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## Product Data Sheet

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# “PHILACEP BARRIER PDC”

## Deck Covering

### Product Information

PhilaCep Barrier PDC is a two component tar-free and solvent-free epoxy coating.

Special features:

- **Thick film**  
Super build. A 2 mm to even 5 mm thick layer on horizontal surfaces fills up pits and dents.
- **Apply on a rusty surface**  
Can be applied, just remove loose rust scales. It fills up rusty pits, too.
- **Apply on a wet surface**  
Can be applied, just wipe out and push away water with a waste rug.
- **Apply onto existing films**  
Can be applied onto any film. PhilaCep Barrier PDC contains no solvents, so all you do is remove loose rust scales.
- **High corrosion protection performance**  
Perfect. PhilaCep Barrier PDC offers almost permanent protection by shutting out all corrosive agents.
- **High impact protection**  
Impact resistant. Super-built film and epoxy resin stand up perfectly to impact and abrasion.
- **Quick cure**  
Very quick. 30 minutes after application the coated surface can be immersed in water. Even underwater PhilaCep Barrier PDC continues curing to guarantee high grade epoxy performance.
- **Safe material**  
This is non-flammable and non-combustible.

PhilaCep Barrier PDC displays very good compatibility with various well-known producers.

### Recommended Purpose

- **In water ballast tanks – spot repair**  
Surface preparation is easy. Remove loose and thick rust scale before spot repair with PhilaCep Barrier PDC.
- **To protect decks, hatch covers, coamings and all sorts of fittings from corrosion**  
Prior to general painting, apply spot touch-up of PhilaCep Barrier PDC to welds, bolts, corners and similar parts to prevent the usual rusting of the deck, hatch coamings, pipes, pipe supports, machinery bed, bildge well, etc.
- **To fill pits and repair heavily-corroded areas**  
Use PhilaCep Barrier PDC as a putty to repair pitting corrosion or heavily-corroded areas, inside or outside.
- **As permanent corrosion protection**  
Where maintenance repair is difficult or impossible, apply PhilaCep Barrier PDC. It's almost permanently corrosion-free.

# Philadelphia Coatings LLC

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- **On the outside shell, deck and cargo hold to protect against abrasion and impact**

Apply PhilaCep Barrier PDC to areas vulnerable to mechanical damage to obtain an outstanding abrasion and impact resistant coating system. Overcoating lets you choose any desired finish color.

### Physical Properties

**Sheen:** Semi-Gloss

**Colors:** Oxide Red, Gray, Yellow, Black, Green

**Volume Solids (%):** 98 ± 2

**Dry film thickness:** 1mm to 2mm

**Theoretical Spreading rate:** 1 Lit/m<sup>2</sup> – 1,6 Kg/m<sup>2</sup>

**Typical thickness humid/dry micron:** 1mm dry thickness per coat to 2mm

**Thinner:** Not applicable

**Heat Resistance:** 50°C immersion - 120°C outdoors

**Min./Max. over-application times:** 24 hrs. – no limitation

**Flash Point:** Mixed product <65°C

**Specific gravity:** 1.55 kg/Lit

**Viscosity 25°C:** Pasty thick

**VOC:** 87.00 g/Lit (material as into the container)

ASTM D412 for Elongation and Tensile Strength

ASTM D4060 for Abrasion Resistance

### Application Data

**Mixing Ratio:** By weight, base to curing agent: 90. By volume, base to curing agent: 10.

**Readiness Time:** 15 minutes in a proper temperature.

**Thinner:** Not recommended. The material is ready for use, under special conditions use thinner for epoxy PH 300, max 5% by volume.

**Painting Method:** Spatula, toothed spatula and trowel.

Pour the mixture over the substrate, which has been cleaned and primed with PhilaDur, with a consumption of about 3 – 3,2 Kg/Sq.m.

After about 30 min. pass the bubbles-breaking roller over the surface. To have a good levelling effect, apply a minimum thickness of about 2 mm.

After drying, the mortar can be sanded to even out surface imperfections.

Use proper equipment. Actual safety measures and precautions are very important from the selected method and environment work. Emergency Contact Numbers are available World Wide upon any request.

Cleaning: Power tool cleaning and Cleaners with Universal Thinner.

**Pot Life:** ± 2 hours

**Curing Time:** Within 2 days at 23°C (fully cured).

The provided data is typical for factory produced products, subject to slight variation depending on color.



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### Optimal Application Conditions:

measure humidity level (it must be below 5%.) using a hygrometer or acting as follows: clean about 5 cm<sup>2</sup> surface and define its borders with adhesive tape, put over this area a transparent plastic sheet and seal the sides with the adhesive tape. After 48 – 96 hours, the area is wet and of a darker color. This phenomenon is due to excessive humidity in the substrate and it endangers the adhesion power of the product, therefore, it is not suitable to apply it over this kind of substrate. mix well base and hardener with a mechanical mixer for few minutes; slowly add the inert and keep on mixing with a speed below 600 rev/min. Apply immediately the product. The product contains thinners; therefore, it does not cause toxic nor noxious fumes. During application, protect hands and skin with gloves and overalls.

### Drying and Over coating Conditions

Temperature of basis material	10°C	23°C	30°C
Semi cure (1)	20 hours	9 hours	5 hours
Repainting interval (Max) (2)	14 days	10 days	7 days
Recoating for repairs	Unlimited		

(1) The given data must be considered as guidelines only. The actual drying time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, preceding paint system etc.

(2) The surface should be dry and free from contaminants prior to overcoating. The best intercoat adhesion is achieved when the subsequent coat is applied before the preceding coat is fully cured. After prolonged exposure it may be necessary to roughen the surface to ensure intercoat adhesion. When recoating with single pack products, maximum recoat interval is limited to 16-24

hours. When in doubt, consult with our technical dept.

### Coating Specification

Long overcoat period if temperatures are around freezing point. Proper selection of the systems, coating application procedures and surface preparation are made depending on actual existing film. Best specific design factors and conditions are tested in a controlled laboratory. Consult with Philadelphia Coatings LLC Technical Department before and throughout testing process.

### Surface Preparation

All surfaces should be clean, dry and free from contamination. High pressure freshwater wash should be conducted prior to the application. Steel products with mill scale: shot blasting or grit blasting should meet the requirements of Sa1 grade in Sweden de-rusting standard at least.



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### Minimum recommended surface preparation:

Substrate	Minimum	Recommended
Carbon steel	St 2 (ISO 8501-1)	Sa 2 (ISO 8501-1)
Stainless steel	The surface shall be hand or machine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface and to remove all polish from the surface.	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media which is suitable to achieve a sharp and angular surface profile.
Galvanised steel	The surface shall be clean, dry and appear with a rough and dull profile.	Light brush blasting using nonmetallic abrasive leaving a clean, rough and even pattern.
Coated surfaces	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1.4)	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1.4)
Concrete	Low pressure water washing to a rough, clean, dry and laitance free surface.	Minimum 4 weeks curing. Moisture content maximum 5 %. Prepare the surface by means of enclosed blast shot or diamond grinding and other appropriate means to abrade the surrounding concrete and to remove laitance.

Optimum performance, including adhesion, corrosion protection, heat resistance and chemical resistance is achieved with recommended surface preparation. For other surface treatments, please consult with Philadelphia Coatings LLC.

### Storage

Circa 24 months at 0°C, stored at dry, shaded and ventilated condition. The container/paint, must be kept sealed and away from heat and ignition.

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

### Color Variation

When applicable, products primarily intended for use as primers or antifoulings may have slight color variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering. Color and gloss retention on topcoats/finish coats may vary depending on type of color, exposure environment such as temperature, UV intensity etc., and application quality. For further information, please consult with Philadelphia Coatings LLC.

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### Pack Size

Basis 4.75 Gal. (18 Lit) drum, agent 0.52 Gal (2 Lit) drum. If other packing specifications are needed, please consult with Philadelphia Coatings LLC.

### Shipping weight

Basis 4.75 Gal. (18 Lit) 39.60 lb drum, agent 0.52 Gal (2 Lit) 4.40 lb drum.

### Health and Safety

Prior to use, obtain, consult and follow the Material Safety Data Sheet for this product concerning health and safety information. Read carefully and conform to precautions on MSDS and packing vessels. To avoid eye and skin contact, tools such as gloves, goggles and face mask etc. should be used during work with product (proper safety measures should be taken according to construction methods and circumstances). All work with the product must be carried out according to all relevant national health, safety and environment standards and codes. This product is for professional use only.

### Limitation of liability

All information is given for guidance only and is subject to regional variation depending upon local climate and environmental condition. An excessive film thickness delays the final curing and creates sagging. Over coating interval will increase with the number of paint layers and the thickness of the paint film. For recommended paints at special circumstances, please consult with our Philadelphia Coatings LLC. Apply in good weather. The relative humidity must not exceed 80% temperature of the surface to be coated must be at least 3°C above the dew point. All data from the tests is obtained under lab conditions, so Philadelphia Coatings LLC won't bear any liabilities from the condition whether the data could reflect the objective status of the actual application circumstance or not.

### Disclaimer

The information in the product manual is based on our experiences from tests and practice. For the application without our knowledge, we could only make sure that our products themselves are warranted. We may modify the data in this product manual according to our continuous development and experience accumulation without advanced notice.