

# CHEMFIT GARD PW

**Two-Component, Solvent Free, Non-Toxic Epoxy Coating with Outstanding Mechanical and Chemical Properties – For Potable Water Tanks, Pharmaceutical Industries, Concrete, Wood & Metal**

## PRODUCT DESCRIPTION

**ChemFit Gard PW** is a two-component, solvent-free, non-toxic epoxy coating with outstanding mechanical and chemical properties. This high-build, 100% solids formulation provides a tough, glossy, and impervious protective lining for a wide range of substrates, including concrete, wood, and metal. It is specifically formulated for applications requiring a non-toxic, easy-to-clean surface, making it suitable for contact with potable water, food processing areas, and environments with stringent hygiene requirements. The coating offers excellent resistance to a wide range of chemicals, corrosive vapours, and sewage, ensuring long-lasting protection and durability

## PRIMARY APPLICATIONS

**ChemFit Gard PW** is recommended for use in conditions such as:

- **Potable Water Tanks:** Internal lining for drinking water storage tanks (above and below ground) and reservoirs.
- **Pharmaceutical & Food Industries:** Wall and floor coating in pharmaceutical facilities, food processing plants, dairies, and breweries.
- **Industrial Structures:** Protective coating for concrete and steel in water treatment plants, sewage works, and chemical facilities.
- **General Substrates:** Provides a durable, chemical-resistant finish on concrete, wood, and metal surfaces.
- **Agricultural & Other Facilities:** Coating for silos, agricultural enterprises, and other hygienic environments.

## KEY FEATURES AND BENEFITS

- **Solvent-free & Non-toxic:** Suitable for direct contact with potable water and safe for use in food and pharmaceutical environments. Complies with BS 6920 for potable water contact.
- **Outstanding Mechanical Properties:** High-build formulation provides excellent abrasion, impact, and chemical resistance. It has a Shore D hardness of 80 and can withstand a wide range of chemicals and corrosive vapours.
- **Impervious & Hygienic:** Creates a seamless, tough, glossy finish that is easy to clean and does not support the growth of bacteria.
- **Durable & Versatile:** Can be used on both concrete and steel surfaces and is resistant to sewage and various chemicals

## MECHANICAL PROPERTIES

Property	Value (Typical, 7 Days @ 25 °C)
Shore D Hardness	~80
Tensile Strength	~12 N/mm <sup>2</sup>
Tensile Adhesion Strength	≥ 1.5 N/mm <sup>2</sup> (or concrete failure)
Abrasion Resistance	~50 mg (14 d / 23 °C)
Water Absorption	0.37%
Temperature Resistance (Dry Heat)	50 °C
Temperature Resistance (Wet Heat)	Up to 80 °C (temporary)

## PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance / Colour	Mixed: Light Grey or White
Basis	Epoxy Resin
Packaging	Available in 20 kg pails or ready-to-mix units
Shelf Life	12 months from date of production
Density (Mixed)	~1.57 – 1.62 kg/l (23 °C)
Solid Content (by weight/volume)	~100%
Volatile Organic Compound (VOC)	< 100 g/L

## PACKAGING AND STORAGE

### Packaging:

- 20 kg pail (pre-weighed resin + hardener kit)

### Storage:

- Store in original sealed containers at +10°C to +30°C
- Protect from direct sunlight, moisture, and freezing
- Keep containers tightly closed when not in use
- Store in dry conditions

**Shelf life:** 12 months from date of manufacture when stored properly

## DOSAGE AND COVERAGE RATES

**Coverage:** 3 – 4 m<sup>2</sup> per kg (approximately 0.25 – 0.33 kg/m<sup>2</sup>). This theoretical value achieves a dry film thickness of approximately 200 microns per coat.

System Structure	Product / Layer	Consumption (approx.)
Primer (Concrete)	1-2 layers of compatible epoxy primer (e.g., ChemFit EP Primer)	0.15 – 0.20 kg/m <sup>2</sup> /layer
Top Coats	Minimum 2 layers of ChemFit Gard PW	0.25 – 0.33 kg/m <sup>2</sup> /layer

**Total System Consumption:** Approximately 0.8 – 1.0 kg/m<sup>2</sup> for a complete system (primer + 2 top coats).

**NOTE:** The coverage rate of 3-4 m<sup>2</sup>/kg is theoretical and based on a smooth, non-porous surface. Actual coverage will vary depending on substrate porosity, surface profile, method of application, and material wastage.

## APPLICATION GUIDELINES

### Surface Preparation:

- **General:** The substrate must be sound, clean, dry, and free from all traces of dust, laitance, oil, grease, curing compounds, and loose particles.
- **Concrete:** Must be fully cured (3-6 weeks old), have a compressive strength of min. 25 N/mm<sup>2</sup>, and a moisture content of less than 4%. Prepare by mechanical methods such as shot blasting or grinding to achieve an open, profiled surface (CSP 2-3).
- **Steel:** Must be blast cleaned to a near-white metal finish (Swedish Standard SA 2½) and free from all rust, mill scale, and other deposits.

### Mixing:

- Stir component A (Resin) thoroughly prior to use.
- Add component B (Hardener) to component A according to the specified mix ratio (e.g., 4:1 by weight; always refer to the product label).
- Mix thoroughly with a slow-speed electric stirrer (max 400 rpm) for at least 3 minutes, taking care to entrain as little air as possible.
- Allow the mixture to stand for approximately 2 minutes to deaerate before application.
- **Pot Life:** Approximately 30-40 minutes at 25°C.

### Application:

- **Primer (For Concrete):** Apply a compatible epoxy primer (e.g., ChemFit EP Primer) at a rate of 0.15-0.20 kg/m<sup>2</sup>. On highly porous surfaces, a second primer coat may be necessary.
- **Top Coats:** Apply **ChemFit Gard PW** by airless spray, roller, or stiff brush.
- Apply a minimum of two coats to achieve the desired total system thickness.
- Apply the second coat after the first coat has become touch dry (e.g., 5 hours minimum at 25°C), but within the maximum overcoating window of 2 days.
- **Application Conditions:** Apply when ambient and substrate temperatures are between +5 °C and +40 °C, and relative air humidity is below 80%. Ensure the substrate temperature is at least 3°C above the dew point to prevent condensation.

### Curing:

- Protect freshly applied coating from damp, condensation, and direct water contact for at least 24 hours.
- The coating becomes fully cured after 7 days at 25°C.
- For potable water applications, follow local authority regulations for cleaning and disinfection procedures before the tank is put into service.

## HEALTH AND SAFETY

Epoxy resins and hardeners may cause skin and eye sensitisation and irritation. If eye contact occurs, rinse with water for 15 minutes and seek medical attention. For skin contact, wash immediately with soap and water and remove contaminated clothing. If swallowed, seek medical attention immediately – do not induce vomiting. Use gloves (nitrile), safety glasses, and protective clothing during handling. Ensure adequate ventilation – use respiratory protection if ventilation is poor. Refer to the Safety Data Sheet for detailed information.

## CLEANG OF TOOLS

Clean all brushes, rollers, mixing equipment, and spillages with xylene, acetone, or epoxy thinner immediately after use before material cures. Dried material requires mechanical removal. Dispose of cleaning materials in accordance with local regulations.

## APPROVALS AND STANDARDS

**ChemFit Gard PW** conforms to the following standards:

- **Potable Water:** Conforms to BS 6920 for use in contact with potable water.
- **Performance Testing:** ASTM D4060 (Abrasion Resistance), ASTM D4541 / C1583 (Adhesion), ASTM D638 (Tensile Strength).
- **Quality Assurance:** ISO 9001 certified manufacturing processes.
- **Environmental:** Low VOC (<100 g/L), contributes to green building certification credits.
- **Composition:** Solvent-free, non-toxic, and 100% solids epoxy coating.

## LEGAL NOTES

*All technical data provided in this Product Data Sheet is based on laboratory testing under controlled conditions. Actual field performance may vary due to differences in substrates, application methods, site conditions, and environmental factors. ChemFit makes no warranty of merchantability or fitness for a particular purpose. Users shall conduct their own trials to validate product suitability for the intended application. ChemFit reserves the right to modify product specifications without prior notice. For the most current documentation, request the latest Product Data Sheet and Safety Data Sheet from ChemFit.*

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