

FloroCrete HD Heavy Duty Trowel Applied Urethane Mortar

Product Description:

FloroCrete HD is a solvent free, low odour, heavy duty, one-step, trowel applied mortar renowned for its thermal shock, heavy impact, abrasion and chemical resistance. It can be installed from 6.0 to 9.5 mm.

Typical Uses, Applications:

FloroCrete HD may be used as a part of the Florock FloroProof moisture mitigation system (contact your Florock representative for details) and is also ideally suited for commercial, industrial and institutional applications, such as:

- Commercial kitchens
- Abattoirs
- Food Processing Plants
- Breweries, wineries & dairies
- Coolers & freezers
- Bottling lines
- Laboratories
- Exterior Surfaces
- Chemical processing
- Sanitise/wash areas

Product Advantages:

- Contains FloroSeptic anti-microbial additive
- Thermal shock resistant
- High chemical & solvent resistance
- High acid & alkali resistance
- Low odour/solvent free installation
- Quick curing formula
- Meets USDA, FDA & OSHA requirements
- Slip resistant
- No topcoat required
- Tolerates dampness

Packaging: FloroCrete HD is packaged and sold by the component. Each batch consists of:

- Part A – Polyol component
- Part B – Isocyanate component
- Part C – FloroCrete HD filler

(Broadcast aggregates are sold separately)

Physical Properties		
Property	Test Method	Results
Compressive Strength	ASTM C579	59 N/mm ²
Tensile Strength	ASTM D638	17.24 N/mm ²
Flexural Strength	ASTM D790	35.16 N/mm ²
Hardness, Shore D	ASTM D2240	85
Bond Strength	ASTM D4541	>3 N/mm ²
Co-Efficient of Friction	ASTM D-2047	Passes ADA recommendations
Co-Efficient of Thermal Expansion	ASTM C531	1.1x10 ⁻² mm/mm/°C
Impact Resistance	ASTM D2794	184 kg cm
Flammability	ASTM E-648	Class I
Abrasion Resistance	ASTM D4060	5 mg loss
Indoor Air Quality		Compliant to CA 01350
Water Absorption	ASTM C413	<0.1%
Resistance to Fungi Growth	ASTM G21	Passes
VOC	EPA Method 24	0
Service Temperature		-45°C to 114°C
*Workable Life, 1 Mixed kit		15 min.
**Cure time at 21° C @ 50% RH		
Set to Touch		8-10 hours
Foot Traffic		12-16 hours
Full Service		24-48 hours
Clean-up Solvent		MEK

Colours: FloroCrete HD is available in Grey, Tile Red and Neutral.

Storage: All containers should be stored at 7° - 29° C and be kept tightly sealed and out of direct sunlight.

**After blending the components, immediately empty from mixing bucket onto the floor.*

***Cooler temperatures require longer cure time and the addition of Flow Additive.*

Coverage:

Each 3 part kit will cover approximately 2.7 m² @ 6mm or 1.8 m² @ 9mm).

Limitations: FloroCrete HD is not to be applied in temperatures below 7°C or above 29°C, or when relative humidity is >85%. Apply only to dry, properly prepared, uncoated, reinforced concrete floor slabs that have a moisture content of <10%. Do not apply if air temperature and/or surface temperature is at or below dew point. During application, protect substrate from exposure to water leakage or condensation from pipes. Do not feather-edge, do not hand-mix material, and do not apply to cracked or unsound substrates. Product is for horizontal use on dry concrete surfaces only.

Substrate Preparation: Mechanically prepare concrete surface using abrasive shot blasting, diamond grinding or other approved method. Ensure that all surface contaminants are removed. Determine that concrete is sound, with appropriate compressive strength. A Schmidt hammer can be used for this purpose. If concrete has strength of less than 3N/mm², do not install FloroCrete HD until concrete has been replaced. FloroCrete HD is not intended for use over existing coatings.

Expansion Joints: In addition to standard slab expansion joint construction, place joints wherever FloroCrete HD is adjacent to dissimilar materials. Isolate areas subject to movement, vibration, thermal stress, load-bearing columns, and vessel sealing rings. Rout-out cracks and fill with FloroCrete HD or RT prior to floor system installation. Treat very large cracks as expansion joints and fill with FloroFlex 6500 JS elastomeric sealant (see System 6500 technical data).

Coving: Prime the area to receive coving with FloroCrete P and scatter the surface using 46 grit silica aggregate. This is a wet on wet application, proceed with cove. For FloroCrete HD coving, mix 1 complete kit of FloroCrete HD with 2x11.34kg bags of FloroCrete coving aggregate. This mix will cover 25 lin/m of 150mm cove and 38 lin/m of 150mm cove).

Chemical Resistance of Mortar	
Reagent	Results
Hydrochloric Acid 37%	R
Hydrofluoric Acid 4%	R
Hydrofluoric Acid 6%	R
Nitric Acid 30%	R
Phosphoric Acid 85%	R
Sulfuric Acid 39%	R
Sulfuric Acid 45%	R
Acetic Acid 10%	R
Acetic Acid 60%	L
Acetic Acid, Glacial 100%	L
Acetic Anhydride 98%	L
Citric Acid 40%	R
Formic Acid 10%	R
Lactic Acid 85%	R
Dibutylamine 100%	R
Ammonium Hydroxide 30%	R
Potassium Hydroxide 50%	R
Sodium Hydroxide 50%	R
Ammonium Chloride (sat'd)	R
Ammonium Sulphate (sat'd)	R
Ammonium Nitrate 50%	R
Ammonium Aqueous 30%	R
Zinc Chloride 50%	R
Ferric Chloride 50%	R
Hydrogen Peroxide 3%	R
Potassium Carbonate (sat'd)	R
Potassium Chloride (sat'd)	R
Sodium Carbonate (sat')	R
Sodium Chloride (sat'd)	R
Sodium Nitrate (sat'd)	R
Sodium Sulphate (sat'd)	R
Sodium Hydro chlorite 10%	R
Diacetone Alcohol 100%	R
Acetone 100%	L
Benzyl Alcohol 100%	R
n-Butyl Alcohol	R
Ethyl Alcohol 100%	R
Glycol Ether Acetone 100%	R
Hexane 100%	R
Is-o-Octane 100%	R
2-Propanol	R
Methyl Alcohol 100%	R
Methylene Chloride 100%	L

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Key:

FloroCrete HD Application:

1. Primer: No primer is required.

2. Mortar: Premix FloroCrete HD component A and add component C (dry material). Blend together with a forced action mixer for 30 seconds making sure aggregate is thoroughly wetted out. Scrape down sides and bottom of container with a flat or straight edge trowel to assure complete mixing. Add Part B to A & C and mix again for 60 seconds. Then, immediately dump mix onto floor or into screed box for application. Be sure to MIX FULL KITS. As temperature will affect mixing, mix when air temperature is between 10°-21° C

Note: Mortar mixers that scrape the mixing vessel may be used to mix Florocrete HD

Note: Flash setting may occur if material remains in bucket too long (10 minutes is max.) or if left in a heap on floor.

Note: Best results are achieved when floor to be coated is divided into areas of 2.4-3 m of wet edge per mechanic. Begin working away from or alongside a wall. Trowel a small area and measure thickness. Use this initial area as a standard and proceed.

Hand Application:

Scoop or pour material from mixer pail along wet edge. Apply FloroCrete HD with a steel plastering or cement finishing trowel 300mm x 100mm. DO NOT COMPRESS material, simply place and smooth material with trowel. Do not use notched hand trowel, power float or power trowel. Set up mixing station as close to area to be coated as possible.

After material is smoothed, use a high quality loop roller or a 10mm nap roller to backroll. Apply little to no pressure to the roller. The backroll will bring liquids to the surface and will smooth minor imperfections. Repeat for each mix.

Chemical Resistance of Mortar	
Reagent	Results
Mineral Spirits 100%	R
Pentane 100%	R
Petroleum Ether 100%	R
Boric Acid 100%	R
Muratic Acid 80%	R
Ethylene Glycol 100%	R
Copper Sulfate (in solution)	R
Benzoic Acid 100%	R
Diesel Fuel 100%	R
Stearic Acid	R
Amyl Acetone	R
Fatty Acid 100%	R
Toluene 100%	R
Xylene 100%	R
Antifreeze 100%	R
Glycol Ether PM 100%	R
Transmission Fluid 100%	R
Freon 100%	R
Glycerin 96%	R
Oleic Acid	R
100 Solvent 100%	R
Kerosene 100%	R
Mineral Oil 100%	R
Brake Fluid 100%	R
Sugar Solution (sat'd)	R
Motor Oil 100%	R
Water	R
MEK & MIBK	L

R - Resistance. Appropriate for long term spills and secondary containment.

L - Limited resistance. Appropriate for splashing and spills that are not promptly cleaned up

F - Not Recommended.

Screed box application:

Pour material from mixer pail into screed box set at a minimum 6 mm thickness material will ooze from the sides of the screed box, this is normal. Pull screed box applying Florocrete HD at a minimum of 6 mm thickness. Smooth the screeded material with a steel plastering or cement finishing trowel 300mm x 100mm. DO NOT COMPRESS material, simply smooth material with trowel. After material is smoothed, use a high quality loop roller or a 10mm nap roller to backroll. Apply little to no pressure to the roller. The backroll will bring liquids to the surface and will smooth minor imperfections. Repeat for each pull. Overlap screed box with previous pull.

3. Topcoat (Optional): Use FloroCryl, FloroSpartic or FloroWear 7100. Consult your Florock Representative for details.

Cure Time: The chemical curing of FloroCrete HD is affected by temperature. At 21°C curing temperature, expect to walk on the floor in 12 hours, with full traffic after 24 hours. At 7°C curing temperature, allowing foot traffic may take 48 hours or longer; therefore, it is imperative that air and substrate temperatures be kept above 21°C for best cure.

Technical Notes:

FloroCrete Flow Additive - Add up to 0.5ltr to a kit of FloroCrete HD, RT or SLX to improve the flow in cold or warm conditions.

FloroCrete Catalyst – May be added to shorten cure time. Contact your Florock Representative for details.

Maintenance: FloroCrete HD System floors can be maintained by using a stiff mechanical brush and/or hot pressure washer or steam cleaner. Surfactant-type detergents or degreasers may be used. However, avoid products containing Phenol, as this may damage colour. Though FloroCrete HD is highly chemical resistant, a test patch is recommended prior to using any harsh cleaners.

Please read material safety data before using product.

Disclaimer:

All statements and recommendations are based on experience we believe to be reliable. The use or the application of these products being beyond the control of the Seller or Manufacturer, neither Seller nor Manufacturer make any warranty, expressed or implied, as to results or hazard from its use. The suitability, risk and liability of a product for an intended use shall be solely up to the User.