SURFACE PREP:

As a Sandable Primer Surfacer:

For use over bare sheet steel, fiberglass (with proper gel coat)

Remove all traces of wax, grease, silicone, oil and other contaminants with detergent wash, followed with a solvent wash (such as Kirker's 650 Wax & Grease Remover). Abrade substrate with 180 grit, then re-clean with final wash cleaner (such as Kirker's 600 Surface Wash).

** A direct-to-metal primer such as ENDURO PRIME Epoxy (EP611 / EP612) should be used over zinc or galvanized coated steel before Low-VOC 2K Urethane Primer is applied.*

For use over factory eCoat

Remove all traces of wax, grease, silicone, oil and other contaminants with detergent wash, followed with a solvent wash (such as Kirker's 650 Wax & Grease Remover). Lightly abrade substrate, then re-clean with final wash cleaner (such as Kirker's 600 Surface Wash).

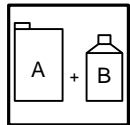
For use over epoxy primer

Kirker's epoxy primers (EP611 / EP612) provide an excellent foundation in many situations. BLACK DIAMOND Low-VOC Primer may be applied directly over ENDURO-PRIME after sufficient flash time (30-60 minutes, depending on the number of coats applied). If more than 3-4 days have passed since application, epoxy primer must be scuff sanded before applying BLACK DIAMOND Low-VOC Primer to ensure sufficient adhesion.

As a Wet on Wet Primer Sealer and for use over factory finishes:

Remove all traces of wax, grease, silicone, oil and other contaminants with detergent wash, followed with a solvent wash (such as Kirker's 650 Wax & Grease Remover). Abrade substrate with 320 - 400 grit, then re-clean with final wash cleaner (such as Kirker's 600 Surface Wash).

Be sure to mask all adjacent panels to prevent dry overspray.



MIXING:

Shake can, then stir contents thoroughly. It is common for some settling to occur.

As a **HIGH-BUILD PRIMER SURFACER**, mix ratio: 4:1 by volume. Thoroughly mix four (4) parts Primer Surfacer (UP751 or UP752) with one (1) part Activator. According to the size of the area to be primed, as well as air flow, temperature, humidity and other environmental factors at the time of application, use the appropriate Activator (LVA-365, LVA-375, LVA-385, LVA-395). Reference the selection chart on the next page for more information.

No additional reduction is required, though it may be useful in certain situations. If preferred, add LVR reducer to the mix until desired spray viscosity is attained. Reference the selection chart below for more information. For maximum fill and build as a primer surfacer, do not reduce.

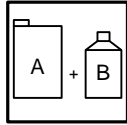
4:1

UP751, UP752	4oz	12 oz.	20 oz.	28 oz.
LVA Activator	1 oz.	3 oz.	5 oz.	7 oz.
TOTAL MIXTURE	5 oz.	15 oz.	25 oz.	35 oz.

Alternately, as a **WET-ON-WET PRIMER SEALER**, mix ratio is 4:1:1 by volume. Thoroughly mix four (4) parts Primer Sealer (UP751 or UP752) with one (1) part LVA Activator and one part LVR Reducer. According to the air flow, temperature, humidity and other environmental factors at the time of application, use the appropriate Activator (LVA-365, LVA-375, LVA-385, LVA-395) and Reducer (LVR-565, LVR-575, LVR-585, LVR-595). Reference the selection chart below for more information.

4:1:1

UP751, UP752	4oz	12 oz.	20 oz.	28 oz.
LVA Activator	1 oz.	3 oz.	5 oz.	7 oz.
LVR Reducer	1 oz.	3 oz.	5 oz.	7 oz.
TOTAL MIXTURE	6 oz.	18 oz.	30 oz.	42 oz.



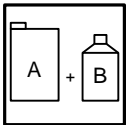
ACTIVATOR / REDUCER SELECTION CHART

Temp range	60° - 75° F	70° - 85° F	80° - 95°F	Above 90°F
Speed	Fast/Small area	Medium/Small area	Slow/Large area	Super Slow/Large area
Activator	LVA-365	LVA-375	LVA-385	LVA-395
Reducer	LVR-565	LVR-575	LVR-585	LVR-595

* For larger areas, always use a slower combination of activators and reducers than temperature would dictate.

Kirker's standard ULTRA-GLO Urethane-Grade Reducers (UR-8065/UR-9065, UR-8075/UR-9075, UR8085/UR-9085, UR-8095/UR-9095) may be used in place of the LVR Low-VOC Reducers above, however doing so will increase the ready-to-spray VOC, potentially rendering the mixed system non-compliant. Kirker recommends only persons with knowledge of current local VOC regulations and the ability to calculate total system VOC should attempt to use these reducers.

Caution: Mix only as much material as you will need to complete the immediate job.



TINTING:

BLACK DIAMOND Low-VOC Urethane Primers may be mixed or tinted to improve topcoat hiding and color holdout. Mix different colors of primer (UP751 / UP752) for a variety of shade values, or tint by adding up to four fluid ounces of LVB Low-VOC Urethane Basecoat (use solid, masstone colors only) per ready-to-spray gallon of primer (Up to one ounce per RTS quart of primer material).

Please note: This tint ratio will not yield a different color primer, though it will help sway the primer toward a shade closer to your topcoat color choice, which will help to provide better topcoat color holdout.



POT LIFE:

Approximately 1.5-2 hours at 70°F

Caution: Pot life is significantly shorter at elevated temperatures and in humid conditions. These environmental factors also may affect flow and leveling during the application process.



GUN SETTINGS:

GUN TYPE	HIGH BUILD PRIMER SURFACER	WET-ON-WET PRIMER SEALER
HVLP:	1.5 mm – 1.7mm tip (8-10 psi)	1.2 mm – 1.4 mm tip (8-10 psi)
Conventional Gravity Feed:	1.6 mm – 2.0 mm (40-50 psi)	1.4mm – 1.6 mm tip (40-50 psi)
Conventional Siphon Feed:	1.7 mm – 2.0 mm (40-50 psi)	1.5 mm – 1.6 mm tip (40-50 psi)

Always refer to gun manufacturer's recommendations for additional details on suggested tip size, air pressure and other adjustments.



APPLICATION:

As a **HIGH BUILD PRIMER SURFACER**, apply three (3) medium wet coats to achieve desired film build, allowing 10-15 minutes flash time between coats. A total dry film build of 4-7 mils is recommended.

As a **WET-ON-WET PRIMER SEALER**, apply one light coat (taking care not to solvent soak feather edge areas), allow 10-15 minutes flash, then apply one medium coat. Allow 20-30 minutes before topcoating with color.



DRY TIMES / RECOAT:

As a wet-on-wet Primer Sealer, allow a minimum of 20-30 minutes before topcoating. After a sufficient flash period, BLACK DIAMOND Low-VOC Urethane Primer may be topcoated for up to 4-6 hours with no sanding required. After six (6) hours, primer sealer must be sanded before topcoating to ensure sufficient adhesion.

BLACK DIAMOND Low-VOC Urethane Basecoat and ULTRA-GLO single-stage acrylic urethane topcoats may be applied directly over BLACK DIAMOND Low-VOC wet-on-wet Primer Sealer after sufficient flash time has passed.

As a Primer Surfacer coating will dry dust-free within 15 minutes and may be sanded after approximately three to six hours depending upon film thickness and number of coats applied.

Air-dry times may vary slightly depending on activator and reducer selection, shop temperatures, airflow and total film thickness. All dry times listed are approximate, at 70° - 75°F.

Force dry for 40 minutes at 140° after a 15-20 minute flash, then allow 20 minutes for cool down before sanding. Sands after 10-20 minutes on a short wave IR lamp (30-60 minutes on a medium wave IR lamp).



CLEANUP:

Close all containers tightly after each use. Clean gun and spray equipment with gun wash or other appropriate solvent products immediately after application to prevent damage.

Shelf life of LVA Activators is limited once can has been opened. These products are extremely susceptible to oxygenation and exposure to moisture. Therefore, containers should be closed tightly after each use, with a clean seal, as quickly as possible. Also, activators should be stored at a consistent temperature to prevent the formation of potentially damaging condensation inside of the can.



HEALTH / SAFETY PRECAUTIONS:

THIS PRODUCT IS INTENDED FOR USE BY PROFESSIONALS ONLY.

USE THIS PRODUCT ONLY WITH ADEQUATE VENTILATION: Wear appropriate, properly fitted fresh-air-supplied NIOSH/MSHA-approved respirator (TC-19C or equivalent) as directed by the manufacturer. Protect hands with impervious nitrile gloves. Always wear eye and face protection. Individuals with lung or breathing problems should neither use nor be exposed to this product, its vapors or spray mist. READ ALL WARNINGS ON ALL LABELS BEFORE USING.

This product is designed to be mixed with other components. Mixture will have hazards of all components. Before opening the packages, read all warning labels. Follow all precautions. See Material Safety Data Sheet for additional health and safety information.

WARRANTY:

All recommendations for the use of Kirker products are based on tests and experience believed to be reliable. Since the methods of use, conditions of application, and the application itself are beyond our control, product warranty is restricted to replacement of material only. No other warranty, written or oral, is expressed or implied.

FOR ADDITIONAL INFORMATION:



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