POWER
For Chemicals and Plast

Category **Iron Protection**

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Super Guard PT

Super Multi-Purpose Phenolic Epoxy Coating

Description: -

Super Guard PT is a two-component polyamine-cured Phenolic / Novolac Epoxy coating, specifically designed as an internal and external lining for storage tanks containing petroleum products such as crude oil, gas, fuels, highly concentrated chemicals, as well as onshore and offshore buried pipelines.

Compared to conventional epoxy coatings, it offers exceptional performance characteristics, including outstanding resistance to highly concentrated chemicals, alkalis, and aggressive solvents, in addition to excellent resistance to elevated temperatures reaching up to 150–180°C, without degradation or loss of performance.

Usage: -

Super Guard PT is used where special performance specifications are required, including:

1- Heavy-Duty Industrial Coatings

- **Internal lining of tanks and pipelines storing concentrated chemicals, fuels, and solvents, particularly in the oil & gas industry**
- **Protective coating for equipment and machinery against corrosion and chemical attack**
- **Coating of fuel, gasoline, and gas storage tanks**
- **Coating of pipelines used for liquid transfer or industrial waste**
- **Coating of service lines and medium-pressure openings**
- **Coating or lining of sewage tanks and water treatment facilities**

2- Marine Applications

- **Used as a protective coating for ships and boats, providing excellent resistance to saltwater corrosion and harsh marine weather conditions.**

3- Industrial Flooring Applications

Designed for floors requiring high chemical resistance and extreme durability, such as:

- **Heavy-duty industrial floors in chemical, fertilizer, pesticide, warehouse, and paper industries**
- **Food production areas exposed to high mechanical and chemical loads**
- **Floors subjected to frequent cleaning with hot water, disinfectants, and organic acids, especially in food and beverage factories.**

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4- Electrical & Electronic Applications

- Encapsulation of microchips due to its excellent electrical insulation, thermal resistance, and thermal stability
- Printed Circuit Boards (PCBs) manufacturing, especially high-density laminated boards

5- Protection & Waterproofing

- Acts as an effective waterproof barrier, sealing pores and cracks in concrete and damp surfaces, allowing a rapid return to service within approximately 24 hours
- Used in repair and rehabilitation works, including injection applications and concrete anchoring

6- Aerospace & Automotive Applications

- Advanced composite materials, used as a resin matrix for components subjected to high mechanical and thermal stresses, such as engine parts and brake components
- Structural adhesives for manufacturing and repair applications requiring high-strength bonding under elevated temperatures

Advantages: -

- Excellent resistance to concentrated acids, alkalis, and aggressive solvents
- Superior resistance to high temperatures up to 150–180°C
- Outstanding adhesion to steel, iron, concrete, and various substrates
- High hardness, durability, and exceptional abrasion resistance
- Excellent resistance to wear and friction, extending service life and reducing maintenance costs
- Excellent electrical and thermal insulation properties
- High resistance to impact and mechanical loads
- Performs reliably under severe operating and environmental conditions
- Ideal for harsh industrial chemicals and wastewater
- Highly suitable for extreme marine and industrial environments
- Provides excellent cathodic protection

Characteristics: At 25 degrees

Color	Colored / Customized
Gloss level	80
Mixing ratio (by weight) A : B	3 : 1
Solids content by weight	95 ± 2%
Density	1.36 ± 0.05 kg / L
Pot life	30 – 40 minutes (decreases with high temperature)
Initial setting time	180 – 240 minutes
Final setting time	24 hours
Overcoating interval	18 – 24 hours
Full hardness	7 days
Wet film thickness (µm)	100 – 170 – 250 – 300
Dry film thickness (µm)	95 – 161 – 238 – 280
Consumption rate (Theoretical)	6.3 m^2 / L (dry thickness 160 microns)
Thinner	Power Solve 6 (5-10%)

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Application Instructions: -

Surface Preparation

1- Steel Surfaces:

- Remove oil and grease according to SSPC-SP1 or AS 1627.1
- Remove salts and contaminants using high-pressure water washing
- Repair welding defects, sharp edges, and scale before surface preparation
- Abrasive blast cleaning according to:
    - Sa 2½
    - ISO 8501-1
    - NACE No. 2
    - SSPC-SP10
- Apply Power Shield 88 Epoxy Primer to the specified thickness before applying Super Guard PT

2- Concrete Surfaces

Note: Concrete must be at least 28 days old, and surface moisture between 4% and 80%

- Compressive strength ≥ 30 N/mm², tensile strength ≥ 1.5 N/mm²
- Surface must be clean, sound, and free from dust, oil, grease, salts, laitance, and mold
- Surface preparation by light shot blasting or grinding in accordance with:
    - NACE No. 6
    - SSPC-SP13
- Repair cracks and voids with suitable filler
- Remove dust using industrial vacuum cleaners
- For flooring applications, apply Power Poxy Primer before Super Guard PT

Application

- Clean the surface using Power Solve 1
- Pre-mix Component A using a slow-speed mechanical mixer
- (300 rpm)
- Add Component B and mix for 2–5 minutes until fully homogeneous
- Avoid excessive mixing speed to prevent air entrapment
- Scrape container sides and bottom during mixing
- Transfer mixture to a second container and re-mix
- Due to rapid Novolac reaction, pour material immediately after mixing
- Apply within 30 minutes for optimal results
- Thin using Power Solv 6 (5–10%) as required
- Apply using notched rollers, then use spiked rollers to eliminate air bubbles
- Clean tools with Power Solve 1

Recommended Coating System – Petroleum Storage Tanks

S	Product Name	Theoretical Coverage
1	Power Shield 88	5.5 – 5.75 m²/L (DFT 125 µm)
2	Super Guard PT	6.3 m²/L (DFT 160 µm)

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Recommended Film Thickness

S	Product Name	WFT (µm)	DFT (µm)
1	Power Shield 88	85	70
		100	85
		150	125
2	Super Guard PT	100	95
		170	161
		250	238
		300	280

Application Precautions

- **Ideal relative humidity for application: 40 – 60%**
- **Ideal surface temperature: 5 – 40°C**
- **Color shade may vary depending on exposure to sunlight, as is typical with epoxy coatings**
- **Recommended dry film thickness: 95 – 280 microns**

Safety precautions: -

- **The product should be applied in a well-ventilated area.**
- **Gloves, protective clothing, and eye goggles should be worn during application.**
- **Never eat, drink, or smoke during application.**
- **In case of skin contamination, wash the contaminated area with water and soap.**
- **In case of eye contamination, immediately wash with abundant lukewarm water and consult a doctor immediately.**
- **Avoid spilling residues of the product into water or soil.**
- **Dispose of product residues or empty containers according to local environmental regulations.**

Packages: -

2 kits compounds [A + B], weight [1, 4, 20 kg].

Storage: -

The product should be stored for two years in tightly sealed containers and under appropriate storage conditions.

Disclaimer:

The technical data provided herein is accurate and correct as of the publication date and is subject to change without prior notice. The information in this datasheet is not exhaustive. Application conditions should comply with those mentioned in this datasheet. The company is not responsible for any losses resulting from application under differing conditions.

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