

SteelKote 565

Polyester Acrylic Hybrid DTM Urethane

Description:

SteelKote 565 is a high gloss two component Polyester-Acrylic Aliphatic Polyurethane topcoat available in standard and custom colors. This product is designed so that it can be used as DTM or over primed substrates subjected to very harsh environments. SteelKote 565 provides excellent weather resistance with outstanding color and gloss retention. The material exhibits high solids and lower VOC compared to the conventional 2K Urethane available in the market. The formula is designed to be ready to spray and it exhibits a very tough film upon curing which gives the end-users great balance of properties like hardness, flexibility, and abrasion resistance. The polyester functionality of this product gives resistance to splash of mineral and vegetable oils, paraffins, aliphatic solvents and against mild chemicals. The recipe is designed to meet ISO12944 C1 and C2 environmental exposure when used as DTM. The product meets SSPC Paint 36 Level 3 standards when used as a topcoat over any of Baril's recommended primers.

Advantages:

- High Solids High Build Aliphatic topcoat with <2.8 lbs/gal VOC
- Easy to apply. In most cases, ready to spray OR requires <8% solvent reduction.
- Suitable for Direct to metal OR over Baril's recommended primers.
- Can be applied with Brush and Roller or Spray
- Excellent gloss and color retention. Excellent resistance to chemicals.
- Very low HAPs

Uses:

- Fleet Vehicles
- Structural Steel
- Oil and Gas field
- Heavy machineries
- Implements
- Heavy haulers
- Storage containers
- Limited Marine Structures

Material Properties

Gloss Level	80° + Gloss @ 4 mils DFT
Density	11.88 lb/gal 1.42 g/ml (mixed)
Volume Solids	62% +/- 1% (mixed)
VOC (EPA Method 24)	< 2.8 lb/gal (345 g/l)
Dry Film Thickness	4.0-6.0 mils
Pot Life	3- hours (mixed) @ 68°F / 20°C
Theoretical Coverage	4.0 mils DFT @ 246 ft ² /gal.
Temperature Resistance	200 deg F (continuous)
Shelf Life	Base: At least 36 months when stored cool and dry. Hardener: At least 24 months when stored cool and dry.

Recommended Substrate Conditions and Temperature:

- Coating performance is proportional to the degree of surface preparation. Please refer to the application instructions for specific primers and intermediate coats for application and curing procedure. All previous coats must dry and free of contaminants. Please adhere to all minimum and maximum topcoat times for specific primers and intermediate coats.
- For ferrous substrate (old and new) sand/shot blast clean to ISO- Sa 2½ or minimum SSPC SP-6, blasting profile around 1.2-3.0 mils is recommended. Remove the weld spatter, protrusions and laminations in steel before blasting.
- For maintenance and repair in atmospheric service use "Hand or Power Tool Cleaning: (SSPC-SP2 or SP3) is recommended. At minimum, the surface should be clean of all grease, dirt, oil, rust and foreign material that would be detrimental to proper adhesion and desired performance of the coating system being applied.
- For Galvanized steel and aluminum: Surface must be free from grease, salts and any contamination. Surface should be sufficiently roughened using ice blasting, sand scuffing and/or sweep blasting.
- Substrate temperature during application and curing should be at least 10 deg F above dew point. Relative humidity during application and curing should not exceed more than 80%. Premature exposure to early condensation and rain may cause severe impact on the performance of the coating as well as gloss and color.

Primer Recommendation:

- SteelKote 830 Series Primer is 2K Polyamide cured Epoxy primer for moderate to high corrosion resistance.
- SteelKote 829 Series Primer is 2K Organic Zinc Rich Primer series for high to very high corrosion resistance (ISO-12944 C5)
- DualCure 306 is a single or two component moisture cured Urethane Zinc Rich primer for ultra high corrosion and humidity resistance.(ISO-12944 CX)
- Please contact your Baril representative for the suitable primer recommendation.

Instructions For Use:

- Mix Ratio: base to hardener 80:20 (4:1) by volume
- Activator: ACT-975.
- Mix base component with a pneumatic air mixing at a moderate speed to homogenize the container. Please note that mixing at a high speed will result in excessive bubble formation. Add hardener to the base part under constant agitation. Agitate the mixed components with power agitators for at least 2-3 minutes. Let material sit for additional 2-3 minutes so that any air-bubble will dissipate.
- The ideal temperature at the time of mixing and application would be 50 deg F or above but not more than 90 deg F. Additional reducer may require if the application is carried out under 50 deg F. Please check with your Baril representative for proper guidelines on recommended thinner. Please note that thinner/reducer must be added after mixing base and hardener. If too much thinner is added, then it will negatively impact the sag resistance.
- Induction time is not necessary.

Air-Spray:

- Nozzle orifice: 1.0-1.5 mm (approx. 0.040-0.060 inch)
- Nozzle pressure: 0.3 – 0.4 MPa (approx. 3-4 bar; 44-58 psi)
- Reduction/Thinner: 5-8% depending on required thickness and application conditions.
- Recommended Thinner:
 - SOL660 – Cold Temperature Reducer
 - SOL670 – Medium Temperature Reducer
 - SOL680 – Hot Temperature Reducer
 - SOL690 – Very Hot Temperature Reducer

Airless Spray:

- Nozzle orifice: 0.43-0.48 mm (approx. 0.017-0.019 inch)
- Nozzle pressure: 20 MPa (approx. 200 bar; 2900 psi)
- Reduction/Thinner: 3-5% depending on required thickness and application conditions.
- Recommended Thinner:
 - SOL660 – Cold Temperature Reducer
 - SOL670 – Medium Temperature Reducer
 - SOL680 – Hot Temperature Reducer
 - SOL690 – Very Hot Temperature Reducer

Brush/Roller:

- Use a high-quality, well-loaded, solvent-resistant, low-nap (0.25 inch – 0.375 inch / 64 mm – 95 mm) roller. If the application results in excess foam or brush strokes then immediately contact your local Baril representative for the recommendation of the flow-aid to be incorporated in the material. Flow aid will enhance flow and leveling of the brush strokes and roller stipple.
- Multiple coats will be required to achieve proper film build and hiding. Please follow the re-coat window guidelines or contact your local Baril representative for more information.
- Reduction/Thinner: 0-5%

Overcoating interval for DFT up to 6.0 mils.

Overcoating with	Interval	23 deg F	32 deg F	50 deg F	68 deg F	86 deg F
Itself	Minimum	N/A	N/A	48 hours	24 hours	16 hours
	Maximum	N/A	N/A	7 days	4 days	2 days
It self + Baril's UCAN 700 Accelerator	Minimum	24 hours	16 hours	12 hours	6 hours	8 hours
	Maximum	4 days	2 days	48 hours	24 hours	12 hours

Curing Time for DFT up to 6.0 mils.

Substrate/Atmosphere Temperature	Dry to touch	Dry to handle
23 deg F + 50-60% relative humidity	16 hours	32 hours
32 deg F + 50-60% relative humidity	8 hours	16 hours
50 deg F + 50-60% relative humidity	6 hours	12 hours
68 deg F + 50-60% relative humidity	4 hours	6 hours
86 deg F + 50-60% relative humidity	2 hours	4 hours

****Full coating properties are established after 7 days of full curing at room temperature**

Humidity exceeding 70% will impact the curing time. Painting should be avoided if the humidity at the time of application exceeds 85%.

Performance Characteristics

Accelerated Weathering: ASTM G154	3000 hours gloss retention @ 60° > 80%
Florida Black Box Exposure:	Pass 48 months < 20% gloss loss <1.0 ΔE color change
Impact (Direct & Indirect): ASTM D2794	80 in lbs
Chemical Resistance: ASTM D5402	Passes 200 Double MEK Rubs
T-Bend Flexibility: ASTM D4145	Passes 2T Bend No cracking, No paint lift off
Taber Abrasion: ASTM D4060	Taber CS-17 / 1kg weight 1000 cycles: 150 mg loss
Pencil Hardness: ASTM D3363	Passes 4H No gouges
Adhesion: ASTM D3359	Passes 5B 0% Adhesion failure (Bonderite 1000)
Salt Spray: ASTM B117 (DTM only)	Passes 1000 hours Shot blasted panel
Bond Strength: ASTM D4541	Passes 400-500 psi Direct to Metal

Dry Times: 68°F @ 4 mils DFT

To Touch:	3 Hours
To Handle:	Overnight
To Full Cure:	7 days

Health & Environmental:

In accordance with OSHA regulations on hazardous materials, harmful and irritating if in contact with skin, eyes and by inhalation. Observe safety information from SDS sheets. Always wear proper protective suits, gloves and eye protection. In case of eye contact, immediately wash with large amounts of water and contact a medical expert. If spraying, always wear proper NIOSH approved respirators. Fresh air fed respirators are preferred. Do not eat, drink or smoke during application. Discharge, treatment or disposal is subject to federal, state, commonwealth, provincial and local laws. Since empty containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind or weld on or near this container.

Cleaning Instructions:

Cleaning tools: Clean immediately after application using MEK or Acetone

Warranty:

The technical data and other printed information furnished are true and accurate to the best of our knowledge. The products are warranted pursuant to acceptance of limited warranty. A copy of which can be obtained from Baril Coatings, which is the exclusive warranty with respect to the sale of this product. The modification of any component or uses not outlined in this bulletin nullifies the warranty unless advance written confirmation is obtained from Baril Coatings. No other warranties expressed or implied shall apply. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, shall be to supply replacement materials as set forth in the limited warranty.