FloroCrete HD 3.0

Trowel Grade Urethane Mortar

Product Description: FloroCrete HD is a solvent free, low odor, heavy-duty, one-step, trowel-applied mortar known for its thermal shock, heavy impact, abrasion and chemical resistance. It allows moisture to move through it at a safe rate and can be installed from 1/4" to 3/8" thickness (6.0 mm 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 ideally suited for commercial, industrial and institutional applications, such as:

- Kitchens/Fryer Areas
- Vehicle Service Areas
- Food Processing Plants
- Breweries, Wineries & Dairies
- Walk-In Coolers & Freezers
- Bottling Facilities
- Laboratories
- Suitable for Indoor & Outdoor Use
- Chemical Processing
- Sanitation & Wash-Down Areas

Product Advantages:

- CA 01350 Air Quality Compliant
- ADA Compliant
- LEED Credits Available
- Meets FDA, USDA & CFIA Standards
- VOC Compliant/Low Odor
- Thermal Shock Resistant
- Heat Resistant to 235º F
- Contains Antimicrobial Additive
- No Topcoat Required
- Tolerates Dampness
- High Chemical & Abrasion Resistance
- Can be Applied to 7 to 14 Day Old Concrete

System Physical Properties

Property	Test Method	Results
Compressive Strength	ASTM C579	9,000 psi
Tensile Strength	ASTM D638	4,200 psi
Flexural Strength	ASTM D790	5,100 psi
Hardness, Shore D	ASTM D2240	85
Bond Strength	ASTM D4541	>400 psi
Co-Efficient of Friction	ASTM D-2047	Passes ADA Recommendations
Co-Efficient of Thermal Expansion	ASTM C531	$1.1x10^{-5}$ in/in/ºF
Impact Resistance	ASTM D2794	>160 in lbs.
Flammability	ASTM E-648	Class I
Abrasion Resistance	ASTM D4060	40 mg loss
Indoor Air Quality	CA 01350	Compliant
Water Absorption	ASTM C413	<0.1%
Resistance to Fungi Growth	ASTM G21	Passes
VOC	EPA Method 24	0
Service Temperature	Lab Test	-100º F to 235º F
Workable Life*	1 Mixed Kit	15 min.
Cure time at 70º @ 50% RH**		
Set to Touch		8-10 hours
Foot Traffic		12-16 hours
Full Service		24-48 hours
Clean-Up Solvent		MEK

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

***Cooler temperatures require longer cure time.* See *FloroCrete Catalyst Tech Data for more information*.

Packaging: FloroCrete HD components are sold separately. A complete batch consists of:
• Part A – Polyol Component
• Part B – Isocyanate Component
• Part C – FloroCrete HD Filler
Optional: A variety of broadcast media are sold separately.

Colors: FloroCrete HD is available in Grey, Tile Red, Neutral and custom colors.

Storage: All containers should be stored at 45° F to 85° F (7° C to 29° C) and be kept tightly sealed and out of direct sunlight. The shelf life for this product is 12 months from date of manufacture.

Coverage: Apply FloroCrete HD at 25.5 SF per kit for 1/4" (6.0 mm), or 17 SF per kit for 3/8" (9.0 mm).

Limitations: FloroCrete HD is not to be applied in temperatures below 45° F (7° C) or above 85° F (29° C), or when relative humidity is greater than 85%. Apply only to dry, properly prepared, uncoated, reinforced concrete floor slabs that have a moisture content of less than 10%. Do not apply if air temperature and/or surface temperature are 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 shot-blaster, diamond grinder 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 3,000 psi, replace concrete before installing FloroCrete HD. FloroCrete HD is not intended for use over existing coatings.

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
Isooctane 100%	R
2-Propanol	R
Methyl Alcohol 100%	R
Methylene Chloride 100%	L

(Continued on Page 3)

FloroCrete HD 3.0

Trowel Grade Urethane Mortar

Expansion Joints: In addition to standard slab expansion joint construction, place new 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 FloroCrete RT prior to floor system installation. Treat very large cracks as expansion joints and fill with Florock 6500 Elastomer Sealant (see tech data for details).

Coving: Prime the area to receive a cove with FloroCrete P and seed using Florock 1-126 sand and proceed with cove; this is a wet on wet application. For FloroCrete HD cove, mix one complete kit of FloroCrete HD with one 50lb. bag of Florock 1-126 sand. This mix will cover 83 LF of 6" cove or 125 LF of 4" cove (25.3 meters of 10cm cove and 38.1 meters of 15cm cove).

FloroCrete HD Application:

1. Primer: No primer is required.

2. FloroCrete HD Mortar: Combine FloroCrete HD Component A and Component B. Blend together with a "mudd mixer" for 30 to 60 seconds. Add Part C (dry material) to A and B and mix again for 60 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, then immediately dump mix onto floor for application. Be sure to MIX FULL KITS as temperature will affect mixing, mix when air temperature is between 50° F and 70° F (10° C to 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.

Chemical Resistance of Mortar
(Continued from pg 2)

Reagent	Results
Mineral Spirits 100%	R
Pentane 100%	R
Petroleum Ether 100%	R
Boric Acid 100%	R
Muriatic 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

Key:
R - Resistant. Appropriate for long term spills and secondary containment.
L - Limited Resistance. Appropriate for splashing and spills that are promptly cleaned up
F - Not Recommended.

Note: Best results are achieved when floor to be coated is divided into areas of 8 to 10 LF (2.5 to 3 meters) 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 12" x 4". 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 smoothened, use a high quality loop roller to backroll. Apply little to no pressure to the roller. The backroll will bring liquids to the surface and will repair minor imperfections. Repeat for each mix.

Rake Application:
Pour material onto the floor and spread to the desired thickness using a cam rake. Spread newly mixed batch across the transition of the previously applied materials before it begins to set. With a trowel or a smoother, smoothen the surface to level and to close any rake marks.

Once material is smooth, use a high quality loop roller to backroll. Apply little to no pressure to the roller as the backroll will bring liquids to the surface and will repair minor imperfections. Repeat for each mix.

Screed Box Application:
Pour material from mixer pail into screed box set at a minimum 1/4" (6.0 mm) thickness. Material may ooze slightly from the sides of the screed box--this is normal. Pull screed box, applying FloroCrete HD at a minimum of 1/4" (6.0 mm) thickness. Smooth out the screeded material with a steel plastering or cement finishing trowel, 12"x4" or smoother. DO NOT COMPRESS material; simply smooth out material with trowel. After material is smoothened, use a high quality loop roller to backroll. Apply little to no pressure to the roller. The backroll will bring liquids to the surface and will smooth out minor imperfections. Repeat for each pull, overlapping screed box with previous pull.

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 8 to10 LF 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.

3. Topcoats: There are many topcoat options available; however the use of epoxy finishes should be avoided wherever thermal shock or hot oil will be present. Consult your Florock Representative for details.

Cure Time:
The chemical curing of FloroCrete HD is affected by temperature. At 70° F (21° C) curing temperature, expect to walk on the floor in 12 hours, with full traffic after 24 hours. At 45° F (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 70° F (21° C) for best cure.

Note: FloroCrete Catalyst R0-178 – Add up to 4 ounces per kit to shorten the cure time. The amount of catalyst added will be based on the temperature & speed of cure desired. Catalyst will shorten the pot life. Contact your Florock Representative for details.

Maintenance:
FloroCrete HD 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 color. Though FloroCrete 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.