HOUSE OF KOLOR®
TECHNICAL DATA INFORMATION

IMPORTANT NOTE: This document includes information on UC01 and UHC01. These products are for sale outside the United States only.

READ ALL INSTRUCTIONS THOROUGHLY BEFORE YOU BEGIN.
Our products are for use by trained professional personnel using proper production automotive spray equipment suitable for the paint to be sprayed. Proper spray booth, air system, respirator and basic spray painting ability are required.

We do not recommend painting in temperatures below 70°F. Although House of Kolor® is designed with high film build in mind, we do not recommend any finish that exceeds 15 mils in thickness. This would include the sanded OEM finish and the Kustom Paint finish.

NOT INTENDED FOR USE BY THE GENERAL PUBLIC.
For controlled results, House of Kolor® recommends products be used as a "total system." We do not recommend the intermixing of various manufacturer's products. This is only asking for trouble. No professional or amateur should run the risk of a job failure. Custom painting is complicated enough without gambling on untested product compatibility.

Apply only over House of Kolor® primers/sealers and/or properly prepared OEM paint. Do not apply House of Kolor® products over alkyd or synthetic enamels, uncatalyzed acrylic enamels, primers, sealers or topcoats that may not be coated with lacquer. You must control every step of the preparation including the products used for a successful paint job. Any unknowns such as existing primer, old paint, etc. can become the weak link in the custom painter's option.

IMPORTANT: The data in this manual represent typical values obtained by the methods indicated. Since application variables are a major factor in product performance, this information should serve only as a general guide. Valspar assumes no obligation or liability for use of this information. Unless Valspar agrees otherwise in writing, Valspar MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. Valspar WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. Unless Valspar agrees otherwise in writing, Valspar's only obligation for any defect in this product under any warranty that Valspar provides or under any other legal theory will be to replace the defective product, or to refund its purchase price, at Valspar's option.

CAUTIONS
Read Cautions and Warnings on all product can labels

TECHNICAL DATA
Material Safety Data Sheets available upon request.

TECHNICAL ASSISTANCE
(800) 845-2500

IMPORTANT VOC INFORMATION

The National Rule and SCAQMD Rule 1151 both make distinctions between base coat and mid coat application. The VOC calculations are different depending on which application procedure is chosen. It is important to know whether the system you are using is classified as base coat/clear coat or as a mid coat/mutistage system.

All Shinny® Base coats may be applied as either a base coat or mid coat. Shinny® Base coats include the following codes: BC, BFC, NE, PBC, PC, SG, MB, HBC, and KF. Kombat Kolor® Urethane Kandy and Solid Color Base coats may also be applied as a base coat or mid coat. Their codes are: UK, UB, and UFB.

BASE COAT APPLICATION

Applying the above products directly over the sealer, Ko-Seal® II (KS10, KS11, KS12, KS210, KS211, KS212) will classify the products as basecoats. The VOC limit for base coat/clear coat application would apply. Refer to Ko-Seal® II Sealer Recommendation Chart to choose the right sealer color for your application.

Example: KD2000 DTM Primer, KS10 Sealer, Shinny® Base coat. Clear coat
base coat / clear coat

MID COAT APPLICATION

Applying any Shinny® or Kombat Kolor® coat over BC25, BC26, OR ANY Shinny® Base coat will classify those products as a mid coat. This would apply whether or not a sealer was used. The VOC limit for mid coat/muti-stage application would apply.

Example: KD2000 DTM Primer, KS10 Sealer, BC25, Shinny® Base coat
base coat / mid coat / clear coat

VERY IMPORTANT VOC INFORMATION FOR CALIFORNIA USERS

The South Coast Air Quality Management District (Rule 1151) (www.agmd.gov) and the San Joaquin Valley Air Quality Management District (Rule 4602 and 4612 Phase II) (www.valleyair.org) have made significant changes to their current rules.

The South Coast Air Quality Management District (Rule 1151) rule goes into effect July 1, 2008. Any product manufactured prior to July 1, 2008, can be used through December 31, 2008. This district consists of the following areas:

Los Angeles County
Orange County
Western San Bernardino County
Western Riverside County

The San Joaquin Valley Air Quality Management District (Rule 4602 and 4612 Phase II) goes into effect January 1, 2009. This district consists of the following areas:

San Joaquin County
Stanislaus County
Madera County
Madera County
Merced County
Fresno County
Kings County
Tulare County
Western Kern County

If you intend to do your custom paint job in any of the above listed areas after the dates stated, you must only use the products listed and follow the directions as outlined in this manual under California Products and application procedures, Appendix A.
MATERIAL AND USAGE RECOMMENDATIONS

PREPARATION

Custom finishing has unusually high product performance requirements that products designed for normal collision repair do not offer. For a durable, long lasting custom paint job, please refer to the below quick reference guide.

<table>
<thead>
<tr>
<th>Bare Metal, Body Fillers, Fiberglass &amp; Some Plastics</th>
<th>Original Vehicle Finish</th>
<th>Artwork over Original Vehicle Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>KPP or KD Epoxy Primer Plus Activator</td>
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<tr>
<td>Step 2</td>
<td>KS Ko-Seal® II Plus Hardener &amp; Reducer (Do Not Use Over Bare Metal)</td>
<td>KS Ko-Seal® II Plus Hardener &amp; Reducer</td>
</tr>
<tr>
<td>Step 3</td>
<td>Shimm® Base Coat Plus Reducer</td>
<td>Shimm® Base Coat Plus Reducer</td>
</tr>
<tr>
<td>Step 4</td>
<td>UK Kandy (Optional) Plus Reducer &amp; Hardener</td>
<td>UK Kandy (Optional) Plus Reducer &amp; Hardener</td>
</tr>
<tr>
<td>Step 5</td>
<td>UC or UFC Clear Plus Reducer &amp; Hardener</td>
<td>UC or UFC Clear Plus Reducer &amp; Hardener</td>
</tr>
</tbody>
</table>

NOTE:
The key to a durable custom finish that will not chip or crack is the foundation. House of Kolor’s KP & KD Epoxy Primers have been designed to offer superior adhesion, flexibility, and protection against body filler bleed through that other conventional urethane primers do not offer. KP & KD Epoxy Primers can be used over the original finish but it is not necessary.

Ko-Seal® II is always recommended when doing custom finishing. They do three things:
1. Improve the adhesion between the substrate and the base coat.
2. Improve color holdout.
3. Make the vehicle one color so fewer coats are required thereby reducing the amount of material needed and reducing the build.

Due to the UV sensitivity of some of the pigments we use and the extreme film build often associated with custom painting, only House of Kolor’s UC & UFC Clearers. These clear coats were designed for the high film build. They offer a high, flexible finish with a higher UV resistance than other clear coats designed for collision repair.

If your vehicle has previously been refinished, we recommend removing this to the original finish or to bare metal. Again the key to a durable custom paint job is the foundation. A chain is only as strong as its weakest link.

Please read, understand, and follow the manual before you begin your custom paint job.

BEFORE YOU BEGIN
READ ALL INSTRUCTIONS THOROUGHLY.

We do not recommend painting in temperatures below 70°F.

GENERAL INFORMATION

Poor preparation can cause future paint problems. Sand the original finish well. Use our KP22CF or KD2000 activated Epoxy Primers over bare metal, body work, and for build up at deep sanded areas on OEM finishes.

1. BODY WORK
Prepare vehicle using special custom painting methods.
A. Before any sanding, use KC10 Wax & Grease Remover to remove any tar, wax, or grease.
B. Grind away paint and primer in areas requiring body work.
C. Always be aware that your hands can transfer body oil, so keep a rag between you and the surface to be primed or painted and avoid touching the vehicle with your bare hand.
D. Use power tools to get close when sanding filler. Then block sand. Keep the block front to rear, but crossing to prevent flat spots.
E. Always prime with our KP22CF or KD2000 Primers. Allow proper cure time to prevent shrinkage.
F. Guide coat your primer so when you block sand, your sand scratches and low spots are revealed.

PLEASE REFER TO SANDING GRIT RECOMMENDATIONS ON PAGE 59 FOR FINAL SANDING PRIMERS.

2. PRIMERS
Many bases are susceptible to staining or bleeding from plastic fillers, putties, fiberglass resins and some primers. To prevent staining, strip bare (or to OEM primer) and prime with our KP22CF or KD2000 Epoxy Primers. See tech sheets for more information on KP & KD Primers.

NOTE: OEM (Original Equipment Manufacturer) coatings work well as a base for your paint job.

3. FOR EXISTING FINISHES
Surface should be free of wax, grease and foreign materials. Use KC10 Wax & Grease Remover prior to any sanding. For post-sanding, use our KC20 to remove any sanding residue for final wash.

PLEASE REFER TO THE SANDING RECOMMENDATION CHART ON PAGE 59 FOR FINAL SANDING OF OEM FINISHES.

Apply 1-2 coats of Ko-Seal® II (sealer). Let dry for 1 hour, but no longer than 2 hours before top coating.

NOTE: Do not attempt to apply a custom paint job on an OEM finish that is in excess of 6 mils, as paint failure can result from excessive film build. In other words, if the vehicle has been repainted, it is strongly suggested to either strip it back to the original finish, or better yet, to bare metal.

NOTE: In custom work, sealers should always be used as the ground coat. They improve adhesion, color and gloss holdout, and make the vehicle all one color for quicker fitting with the base coats.
1. COLOR SANDING

Color sanding for Flow Coats:

After clear coats have cured overnight (12-24 hours), color sand with 500 grit wet sandpaper. Add a small amount of mild liquid detergent to the water and soak the sandpaper for 15-20 minutes. This prevents sandpaper loading. Sand the entire vehicle flat, leaving no glossy spots. Dry as you go, so soap residue does not bite the finish paint. After sanding, wipe the vehicle with a clean rag and water. Wipe dry. Use a tack rag to remove lint before re-coating. (Chemicals washes at this stage are not recommended).

NOTE: Avoid touching the vehicle with your bare hand, as the oil from your skin may impair flow coats. Final wipe use warm water, if contaminated wash with KC20.

NOTE: When using a tack cloth, open the cloth and let stand for 15-20 minutes to eliminate resin transfer, then form the cloth into a ball and use in that manner.

CAUTION: Do not sand through the clear and ruin all you have done.

Color sanding for Polishing:

Begin color sanding with 1200P grit sandpaper. Block large areas. Avoid color sanding areas that are difficult to polish by machine without risk of burning or tearing the finish. Add a small amount of ivory liquid detergent to ease sandpaper loading. Dry as you go. You may continue with 1500P - 2000P grit etc. Many quality polishing products exist for this work. Use proven polishing pads and rubbing/polishing compounds, and a polisher not to exceed 1750 rpm free running speed.

2. FLOW COATS (optional)

Flow coats (or refills) is the perfectionist method for finishing a topcoat clear. With this method, polishing is not required unless you desire a show quality finish, or to remove minor dirt particles. This method reduces time required to color sand and polish.

Urethane Enamel Reflow Method:

After color sanding, re-clear using 6-10 oz. of extra reducer per mixed quart using UC1 Clear, UC35 Clear, UCF1 Flo-Klear, UCF1 Komple Klear® or UCF3 Flo-Klear (needs less extra reducer). The additional reducer will give you extra flow out. Begin with a medium coat, allow flash time, and then follow with 1 or 2 wet coats. Allow flash time between coats. (For improved hardness the next day, add an additional 1-1.5 oz. of the specified catalyst to this mixture).

Acrylic Lacquer Reflow Method:

After color sanding, apply 1 medium to light coat of S001 Sunscreen Clear thinned 200%, using a slow dry thinner. Then apply 1 wet coat. The medium/light coat tacks the surface, giving the wet coat that follows something to adhere to. A wet first coat may cause problems. After the wet coat has flashed, thin the clear 300-400% and apply 1 wet coat. Check gun pattern, as this much thinner usually means narrowing the gun pattern. A spray booth with good air movement is necessary for this method.

NOTE: If the shop temperature is below 75°F (or if you are not in a spray booth), DO NOT USE SLOW DRY THINNER. Air movement is critical to remove the thinner during flow coats. Use a fast dry thinner and allow plenty of time between coats to prevent crazing. (Use retarder only in a spray booth with shop temperatures over 75°F).

3. POLISHING

Polishing may be done after 1 to 3 days for urethane enamel finishes and 10 to 14 days for acrylic lacquer finishes. Dry times will vary with weather and shop conditions.

For great results use 3M® Superbuff III Wool Pad #05703 with Extra Cut Compound #05936. Clean surface with a 50/50 mix of distilled water and alcohol and re-polish any spots you may have missed. Change pad to 3M® foam pad #05725 with Machine Gelze #05937 and buff at 1500 to 1750 rpm.

For the ultimate show finish, color sand with 1200 to 2000 grit sandpaper. Then polish, using a 1500 to 1750 rpm polisher and compounds of your choice.

After 60 days, the vehicle may be waxed. We recommend using a quality non-abrasive Carnauba wax.
APPLICATION TECHNIQUES
Spray Pattern Overlap

Custom painting requires a good understanding of the basics. It demands attention to detail and a working knowledge of sound application techniques. The following is a brief description of both a 50% and 75% spray pattern overlap.

50% Overlap
- Measure spray gun pattern width, do not guess.
- Adjust spray gun for pattern consistency.
- Restrict amount of fluid being delivered when using 75% overlap to avoid runs and sags.
- 75% overlap generally used for Pearls and the first 2 to 3 coats of Kandy.

75% Overlap

URETHANES / POLYURETHANES
Flash Between Coats

The times allowed between coats of Urethanes and Polyurethanes are critical for the success of a custom paint job. Actual times vary depending on temperature, air flow and humidity. One of the safest ways to determine when a finish is ready for the next coat is by the "string" method. This method is as follows:
- Find area on masking tape closest to "wettest" point of sprayed finish.
- Press finger into finish and lift up approximately one inch.
- Look for fine hair-like strings pulling up with finger.
- Continue this process using a different spot each time until finish stops "stringing".
- Once finish still feels sticky, but does not "string", it is ready for next coat.
- Do not allow House of Kolor® Urethanes or Polyurethanes to completely dry to touch. If finish completely dries to touch, finish must not be recoated for 12 hours or lifting may occur.

Must stop doing this.
**TECH TIPS**

**SANDPAPER GRADING SYSTEMS**

When choosing a sandpaper, it is important to remember that sandpapers produce a significantly different scratch pattern based on the different grading systems.

**CAMI** (Coated Abrasives Manufacturer's Institute) graded sandpaper has long been the standard system of measurement in the automotive refinish industry in America. It is known as having a wider variety of grit.

**FEPA** graded sandpaper is new from the Federation of European Producers of Abrasives. It is regarded as having a tighter measurement system, with closer tolerances for particle size. The result, as shown in the chart, is that the scratch patterns of FEPA and CAMI differ significantly the higher you go.

**Sanding Grit Recommendations**

<table>
<thead>
<tr>
<th>Substrate</th>
<th>CAMI Grade</th>
<th>FEPA Grade (P Grit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare Metal / Old Finish</td>
<td>Minimum 80 Grit Dry</td>
<td>Minimum 80P Grit Dry</td>
</tr>
</tbody>
</table>

**Ko-Seal® II**

<table>
<thead>
<tr>
<th>Substrate</th>
<th>CAMI Grade</th>
<th>FEPA Grade (P Grit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP2CF, KD2000, and Old Finish</td>
<td>240 to 280 Grit Dry</td>
<td>280P to 320P Grit Dry</td>
</tr>
<tr>
<td></td>
<td>400 to 500 Grit Wet</td>
<td>600P to 800P Grit Wet</td>
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</tbody>
</table>

**Shirmir® Base Coats**

<table>
<thead>
<tr>
<th>Substrate</th>
<th>CAMI Grade</th>
<th>FEPA Grade (P Grit)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ko-Seal® II</strong> (after 3 hours) and SG100 Intercoat Clear</td>
<td>280 Grit Dry</td>
<td>320P Grit Dry</td>
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<tr>
<td></td>
<td>500 Grit Wet</td>
<td>800P Grit Wet</td>
</tr>
<tr>
<td></td>
<td>Maroon Scuff Pad</td>
<td>Maroon Scuff Pad</td>
</tr>
</tbody>
</table>

**UC, UFC, Urethane Clear (Flow Coating)**

<table>
<thead>
<tr>
<th>Substrate</th>
<th>CAMI Grade</th>
<th>FEPA Grade (P Grit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC, UFC Urethane Clear</td>
<td>280 Grit Dry</td>
<td>320P Grit Dry</td>
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<tr>
<td></td>
<td>500 Grit Wet</td>
<td>800P Grit Wet</td>
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**NOTE:** If Ko-Seal® II has cured beyond 24 hours, DO NOT use a Maroon Scuff Pad. It must be sanded and resealed.

To identify the grade sand paper you are working with; FEPA grade will have a “P” either proceeding or following the grit size. CAMI grade will not have the letter “P” on the sand paper.

<table>
<thead>
<tr>
<th>Examples:</th>
<th>FEPA Grade</th>
<th>CAMI Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>400P or P400</td>
<td>400 (No “P” proceeding or following the grit size)</td>
<td></td>
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<table>
<thead>
<tr>
<th>CAMI GRADE</th>
<th>FEPA GRADE</th>
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<tbody>
<tr>
<td>1200</td>
<td>P</td>
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<tr>
<td>1000</td>
<td>2500</td>
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