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## Product Data Sheet

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# “PHILAGARD T PHE 06/04”

A versatile high-performance epoxy coating

### Product Information

A solvent borne coating formulated for heavy-duty applications on vessels underwater and above water areas/hull, outside hull, cargo holds, decks, industrial environments, offshore platforms/oil gas asset and other. The resin system is enhanced for added resistance against water, abrasion and moderate chemicals. For use on interior and exterior concrete and metal steps and various other surfaces. For use at Newbuilding, Maintenance & Repair or On-Board Maintenance and various industrial constructions.

**PhilaGard T PHE 06/04 displays very good compatibility with various well-known producers.**

### Recommended Purpose

- Designed for heavy-duty applications
- Outstanding resistance against water, oil, grease and moderate chemicals
- Excellent wear and abrasion resistance
- Suitable for interior and exterior concrete and metal surfaces

### Physical Properties

**Sheen:** Semi-Gloss

**Colors:** Red Brown, Gray, Oxide Red, Green others as per RAL scale.

**Volume Solids (%):** 62 ± 2

**Theoretical Coverage:** 100 sq ft/gal or 6.20-4.34 m<sup>2</sup>/Lit at 100-150 microns dry / 161-242 microns wet

**Recommended Film Thickness:** Over 250 microns dry by 2 coats.

**Weight per Gallon:** 13.4 ± 0.5 lbs/gal

**Viscosity:** 88-98 KU

**Specific Gravity:** 1.40 kg/Lit

**Flashpoint:** Mixed product > 90 °F (32°C)

**VOC:** 340.00 gr/Lit (2.8 lbs/gal) (material as into the container)

ASTM D412 for Elongation and Tensile Strength

ASTM D4060 for Abrasion Resistance

### Application Data

**Mixing Ratio:** Basis 4 part per/volume, Curing Agent 1 part/volume.

**Thinner:** The material is ready for use, under special conditions use thinner for epoxy PH 300, max 5% by volume.

**Painting Method:** Airless spraying is recommended. brush and spray follow. Tip range 0.48mm-0.66mm (21 thou), blowing pressure shouldn't less than 141kg/cm<sup>2</sup> (2000psi). Additional thinner may be required. Use the proper equipment. Actual safety measures and precautions are very important from the selected method and environment work.

# Philadelphia Coatings LLC

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Emergency Contact Numbers are available World Wide upon any request.

**Curing Agent B:** To enhance the efficacy of the advanced formulated polydiamine adduct (Curing Agent), designed specifically for high solids and solvent-free epoxies tailored for optimal corrosion protection in heavy-duty applications, consider the following process:

- 1) In cases of elevated or high viscosity, in order to improve processability, add thinner for epoxy PH 300, max 10% by volume in component B Curing Agent. Stir well and subsequently mix with Base A.
- 2) For the ready mixed product A+B, adjust final viscosity as necessary by adding thinner for epoxy PH 300 max 5% by volume, if needed.

**Cleaning:** Power tool cleaning and Cleaners with Thinner for epoxy PH 300.

**Readiness Time:** 20 minutes in a proper temperature.

**Pot Life:** 12 hours at 15°C, 8 hours at 23°C, 5 hours at 30°C

**Curing Time:** Within 4 days at 23°C (fully cured).

### Drying and Over-Coating Conditions

Temperature of basis material	10°C	23°C	30°C
Touch Dry	90 minutes	30 minutes	20 minutes
Hard Dry	8 hours	4 hours	3 hours
Repainting interval (Min)	24 hours	8 hours	6 hours
Repainting interval (Max) (1)	Always under 30 days, depending from environment temperature, best period between 2 days- 7 days		

(1) 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 times it may be necessary to roughen the surface to ensure intercoat adhesion.

### Coating Specification

Long overcoat period, if local climate, temperatures around to freezing point, proper selection of the systems, coating application procedures, proper surface preparation, as per actual existing film esp. over coated epoxy layer. Try to test design factors, statements and specific recommendations in a controlled laboratory. Always factor in the conditions and consult with Philadelphia Coatings LLC Technical Department before and throughout testing.

### Surface Preparation

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.



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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 20°C, stored in a 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.

### Pack Size

Basis 17,5 Lit pail, curing agent 2,5 Lit pail. If other packing specifications are needed, please consult with Philadelphia Coatings LLC.

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### Shipping weight

Basis 17,5 Lit pail, curing agent 2,5 Lit pail.

### 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 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.