BioBond
POWERED BY NATURE

TECHNICAL DATA SHEET

Carbyne™ SSoE250

Epoxy Base Coat 100% Solids

071425-C

Carbyne™ SSoE250 is a bio-based,100% solids, two-part epoxy with excellent bonding performance on a variety of substrates. BioCoat SSoE250 has low to no VOC content with minimal to no odor. BioBond BioCoat SSoE250 is an excellent choice to use as an epoxy coat for a floor.

PRODUCT DESCRIPTION

Carbyne™ SSoE250 provides the following product characteristics:

Technology	Expoxy
Chemical Type	Biobased epoxy resin
Appearance (Mixture)	Clear
Viscosity	Thixotropic
Cure	Room Temperature
Components	Two-component (Mixing Required)
Solids Content	100%
Bio-based Content	28%
Application	Bonding
Components	Excellent bonding Excellent Gloss One hour pot-life Anticorrosion Water based Low to no odor

TYPICAL PROPERTIES OF UNCURED

Mixture

Density @ 25 °C, (g/mL)	1.2
Viscosity (cP) @ 50°C	500 cps

TYPICAL PROPERTIES OF CURED

Physical Properties

Odor	None
Dry to Touch Time (hrs)	10
Full Cure (days)	5
MEK Double Rubs	4000+
Adhesion to Concrete (psi) (ASTM D7234-22)	>480
Abrasion Resistance (ASTM D4060-19)	82 mg
Hardness (ASTM D2240-15)	79.3 (Shore D)
Chemical Resistance (ASTM D1308-20)	Sulfuric acid, Sodium hydroxide, others, no visual changes
Tensile Strength (psi) (ASTM D882)	5754
Percent Elongation (ASTM D882)	11%

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials. For safe handling information on this product, consult the Safety Data Sheet (SDS)

DIRECTIONS FOR USE

01. Mix Part A to ensure homogeneity
02. Add Part B to Part A. Mix well
03. Apply to surface to be coated using brush or roller.
04. Do not hand mix. Use low-speed drill (300–450 rpm) with suitable mixing blade.
05. Do not thin with solvents.
06. Scrape sides and bottom of container to ensure uniform blend.

For Smaller Areas

To only use 1/2 the kit: Use half of all components provided in the kit and half of water required and follow the mixing instructions.

APPLICATION INSTRUCTIONS

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- Substrate must be clean, sound, and free of contaminants (oil, grease, laitance, coatings, mold, etc.).
- Mechanically prepare to an ICRI CSP 3–4 profile.
- Fill blowholes and defects with a suitable BioCoat repair mortar.
- Pour mixed material onto prepared surface.
- Spread evenly with notched squeegee or trowel.
- Back-roll with a short-nap roller for uniform finish.

SURFACE PREPARATION

Mositure Content

Maximum Limit: The moisture content of the concrete substrate must typically be ≤ 4% by mass, as measured with a concrete moisture meter.

Alternative testing: Relative humidity tests conducted per ASTM F2170 should show values ≤ 85%.

Surface Profile (Roughness)

Open Texture: The concrete substrate needs a clean, sound, and open-textured surface to ensure proper adhesion.

Mechanical Preparation: Achieve this open texture through mechanical means like shot blasting, grinding, or similar techniques.

Avoid Polishing: Do not use grinding pads that will polish the concrete surface as this is not suitable for achieving the required profile.

Note on Porosity & Permeation: Variations in concrete porosity due to factors like water-to-cement ratio, aggregate gradation, and admixtures can significantly affect how much epoxy penetrates the substrate. Optimal bonding is generally observed at 6-8% porosity levels.

Curing (Ambient & Substrate Temperature)

- **50 °F (10 °C):** Foot traffic ~24 hrs | Light traffic ~3 days | Full cure ~10 days
- **68 °F (20 °C):** Foot traffic ~12 hrs | Light traffic ~2 days | Full cure ~7 days
- **86 °F (30 °C):** Foot traffic ~8 hrs | Light traffic ~36 hrs | Full cure ~4 days

Recoat/Waiting Times (Ambient & Substrate Temperature)

- **50 °F (10 °C):** Minimum 24 hrs | Maximum 48 hrs
- **68 °F (20 °C):** Minimum 8 hrs | Maximum 24 hrs
- **86 °F (30 °C):** Minimum 6 hrs | Maximum

Working Time (Pot Life)

- At **50 °F (10 °C):** approx. **50 minutes**
- At **68 °F (20 °C):** approx. **25 minutes**
- At **86 °F (30 °C):** approx. **15 minutes**

Temperature Guidelines

Conditioning: Store and condition all components at **65–75 °F (18–24 °C)** for at least 24 hours prior to mixing.

Application Range: Apply only when ambient and substrate temperatures are between **50–85 °F (10–30 °C)**.

Dew Point Control: Ensure substrate temperature is at least **5 °F (3 °C)** above the dew point to prevent condensation and adhesion issues.

Ambient Humidity: Must remain at or below **85%** during both application and initial cure.

STORAGE

The product can be stored in ambient conditions with the lid secured in the container or plunger closed if using in portable gun. Storage information may also be indicated on the product container labelling.

Optimal Storage: Store material at room temperature or ambient conditions. Storage below or above these conditions can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. BioBond cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

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Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. BioBond is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law. In case products are delivered by BioBond please additionally note the following: In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

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