

# Black Diamond Series

## Low-VOC Urethane Clearcoat (4:1)



The all new Black Diamond Low-VOC line from Kirker is designed to meet even the most stringent VOC standards. EC350 is a high-solids 2.1-VOC Urethane Clearcoat that delivers a beautiful finish with maximum gloss and extraordinary DOI. This fast-drying, fast-building clearcoat features excellent flow and leveling, with exceptional resistance to both shrinkage and dieback. Provides superior protection against chemicals, UV and weather.

### COATING TYPE:

2- Component Urethane Clearcoat

### PRODUCT CODE:

EC350

### 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:

<b>Appearance:</b>	Viscous liquid, clear
<b>Package Measure:</b>	1 U.S. Gallon (3.785 Liters)
<b>Actual VOC (as supplied):</b>	87.8 grams/liter (0.73 lbs/gallon)
<b>Regulatory VOC (as supplied):</b>	190 grams/liter (1.59 lbs/gallon)
<b>Material Density:</b>	1,155 g/l (9.64 lbs/gal)
<b>Weight % Total Volatiles:</b>	64.2%
<b>Weight % Exempt Volatiles:</b>	56.6%
<b>Weight % Water:</b>	0%
<b>Volume % Exempt Volatiles:</b>	53.8%
<b>Volume % Water:</b>	0%
<b>Dry mils per coat:</b>	0.6-1.2 mils per coat
<b>Theoretical coverage (1 dry mil):</b>	579 square feet
<b>READY FOR USE</b>	
<b>Mix ratio:</b>	4:1 (with LVA Activator)
<b>Material density:</b>	1,133.7-1,157.4 g/l ( 9.5-9.7 lbs/gallon)
<b>Actual VOC:</b>	76.3-126.7g/l (0.64-1.06 lbs/gallon)
<b>Regulatory VOC:</b>	179.5-258 g/l (1.5-2.15 lbs/gallon)
<b>Volume % water, exempts:</b>	50.8-57.5%



**SURFACE PREP:**

This clear is specifically designed for use over Kirker's BLACK DIAMOND Low-VOC Urethane Basecoats, although it may also be applied over single-stage urethane systems like ULTRA-GLO, Kirker's SPECTRA Series Urethane Candy Colors or other manufacturer's basecoats.

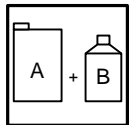
*\* When using another manufacturer's basecoat, always spray a test panel to ensure compatibility.*

Prior to application, be sure basecoat is clean and free of contaminants. If basecoat has passed its recoat window, surface must be abraded prior to clearcoat application. For best results, finish sand with 600 grit, then reclean before proceeding.

**For use over factory finishes and other catalyzed substrates**

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). Finish sand substrate with 400-600 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:**

Do not shake can.

Mix Low-VOC Urethane Clearcoat at a 4:1 ratio: Four (4) parts clear to one (1) part activator. According to the size of the job, 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 below for more information.



EC350	4oz	12 oz.	20 oz.	28 oz.
LVA Activator	1 oz.	3 oz.	5 oz.	7 oz.
<b>TOTAL MIXTURE</b>	<b>5 oz.</b>	<b>15 oz.</b>	<b>25 oz.</b>	<b>35 oz.</b>

In most situations, additional reduction will be required. Add 10%-20% LVR reducer to the mix until desired spray viscosity is attained. Reference the selection chart below for more information. For proper film build, do not over reduce.

**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.

Only if necessary, Kirker's Universal Urethane Fish Eye Eliminator (UFE8) may be added to the mix (up to ¼ fluid ounce of UFE8 per ready-to-spray quart of BLACK DIAMOND Low-VOC Urethane Clear).

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



**POT LIFE:**

Approximately 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:**

<u>GUN TYPE</u>	<u>TIP SIZE</u>	<u>AIR PRESSURE</u>
HVLP:	1.3 mm – 1.5 mm	8-10 psi (at the air cap)
Conventional Gravity Feed:	1.3 mm – 1.5 mm	45-55 psi
Conventional Siphon Feed:	1.4 mm – 1.7 mm	45-55 psi

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



**APPLICATION:**

Apply EC350 Low-VOC Urethane Clearcoat in two (2) to three (3) medium wet coats as necessary to achieve the desired build, allowing at least 15-20 minutes flash time between coats (+/- depending on air flow and temperature).



**DRY TIMES:**

	<u>AIR DRY</u>
Dust free:	10-15 minutes
Tack free:	15-25 minutes
Tape:	12 hours
Polish:	12 hours
Stripe:	12 hours
Deliver:	18 hours
Decal:	48 hours

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

Baking is not recommended for this clear.



**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.



**RECOAT WINDOW:**

EC350 may be recoated for up to 18 hours (at 70°F). If reclearing after 18 hours, the surface must first be abraded with 1000-1500 grit sandpaper to promote sufficient adhesion. If applying basecoat over clear after its 18 hour recoat window, surface should first be abraded with 600-800 grit sandpaper.



**POLISH:**

After at least twelve (12) hours air dry time, EC350 Urethane Clearcoat may be sanded with 1500 grit or finer to abrade surface and/or remove dust nibs and other imperfections, then with 2000 grit or finer to remove 1500-grit sand scratches.

Use a wool pad or foam pad in combination with a high-quality clearcoat finishing compound, following material manufacturer's instructions. Follow with a high-quality finishing glaze applied either by hand, or variable-speed buffer.

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**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.

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**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.

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**FOR ADDITIONAL INFORMATION:**



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