CHEMFIT HYG-GARD 205W

Single Component Waterborne Modified Acrylic Resin Coating with Mid-Sheen Finish Containing Antimicrobial – For Surface Coating for Hygienic Areas

PRODUCT DESCRIPTION

ChemFit HygGard 205W is a single component, waterborne modified acrylic resin coating with a mid-sheen finish containing an antimicrobial agent. This ready-to-use formulation is specifically designed as a surface coating for hygienic areas where microbial contamination is a critical concern. The waterborne, low-VOC formulation provides a durable, easy-to-clean, and aesthetically pleasing mid-sheen finish that actively contributes to surface hygiene by inhibiting the growth of harmful bacteria. This product is effective against a broad spectrum of bacteria, including **Staphylococcus aureus** (Gram-positive) and **Escherichia coli** (Gram-negative), as demonstrated by testing according to **ISO 22196:2011**. It is ideal for use on walls and ceilings in environments requiring high standards of cleanliness.

PRIMARY APPICATIONS

ChemFit HygGard 205W is recommended for use in conditions such as:

- Surface coating for walls and ceilings in hygienic areas
- Food processing facilities, commercial kitchens, and breweries
- Pharmaceutical manufacturing, laboratories, and cleanrooms
- Hospitals, healthcare facilities, clinics, and operating theaters
- Schools, daycare centers, and public buildings
- Wet areas, changing rooms, showers, and locker rooms
- Animal research facilities and veterinary clinics
- Clean manufacturing environments (electronics, medical devices)

KEY FEATURES AND BENEFITS

- **Single component** – Ready to use; no on-site mixing required
- **Waterborne** – Low VOC, environmentally friendly, low odor, easy clean-up
- **Contains antimicrobial** – Proven to inhibit Staphylococcus aureus and E. coli (ISO 22196:2011)
- **Mid-sheen finish** – Attractive satin appearance; low glare, easy to clean
- **Durable finish** – Good adhesion, scrub resistance, and washability
- **Good resistance to cleaning regimes** – Withstands repeated cleaning with mild detergents and cleaning solutions
- **Breathable** – Allows moisture vapor transmission from the substrate
- **Good opacity** – Excellent coverage and hiding power
- **Fast drying** – Quick recoat time for efficient project completion
- **Mildew resistant** – Resists fungal growth in humid conditions
- **Good water vapour permeability** – Prevents blistering and peeling

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Liquid
Color	White (tintable to a wide range of colors)
Finish	Mid-sheen / Satin (approx. 50-60% gloss at 85°)
Basis	Waterborne modified acrylic resin with antimicrobial additive
Type	Single component, ready to use
Antimicrobial agent	Zinc-based or silver-based dry-film preservative
Density	1.2 – 1.3 kg/L
Solids content (by volume)	32 – 37%
VOC content	< 30 g/L (EU Cat A/a limit)
Touch dry (at 20°C/50% r.h.)	1 – 2 hours
Recoat time (at 20°C/50% r.h.)	2 – 4 hours
Full cure	7 days
Application temperature	+10°C to +35°C
Substrate temperature	+10°C to +35°C; must be ≥3°C above dew point
Relative humidity	Max. 80%

ANTIMICROBIAL PERFORMANCE

Property	**Result**
Test method	ISO 22196:2011 (JIS Z 2801:2000 equivalent)
Target microorganisms	Staphylococcus aureus (ATCC 6538P), Escherichia coli (ATCC 8739)
Antibacterial activity	Proven inhibition – reduction of ≥ 95% up to 99.99%

NOTE: The antimicrobial activity according to ISO 22196:2011 involves inoculation of the test surface with a bacterial suspension, covering with a sterile film, and incubating at 35°C for 24 hours at ≥90% relative humidity, after which the reduction in bacterial counts is calculated compared to an untreated control surface. Studies have demonstrated that antimicrobial coatings tested according to this standard can achieve bacterial reductions between 1.21 and 5.3 $\log_{10}$ units (approximately 94% to 99.999%). The antimicrobial additive works as a dry-film preservative to protect the coating from colonization and degradation by bacteria, fungi, mould, yeast, and algae.

PACKAGING AND STORAGE

Packaging:

- 5 L container
- 15 L container

Storage:

- Store in original sealed containers at +5°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

DOSAGE AND COVERAGE RATE

Application	Consumption (approx.)	Coverage per 5 L	Coverage per 15 L
Single coat (smooth, sealed surface)	0.10 – 0.12 L/m²	40 – 50 m²	120 – 150 m²
Single coat (porous or textured surface)	0.12 – 0.16 L/m²	30 – 40 m²	90 – 120 m²
Two coat system (recommended)	0.20 – 0.24 L/m² total	20 – 25 m²	60 – 75 m²

Coverage: Approximately 10 – 12 m² per litre per coat, depending on substrate porosity and surface profile.

Recommended system:

- For new or highly porous substrates: one primer coat + two top coats
- For sealed or previously coated substrates: two top coats

NOTE: Coverage is approximate; varies with substrate porosity, surface profile, and application method. Theoretical values are based on standard substrate conditions.

APPLICATION GUIDLINES

Surface Preparation:

- Substrate must be sound, clean, dry, and free from dust, oil, grease, laitance, curing compounds, mould, mildew, and any contaminants
- Remove all loose or deteriorated material; repair cracks and holes with suitable filler
- For glossy surfaces, abrade to achieve profile
- For previously painted surfaces, ensure good adhesion and compatibility
- On new plaster or concrete, allow to cure fully (minimum 28 days) and apply suitable primer/sealer

Priming:

- For porous, chalky, or highly absorbent substrates, apply compatible acrylic primer/sealer
- For new drywall or plaster, use appropriate primer to seal and equalize absorption
- For wet rooms and humid areas, apply moisture sealer primer
- Allow primer to dry according to primer product data sheet before applying **ChemFit HygGard 205W**

Mixing:

- Stir thoroughly before use to ensure uniform consistency
- Do not thin or dilute with water; for spray application, follow manufacturer's guidelines

Application:

- Apply by brush, short-nap roller, or airless spray
- For roll application, use short-nap synthetic roller (10-12 mm nap)
- Apply uniformly at specified consumption rate
- Maintain wet edge to avoid lap marks
- For best results, apply two coats; allow minimum 2-4 hours between coats at 20°C
- For spray application, follow manufacturer's guidelines; ensure proper ventilation

Curing:

- Protect from water, condensation, and mechanical damage for minimum 24 hours
- Light cleaning after 72 hours at 20°C
- Full cure (maximum film hardness and durability): 7 days
- 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)
- Do not apply if rain or heavy condensation is expected within 24 hours

HEALTH AND SAFETY

Waterborne acrylic coating may cause mild eye and skin irritation. If eye contact occurs, rinse immediately with plenty of water for 15-20 minutes and seek medical attention if irritation persists. For skin contact, wash immediately with soap and water. If swallowed, do not induce vomiting; rinse mouth and drink water, then seek medical advice. Use gloves, safety glasses, and protective clothing during handling. Ensure adequate ventilation when using in confined spaces. Refer to the Safety Data Sheet for detailed information.

CLEAING OF TOOLS

Clean all brushes, rollers, and equipment with warm soapy water immediately after use before coating dries. Dried material requires mechanical removal. Dispose of cleaning materials in accordance with local regulations.

LIMITATIONS

- For interior use only; not suitable for exterior exposure without UV-resistant top coat
- Do not apply on substrates with rising moisture or hydrostatic pressure
- Do not apply to floors or any surface subject to water immersion or prolonged contact with water (including shower enclosures, saunas, steam rooms)
- Antimicrobial properties are surface-bound; effectiveness may be reduced if coating is abraded, damaged, or covered by dirt/film
- Regular cleaning is still required; antimicrobial coating is an adjunct to, not a replacement for, good hygiene practices
- Do not use in direct food contact applications; for food processing areas, apply to walls and ceilings (not food contact surfaces)
- Not recommended for use in HVAC duct work

APPROVALS AND STANDARDS

ChemFit HygGard 205W complies with the following standards:

- **ISO 22196:2011 (JIS Z 2801:2000)** – Proven antibacterial activity against Staphylococcus aureus and Escherichia coli
- **EN 13300** – Water vapour permeability, wet scrub resistance class 1
- **ISO 11998** – Wet scrub resistance testing
- **M1 Classification** – Very low emission class (Finland)
- **ISO 9001** – Quality management system certified
- **Low VOC** – LEED compliant for low-emitting materials; meets EU 2010 Directive (Cat A/a) 30 g/l limit
- Single component, waterborne modified acrylic resin coating with mid-sheen finish containing antimicrobial
- Suitable for surface coating for hygienic areas

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.

CHEMFIT CONSTRUCTION CHEMICAL AND SERVICES LIMITED

Office No. 8, 1KM Near Gaey Soap, Sargodha Road, Faisalabad
Tel: +923364544837
Web: www.chemfitchemicals.com
Email: chemfit.pro@gmail.com