Polyguard HBPU FG8448

Part A: 8448A; Part B: 8448B

Product Description

Polyguard HBPU FG8448 is a two-component, high-build, 100% volume solid polyurethane coating. It provides excellent durability, chemical resistance, aesthetic properties, gloss, and color retention for longer period of time. The component A is a base consisting of superior-quality polyol and component B is a curing agent.

There are three available grades.

1) Mixing Ratio - 3:1 (Site / Factory Application)

2) Mixing Ratio - 2.5:1 (Online Plant Application)

3) Mixing Ratio – 1:1 (Site / Factory Application)

Typical Uses

This coating system is designed for industrial exposures over prepared steel, wood, concrete, and plastic surfaces (with etching primer). It offers exceptional protection in marine applications, sewage and seawater tanks, pipes, and wastewater treatment facilities. It serves as a heavy-duty structural coating for moderately to severely corrosive environments, including sheet pilings, void spaces, chain lockers, and liner for clarifiers.

Features

- Excellent scratch resistance
- Bio-bacterial resistance
- Superior corrosion resistance in severely corrosive environments
- Weatherproof protection for long-term outdoor performance
- Complies with AWWA C222 standard

Technical Properties:

Color / Shades	All shades including Black, Grey, and White
Finish/ Gloss	Smooth & Glossy
Volume Solids	100%
Specific Gravity	1.60 Kg/L
Mix ratio	There are three available grades: 1) 3:1 by volume 2) 2.5:1 by volume 3) 1:1 by volume
Typical Thickness	250-1000 microns [9.8-39.4 mils] per coat wet*
Coverage	0.9-1 m^2/liter at 1000 microns WFT (theoretical)**
Flash Point (Typical)	162^{0}C [324°F]
VOC	Nil
Reducer/Thinner	Not Applicable
Cleaner	Thinner C1

Drying Time

Variant / Surface Temperature	3:1 Mix Ratio @ 25^{0}C	2.5:1 Mix Ratio @ 25^{0}C	1:1 Mix Ratio @ 25^{0}C
Touch dry	20 Mins	1-1.5 Mins	1.5-2.5 Mins
Dry to handle	5-10 Mins	5-10 Mins	5-10 mins
Recoat	30 Mins	30 Mins	2 hours
Hard dry	Overnight	Overnight	4 Hours
Pot Life	9-10 Min	9-10 Mins	4-5 mins

These figures are provided as a guideline only. The drying times mentioned are based on a dry film thickness of 1000 microns (39.4 mils) under standard conditions.

Surface Preparation

All surfaces should be clean, dry, and free from contamination. The surface should be assessed and treated in accordance with ISO 8504:2000.

Steel

Cleanliness: Blast cleaning to min. Sa 2½ (ISO 8501 1:2007).

Roughness: using abrasives suitable to achieve Grade, medium G (50 - 100 um, Rz scale) (ISO 8503-2).

Other surfaces

The coating may be used on other substrates. Please contact TRPL for more information.

Application

Application Method	Thinning	Application Parameters
Spray	-	Use multi components airless spray system with tip pressure 3000 to 4500 Psi or as per required visual surface and thickness of coating and with heating arrangement. **Pressure at nozzle:** 20 -32 MPa (200 to 320 bar) **Nozzle tip sizes:** 35-43 Thau depending on production rate **Spray Angle:** 90^0-110^0
Brush & Roller	-	Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness and uniformly coated surface with the repair material Polyguard RP FG8448 (3:1 by volume)

Thoroughly mix Comp. A (base) with Comp. B (hardener or curing agent) using an online static mixer. Ensure that the mixture is homogeneous before spraying. It is essential to achieve 100% ionization of the spraying film while maintaining the required application temperature.

System Cleaning: Be sure to flush the application equipment thoroughly with Thinner C1 both before and after use.

Filter Size & Cleaning Procedure: Filters should be removed, both in the pump & the spray gun after a certain frequency to avoid coating system choke up and filters recommended sizes shall be 60 and 80 mesh to smooth & trouble-free operations.

Note

- To achieve a thickness of 2000 microns, it is advisable to use a two-pass approach.
- **The theoretical coverage will depend upon surface conditions & application skills. Allow appropriate loss factor.
- It is of vital importance that the nozzle and other parts including the static mixer of the spraying equipment are cleaned properly directly after the work is done due to the PU paint.
- The hoses should be used with high pressure of good quality and no longer than necessary.
- The hose length between the mixer & gun should be less than 1 meter.
- Preferably store both paint components at 20-25^{0}C. Be aware that higher storage temperatures will shorten the life of the paint.
- For stripe/repair coating, however, a lower paint temperature may be favorable in order to get a sufficient pot life.

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Application Conditions	The temperature of the substrate should be a minimum of 10°C and 5°C above the dew point of the air. Best coating adhesion is obtained by utilizing the induction time indicated after mixing the two components and a relative humidity of 85% during the application process. The temperature and the relative humidity should be measured in the vicinity of the substrate. Good ventilation is usually required. In the case of confined areas, ensure proper ventilation arrangements for drying. The coating should not be exposed to oil, chemicals, or mechanical stress until cured. The coating should not be exposed to oil, chemicals, or mechanical stress until cured.
Packing	1) Mixing Ratio - 3:1 (Base: 15 Liters & 200 Liters; Hardener: 5 Liters & 200 Liters) 2) Mixing Ratio - 2.5:1 (Base: 14.3 Liters & 200 Liters; Hardener: 5.7 Liters & 200 Liters) 3) Mixing Ratio – 1:1 (Base: 10 Liters & 200 Liters; Hardener: 10 Liters & 200 Liters)
Storage	**Shelf Life** Base: 12 Months, when sealed Hardener: 12 months, when sealed **Storage Conditions** Store indoors at 4.5^{0}C [40^{0}F] to 38^{0}C [100^{0}F] The product must be stored in accordance with national regulations. Keep the containers in a cool and dry place and well-ventilated area with no direct source of heat or light. Containers must be kept tightly closed when not in use.

Safety: Handle with care. Before & during use, observe all safety labels on packaging and paint containers, consult Material Safety Data Sheets, and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin & eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well-ventilated areas.

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