

CHEMI-COAT®

A high build epoxy resin with excellent chemical resistance



AREAS OF USE

- Any area where chemicals are stored or used
- Chemical bund areas

FEATURES

- Versions available: Chemi-Coat®, Chemi-Coat® Rapid, Chemi-Coat® Anti Slip, Chemi-Coat® Cold Cure, Chemi-Coat® Acid Strength
- One coat, high build 100% solids epoxy resin coating – gives excellent chemical and wear resistance with just one coat
- Chemi-Coat® Acid Strength resists up to 98% Sulphuric Acid
- Glossy, attractive, easily cleaned finish
- Low odour – safe to use in confined spaces
- Cures within 8 hours to withstand light traffic (see 'Rapid' versions)
- Superior performance demonstrated by ISO testing to CE Mark EN1504-2

DESCRIPTION

Watco has developed a range of formulations to offer excellent resistance to chemical spillages. This one coat, high build, virtually solvent free epoxy resin floor coating, guarantees exceptional wear and offers superior protection for concrete floors.

The 'rapid' versions cure within just 8 hours to withstand light traffic saving on downtime, whilst the 'anti slip' versions provide a good level of slip resistance where needed.

Chemi-Coat® Cold Cure can be applied in cold conditions and also comes in a slip resistant version.

Chemi-Coat® Acid Strength has a modified formula which makes it more resistant to acid – up to 98% Sulphuric. Please contact us for details regarding other chemicals.

All grades now carry CE Mark EN1504-2 and have impressive test results for hardness, abrasion, scratch and impact resistance, as well as for adhesion, slip resistance and flexibility. They also offer superior chemical resistance, and have an A+ VOC emissions rating with a low level of VOC.

SPECIFICATION

Composition	High build, 100% solids epoxy resin.
Number of Components	1 x curing agent and 1 x resin.
Finish	Coloured, high gloss, smooth (anti slip also available).
Primer Required	Not usually. See section overleaf headed 'Priming'.
Number of Coats	1
Dry Film Thickness	220 microns.
Wet Film Thickness	220 microns.
Usage Interior/ Exterior	Interior.
Application Tools	Medium pile roller. Cut in using a brush.
Minimum Application Temperature	Air temperature 15°C Floor temperature 10°C (5°C for 'Cold Curing' versions).
Suitable For	Concrete, sand and cement, well bonded paint and some metals. The moisture content of concrete should be less than 75% RH.
Pack Size	4L
Coverage	18m ²

Pot Life	25 mins at 20°C ('Rapid' version) 20 mins at 20°C)
Mix Ratio (by weight)	100 parts resin : 24 parts curing agent.
Cleaning Tools	It is not practical to clean applicators and they should be discarded after use.
Shelf Life	24 months in unopened container.
Cleaning	Normal industrial cleaners. Do not steam clean or subject to temperatures in excess of 60°C.
Storage	Between 15°C-25°C for at least 8 hours prior to use. Do not allow to freeze.
Principle Limitations Please contact us regarding applications not described here.	Most self-levelling compounds cannot be painted – please ask for details. Unsuitable for asphalt. Painting chequer plate can be a problem since coatings can wear prematurely off the 'high spots'. Do not apply to damp surfaces.

COLOURS

Light Grey*
Mid Grey*
Dark Grey
Black
Mid Blue
Mid Green
Tile Red
Stone
Safety Yellow

*Chemi-Coat® Acid Strength is available in these colours only.

While great care is taken with the colour samples shown, no guarantee can be given that they represent exactly the colours offered.

CURING TIMES (HOURS)

	Recoat Times	Touch Dry	Light Traffic	Heavy Traffic
Standard, Anti Slip, Acid Strength	16 at 10°C, 10 at 20°C, 6 at 30°C	12 at 10°C, 6 at 20°C, 4 at 30°C	24 at 10°C, 16 at 20°C, 8 at 30°C	48 at 10°C, 48 at 20°C, 16 at 30°C
Cold Cure	24 at 5°C, 16 at 10°C, 12 at 20°C, 6 at 30°C	16 at 5°C, 12 at 10°C, 6 at 20°C, 4 at 30°C	30 at 5°C, 24 at 10°C, 16 at 20°C, 8 at 30°C	72 at 5°C, 48 at 10°C, 48 at 20°C, 16 at 30°C
Rapid	12 at 10°C, 6 at 20°C, 4 at 30°C	8 at 10°C, 4 at 20°C, 3 at 30°C	16 at 10°C, 8 at 20°C, 6 at 30°C	48 at 10°C, 16 at 20°C, 16 at 30°C

Full Chemical Resistance: 7 days. Light Traffic: Foot, trolley, pallet truck, occasional forklift. Heavy Traffic: Regular forklift, heavy footfall, parked vehicles

TEST RESULTS

<p>Abrasion Resistance ISO 5470-1 Taber test method expresses results in mg on a scale between 0mg (highest resistance) and 3000mg (lowest). A reading below 3000mg is a CE mark pass.</p>	<p>3000mg → 0mg Lowest → Highest</p>	<p>Flexibility ISO 1519 Flexibility is measured using a Mandral Flex Tester, 2mm is the most flexible, 36mm the least.</p>	<p>36mm → 2mm Lowest → Highest</p>
<p>Impact Resistance ISO 6272 Impact is expressed as Newton metres. Greater than 4 Nm is a CE mark pass.</p>	<p>Class 1 >4Nm Class 2 >10Nm Class 3 >20Nm</p>	<p>Gloss Value Rating is a 'Gloss Unit' measured on an Optical Glossmeter.</p>	<p>Matt 0-10%, Low Sheen 10-25%, Eggshell 26-40%, Semi-Gloss 41-69%, Gloss 70-85%, High Gloss +85%</p>
<p>Scratch Resistance ISO 4586-2 Scratch resistance is measured using a Sclerometer and the resistance is measured in Newtons. 1N is the lowest resistance, 20N the highest.</p>	<p>1N → 20N Lowest → Highest</p>	<p>Chemical Resistance Results shown are for tests with commonly used chemicals. Advice can be given for chemicals not listed here: Petrol, 25% Lactic Acid, Diesel Fuel, 10% Hydrochloric Acid, Xylene, 10% Nitric Acid, Salt,</p>	<p>25% Sulphuric Acid, White Spirit, 20% Phosphoric Acid, Bleach, 10% Citric Acid, 20% Ammonia, 20% Caustic Soda, Anti Freeze, Sugar Solutions, Mineral Oil, 10% Oxalic Acid, Detergents, 5% Acetic Acid, Methylated Spirits. Avoid permanent immersion.</p>
<p>Adhesion Test ISO 2409 Cross-Cut Test method. Class 0 is highest adhesion, Class 5 is lowest.</p>	<p>Class: 5 → 4 → 3 → 2 → 1 → 0 Lowest Highest</p>	<p>Chemi-Coat® Acid Strength Rating Key (at 25°C): 0 = No Effect 1 = Stains/Dulls 2 = Blisters 3 = Lifts Film</p>	<p>Acetic Acid 98% (0-1), Ammonia 28% (0), Brake Fluid (0), Calcium Chloride 10% (0), Diesel (0), Formic Acid 38% (1), Petrol (0), Hydrochloric Acid 37% (0), Hydrofluoric Acid 48% (0-1), Nitric Acid 30% (1), Phosphoric Acid 25% (1), Sulphuric Acid 98% (0-1), Xylene (0), Skydrol (0-1)</p>
<p>Adhesion Test EN 1542 Adhesion is expressed in MegaPascals (MPa) or Newton millimetres squared (Nmm²). Greater than 2 MPa is a CE mark pass.</p>	<p>>2MPa (Nmm²) = test pass</p>	<p>Water Permeability EN 1062-3 To achieve a CE mark, the measurement must be less than 0.1 kg/m²(24 h)^{0.5}</p>	<p>CE Marking Critical Value: < 0.1kg/m²/(24 h)^{0.5} W₁ → W₂ → W₃ Lowest Highest</p>
<p>Wolff-Wilborn Hardness Test Also known as the 'pencil test', a 9H reading is the measure of a hardest coating. HB is the softest.</p>	<p>HB → 9H Least Hard → Hardest</p>	<p>Slip Resistance BS7976-2 The Pendulum Test Value (PTV) is measured in wet conditions. A number above 36 indicates a 'low slip potential'.</p>	<p>High: 0-24 PTV Moderate: 25-35 PTV Low: 36+ PTV</p>

STANDARD COMPLIANCE

<p>EN 1504-2 This mark indicates that a coating has passed all the tests required to carry a CE mark.</p>	<p>BREEAM COMPLIANT</p>	<p>VOC LEVEL Anti Slip/ Cold Cure 35g/Litre LOW</p>	<p>VOC LEVEL Rapid 50g/Litre LOW</p>	<p>ISO 16000 The 'Loi Grenelle' measurement of the effect of a product's VOC level within a building. A+ is the top safety rating.</p>	<p>BREEAM COMPLIANT (For refurbishment requirements).</p>
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PREPARATION & APPLICATION

SURFACE PREPARATION

Bare Concrete – remove surface laitance, dust and any light dirt or grease deposits using Watco Etch & Clean. Watco Etch & Clean also etches smooth, bare concrete surfaces to provide a key. Flush with clean water and allow surface to dry. For the removal of heavier deposits of oil and grease we recommend Watco Concroff®, again, flush with clean water and allow the surface to dry.

New Concrete – as a guide, new concrete should be left for eight weeks to dry (if the application has to go ahead before this, use Watco New Concrete Primer). The surface should then be prepared using Watco Etch & Clean and thoroughly rinsed away and left to dry prior to applying this coating.

Painted surfaces – abrade to remove any weak or loose paint. Check remaining paint is well bonded. Very smooth, glossy paint should be lightly abraded to provide a key. Watco Bio D can be used to remove grease and oil from painted surfaces. Watco Concroff is a very powerful degreaser for contaminated bare concrete, (do not use on a previously painted surface since it can soften paint).

Priming – is not usually required, but for open textured, or very porous high suction surfaces, such as sand and cement screed, use Watco 4 Hour Epoxy Primer to ensure a uniform finish and to prevent air entrapment bubbles. Very smooth or power floated concrete should be primed with Watco Powerfloat Primer.

Metal – remove any rust and flaking material by disc grinding or wire brushing. Apply the coating immediately after preparation to the clean metal surface. Grease or oil can be removed using Watco Bio D. Allow the metal to dry before coating.

Galvanised Metal – Watco Galvaprim must be used to prepare galvanised metal.

Non-ferrous Metals - for advice, please contact our Technical Department.

MIXING

Remove the two inner tins from the tall outer tin. Stir the contents of each tin thoroughly and pour all of the contents into the outer tin, (scrape around the inside of the tins to remove any residue). Mix the components together thoroughly using a spatula or similar wide bladed tool, (a piece of wooden batten is ideal) and do not thin. Continue mixing until an even colour and consistency are obtained. Do not mix more than one pack at a time. If a paint stirrer fitted to an electric drill is used, also use the spatula to blend in any unmixed material from the sides and bottom of the tin. In the anti slip versions the slip resistant particles are already pre-blended (in the Curing Agent).

APPLICATION

Important - once the contents of the pack have been mixed, a chemical reaction takes place which creates heat. The product should therefore be decanted into a shallow tray to avoid reducing the pot life and used straight away. Best results are obtained in warm (minimum of 15°C), dry conditions with good ventilation. Apply one coat with a medium pile roller, (not foam), working well into the surface of the concrete. On vertical surfaces 2 thin coats are recommended. Do not exceed the maximum coverage of 18m² per 4 litre pack. Do not wash or allow water to lie on the surface for at least 7 days.

SAFETY

Material Safety Data Sheets are available.

