



CastorCrete® Bio Floor HDF/HDQ

System Description

CastorCrete Bio Floor HDF/HDQ has been engineered as a hybrid flooring system consisting of CastorCrete SL cementitious polyurethane slurry mortar, and epoxy pigmented receiving coat, broadcast vinyl flakes or colored quartz aggregate, grout coat and top coated. Typical installation thicknesses between 1/4 inch (6.35 mm) and 5/16 inch (9.5 mm).

System Uses

CastorCrete Bio Floor HDF/HDQ is a medium duty aesthetically pleasing flooring system that is ideal for biotech, pharmaceutical, animal and research facilities, wet and dry processing areas, clean rooms, food and beverage processing and manufacturing.

Features and Benefits

- Aesthetically Pleasing
- Zero VOC urethane cement slurry mortar
- 100% Solids Epoxy and Low VOC Polyurea and Polyurethane
- Fast Installation
- Moisture Tolerant
- Thermal Shock Resistant
- Impact and Abrasion Resistant
- Chemical Resistant to Organic and Inorganic Acids, Salts, Alkalis and Amines
- UV Resistant Top Coats
- Excellent Light Reflectivity
- Superior Life Cycle Advantages
- Qualifies for LEED projects

Colors

CastorCrete Bio Floor HDF/HDQ is available in standard and custom colors. Colored quartz aggregate 9 solid colors, 14 blended and infinite custom blends. Vinyl flake 26 solid colors, 12 blends and infinite custom blends.

Concrete Moisture

ASTM F1869 Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride, maximum 10 pounds (4.54 kg) per 1,000 sq. ft. (92.9 sq. meters) per 24 hours and ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes, maximum Relative Humidity of 85%.

Surface Preparation

Concrete must be sound, clean, dry and profiled. Refer to the CastorCrete Bio Floor HDF/HDQ application instructions for more detailed surface preparation instructions.

Cure Rate

Will vary depending on material placed over the CastorCrete SL.

Products

CastorCrete SL
Epoxy 400
Colored Quartz or Vinyl Flakes
Polyurethane 325
Polyurea 5100
Polyurethane 100.

Physical Properties

Compressive Strength (ASTM C579)	8,500 psi
Tensile Strength (ASTM C307)	1,400 psi
Flexural Strength (ASTM C580)	2,700 psi
Hardness, Shore D (ASTM D2240)	85-90
Impact Resistance (ASTM D2794)	160
Concrete Thermal Compatibility (ASTM C884)	Passes
Coefficient of Thermal Expansion (ASTM C531)	1.1 X 10 ⁻⁵
Flammability (ASTM D635)	Self Extinguishing
Abrasion Resistance (ASTM C501) (CS-17, 1,000 gr., 1,000 cycles)	0.32gm loss
Coefficient of Friction Wet Surface (ANSI/NFSI B101.1 Static & B101.3 Dynamic)	Incline >0.45 Level >0.42
Water Absorption (ASTM C413):	<0.10
Bond Strength (ASTM D7234): (concrete failure)	400 psi
Calcium Chloride Test (ASTM F1869)	10 lbs.
Relative Humidity Test (ASTM F2170)	85%
Microbial Resistance (ASTM G21)	Passes #1

Chemical Resistance

Refer to Arizona Polymer Flooring Chemical resistance guide for full system chemical resistance.



Installation

Please refer to CastorCrete Bio Floor HDF/HDQ installation guidelines for information and instructions.

Slip and Fall Precautions

APF recommends coatings or surfacing systems meet ANSI (American National Standard Institute) and NFSI (National Floor Safety Institute) B101.3 Test Method for Measuring Wet DCOF (dynamic coefficient of friction) of Common Hard-Surface Floor Materials, a. incline surfaces >0.45; b. level surfaces >0.42. APF recommends the use of angular slip-resistant aggregate in all coatings or surfacing systems that may be exposed to wet, oily or greasy conditions. It is the contractor's and end user's responsibility to provide a coating or surfacing system that meets current safety standards. APF or its sales agents will not be responsible for injury incurred in a slip and fall accident.