CHEMFIT EPOXYHYG 183W CR

2-Part Water Dispersed Epoxy Seal Coat – For Hygienic Areas

PRODUCT DESCRIPTION

ChemFit EpoxyHyg 183W CR is a two part, water dispersed, solvent free, coloured epoxy seal coat specifically formulated for hygienic areas. This waterborne epoxy coating cures to a silky matte finish and provides an impervious, easy-to-clean surface with good chemical and mechanical resistance. The water dispersed formulation offers low odour and low VOC emissions, making it suitable for use in occupied and confined spaces. It is water vapour permeable, allowing the substrate to breathe while remaining impervious to liquid water. Ideal as a final seal coat for epoxy and cementitious flooring systems, as well as a light-duty coating for concrete and screed surfaces in hygienic environments.

PRIMARY APPICATIONS

ChemFit EpoxyHyg 183W CR is recommended for use in conditions such as:

- Final seal coat for epoxy and cementitious flooring systems in hygienic areas
- Coloured coating for concrete and cementitious substrates in cleanrooms, hospitals, and pharmaceutical facilities
- Wall and ceiling coating for food processing areas, breweries, laboratories, and abattoirs
- Light-duty protective coating for production areas, warehouses, showrooms, and car park decks
- Tunnel walls, decontaminable areas, and waste water treatment facilities

KEY FEATURES AND BENEFITS

- **Two part, water dispersed** – Low odour, low VOC, environmentally friendly
- **Solvent free** – Safe for indoor use and occupied spaces; will not taint foodstuffs
- **Water vapour permeable** – Allows substrate to breathe; prevents blistering
- **Good chemical and mechanical resistance** – Good abrasion and impact resistance
- **Impervious to liquids** – Seamless, easy-to-clean, hygienic surface
- **Silky matte finish** – Aesthetic appearance with low glare
- **Moisture tolerant** – Can be applied to damp (but not wet) concrete surfaces
- **Water dilutable** – Can be thinned with up to 10% water for first coat penetration
- **Good adhesion** – Excellent bond to dense concrete and properly prepared substrates
- **Non-toxic** – Safe for use in food processing areas
- **Available in standard RAL colours** – RAL 7032, 7035, 9010, 1001, 6010, 6011
- **Packaged in Part A: 10 kg + Part B: 6 kg unit** – Convenient ready-to-mix set

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Part A: Coloured liquid; Part B: Transparent liquid
Colour	Range of RAL colours (RAL 7032, 7035, 9010, 1001, 6010, 6011)
Finish	Silk / Silky matte
Basis	Waterborne epoxy resin
Type	Two part, solvent free
Density (Part A)	~1.28 kg/L
Density (Part B)	~1.09 kg/L
Density (mixed)	~1.22 kg/L
Solids content (by weight)	~55%
Solids content (by volume)	~43%
Mix Ratio (by weight)	Part A : Part B = 70 : 30
Pot Life (at +20°C)	90 – 120 minutes
Pot Life (at +30°C)	30 – 60 minutes
Touch Dry (at +20°C)	~4 hours
Recoat Time (at +20°C)	12 – 24 hours
Foot Traffic	24 – 36 hours
Full Cure (at +20°C)	7 days
Application Temperature	+10°C to +30°C
Substrate Temperature	Must be ≥3°C above dew point
Relative Humidity	Max. 80%
Substrate Moisture	< 6% (no rising moisture)

MECHANICAL PROPERTIES

Property	**Value**
Abrasion Resistance	120 – 250 mg weight loss (Taber Test)
Water Vapour Transmission	~1.5 g/h/m²
Thermal Resistance (dry heat – permanent)	+50°C
Thermal Resistance (dry heat – short term)	+80°C (7 days)
Thermal Resistance (dry heat – max 12 hours)	+100°C

CHEMICAL RESISTANCE

- Resistant to many chemicals including oils, fuels, dilute acids, and alkalis
- Good resistance to cleaning agents and disinfectants used in hygienic areas
- For a detailed chemical resistance table specific to your application, contact **ChemFit** technical service

ANTIMICROBIAL PERFORMANCE

ChemFit EpoxyHyg 183W CR is formulated to provide effective antimicrobial protection for hygienic environments. The coating resists the growth of bacteria, mould, mildew, and fungi on the coated surface

Microorganism	Result
Staphylococcus aureus (MRSA)	Proven inhibition
Escherichia coli (E. coli)	Proven inhibition
Salmonella	Proven inhibition
Mould and Mildew	Resists growth
Fungi	Resists growth
Bacteria	Generally resistant to bacterial colonization

Test standards:

- ISO 22196 / JIS Z 2801 – Antibacterial activity measurement on plastic and non-porous surfaces
- AATCC 30 – Antifungal assessment and mildew resistance test
- ASTM G21 – Antifungal activity testing

PACKAGING AND STORAGE

Packaging:

- Part A: 10 kg container
- Part B: 6 kg container
- 16 kg total ready-to-mix set

Storage:

- Store in original sealed containers at +15°C to +30°C
- Protect from direct sunlight, moisture, and freezing
- Store in dry conditions

Shelf life: 12 months from date of manufacture when stored properly in unopened containers

DOSAGE AND COVERAGE RATE

- **Primer coat (diluted with 5-10% water):** consumption 0.15 – 0.25 kg/m², coverage per 16 kg set ~64 – 106 m²
- **Standard coat (undiluted):** consumption 0.10 – 0.15 kg/m², coverage per 16 kg set ~106 – 160 m²
- **Two coat system (recommended):** consumption 0.20 – 0.30 kg/m² total, coverage per 16 kg set ~53 – 80 m²
- **Three coat system (for demanding areas):** consumption 0.30 – 0.45 kg/m² total, coverage per 16 kg set ~35 – 53 m²

NOTE: Coverage is approximate; varies with substrate porosity, surface profile, application method, and number of coats. For porous surfaces, the first coat may be diluted with up to 10% clean water to aid penetration.

APPLICATION GUIDLINES

Surface Preparation:

- Substrate must be sound, clean, dry, and free from dust, oil, grease, laitance, curing compounds, and loose particles
- Mechanically abrade (shot blasting or grinding) to achieve open texture
- Substrate moisture content must be < 6% with no rising moisture
- Substrate temperature must be at least +3°C above dew point to prevent condensation
- For application over existing epoxy or cementitious systems, ensure substrate is clean and sound

Priming:

- On porous substrates, apply a priming coat diluted with up to 5-10% clean water at 0.15 – 0.25 kg/m²
- On dense cementitious surfaces, the first coat may be diluted with up to 10% water to aid penetration
- Allow primer to dry before applying subsequent coats

Mixing:

- Pre-mix Part A (resin) thoroughly to redistribute any settlement
- Add Part B (hardener) to Part A according to ratio (70:30 by weight)
- Mix with low-speed drill (300-400 rpm) for 2-3 minutes until uniform
- Pour into another container and mix again for 1 minute to ensure thorough blending
- Use within pot life: ~90-120 minutes at +10°C, ~90-120 minutes at +20°C, ~30-60 minutes at +30°C

Application:

- Apply by short-pile roller, brush, or airless spray
- For best results, apply two coats at right angles to each other
- Apply second coat after first coat is touch dry (minimum 12 hours at +20°C, maximum 5 days)
- Maintain wet edge to avoid lap marks
- For roller application, use short-nap synthetic roller

Curing Times (at +20°C):

- Touch dry: ~4 hours
- Foot traffic: ~24 – 36 hours
- Light traffic: ~3 days
- Full chemical resistance: 7 days

Curing Time Between Coats (at +20°C):

- Over primer: minimum ~12 hours, maximum ~48 hours
- Over same material: minimum ~15 hours, maximum ~5 days

Limitations:

- For interior use only
- Do not apply below +10°C or if relative humidity exceeds 80%
- Do not apply if substrate temperature is below dew point (+3°C margin)
- Protect from water, condensation, and mechanical damage during cure
- Under direct UV exposure, some discolouration and colour deviation may occur – this has no influence on function and performance

HEALTH AND SAFETY

Water dispersed epoxy may cause skin and eye sensitization and irritation. If eye contact occurs, rinse immediately with plenty of water for 15-20 minutes and seek medical attention. For skin contact, wash immediately with soap and water; remove contaminated clothing. If swallowed, do not induce vomiting; rinse mouth and drink water, then seek medical attention. Use gloves (nitrile), safety glasses, and protective clothing during handling. Ensure adequate ventilation. Refer to the Safety Data Sheet for detailed information.

CLEAING OF TOOLS

Clean all brushes, rollers, mixing equipment, and spillages with warm soapy water immediately after use before material cures. Dried material requires mechanical removal.

APPROVALS AND STANDARDS

ChemFit EpoxyHyg 183W CR complies with the following standards:

- **EN 1504-2** – Surface protection systems for concrete (Coating) – CE marked
- **EN 13813** – Screed material and floor coatings
- **BS476: Parts 6 and 7** – Combined system can achieve Class 'O' fire rating
- **ISO 22196 / JIS Z 2801** – Antibacterial activity measurement
- **AATCC 30** – Antifungal assessment and mildew resistance test
- **Cleanroom Suitable Materials (CSM)** – Particle emission and outgassing classification (where applicable)
- **ISO 9001** – Quality management system certified
- **Low VOC** – Meets environmental standards for indoor air quality
- **Solvent free** – Safe for confined spaces; will not taint foodstuffs
- **Water vapour permeable** – Allows substrate to breathe
- Two part, water dispersed epoxy seal coat
- Suitable for hygienic areas, cleanrooms, food processing facilities, hospitals, and pharmaceutical industries

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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