FLOORSAVERS INC.
FLOORING - WALLS - LININGS - CEILINGS

FS-Chem™ 600

High Chemical Resistant Epoxy Novolac Coating

DESCRIPTION

FS-Chem™ 600 is a 100% solids, two-component highly chemical-resistant, epoxy novolac floor coating. It is a multi-functional epoxy system designed to give outstanding resistance to broad range of chemicals including 98% sulfuric acid and most solvents. FS-Chem™ 600 also offers a workable pot life, blush-free cure and a low viscosity, making aggregate-filled flooring easy to apply. This material can be applied down to 5°C/45°F and is available with a non-sag thickener for easy vertical application.

WHERE TO USE

- For areas subjected to severe chemical attack.
- Suitable for use in direct exposure and secondary containment areas in manufacturing facilities and storage of harsh chemicals and solvents.
- Recommended for laboratories, dairies, breweries, chemical plants, paper mills, food processing, pharmaceutical, refineries, battery storage, waste treatment facilities, PCB manufacturing, pulp and paper plants, operating rooms.

BENEFITS

- Low odor, 100% solids, zero VOC's
- Easy applied in a two-coat application
- Excellent chemical resistance (immersion as well as splash/spills)
- Resistant to concentrated acids and harsh chemicals (98% sulfuric, 40% nitric, 85% phosphoric)
- Excellent bond to concrete
- Fast setting; ideal for quick turn-around projects
- Resistance to traffic abrasion
- Versatile; offers either self-leveling or broadcast finishes
- Resistant to water immersion
- Easily cleaned and maintained
- Available in grey and tile red

HANDLING & CURING PROPERTIES

Wet Properties (@ 23˚C (74˚F) :	
Viscosity (Mixed)	1,200 cps
Solids Content	100 %
Mixing Ratio (by volume) A/B	1.4 to 1
Mixed Weight (Density)	.1.15 kg/litre (9.6 lb/US gal)
Pot Life (working time)	20 minutes
Application Temperature	10˚C- 30˚C (50˚F-86˚F)
Thin Film Set Time	10 hours
Foot Traffic	12 hours
Vehicular Traffic	24 hours
Full Service	7 days
Cured Properties (7days cure/50% RH):	
Tensile Elongation (ASTM D638-86)	9.6% @ break
Tensile Strength (ASTM D638-86)	30 Mpa (4,350 psi)
Hardness (Shore D) (ASTM D2240-86)	81
Abrasion Resistance (ASTM D4060)	84 mg loss
Taber Abrasion, C-17 Wheel, 1000 cycles	

SURFACE PREPARATION

FS-Chem™ 600 should be applied over clean, sound, dust free surfaces. For best results, surface should be prepared as follows:

CONCRETE:

Shot blasting or equivalent to remove surface laitance, curing compounds or form oils. Concrete should be minimum 28 days old or have 3% or less moisture content. Moisture content can be determined using test method ASTM D4263.

NOTE: FS-Chem™600 is a self-primed product that requires no primer when the concrete substrate is dry.

AREA PREPARATION

For optimal performance, both the coating and substrate should be maintained at 18° to 30° (60 to 86°F) for 24 hours prior to beginning work. The same temperature range should be maintained during mixing, application and cure.

Application in direct sunlight and rising surface temperatures may result in blistering of materials due to expansion of entrapped air or moisture in the substrate. Concrete that has been in direct sunlight must be shaded 24 hours prior to application and remain shaded until after the initial set.

APPLICATION

The mixing equipment used to mix the coating must be clean and free of any contaminants that may be present in the equipment from previously used products. Two coats are recommended: one prime coat and one top coat. The first coat is applied at 5 mils whereas the second coat is applied at 10 mils.

- Pre-mix component "A" of FS-Chem^{TM}600 first to eliminate the possibility of settlement. Pour all of the liquid from Part B into a Part A container.
- Mix thoroughly using a slow speed drill equipped with a mixing blade for two minutes (minimum) until the colour is uniform.
- Immediately pour all of the mixed coating onto the edges of prepared floor and spread the material evenly with a flat squeegee. Using a lint free 6 mm nap roller back roll the applied material to provide an even coat. Care should be taken not to over-roll the material as air may become entrapped in the coating.
- Apply the second coat in the same manner as the first coat (a notched squeegee may be used in the second coat to produce a thicker film)
- To obtain a slip resistant finish, sprinkle dry #31 mesh clean silica (or alumina) into FS-Chem^{TM} 600 while it is wet and back roll to encapsulate; alternatively the primer (first coat) may be seeded in the same manner.
- Allow to cure thoroughly overnight (12-16 hours) before exposing to foot or light duty traffic. It requires 24 hours for light vehicular traffic and 7 days for full service.

MIXING

The mixing equipment used to mix the coating must be clean and free of any contaminants that may be present in the equipment from previously used products. Mix component A first to eliminate the possibility of settlement. Pour all of the liquid from Part A and Part B into the mixing container. A 'Jiffy Mixer' or a mud mixer blade on a slow speed drill is the preferred method of mixing. Mix the blended components for 2 minutes.

PACKAGING

3.79 litre/1 U.S. gallon units
18.9 litre/5 U.S. gal. units

LIMITATIONS

*Do not apply FS-Chem^{TM} 600 if the substrate and ambient temperatures are below 10°C (50°F)
*Do not apply the topcoat less than 8-10 mils as an orange peel finish may appear or bubbling may occur due to insufficient material to self level.
*Do not leave mixed material (Part A & B together) in the container for extended amount of time; it will harden and warm up and smoke.
*Not recommended for areas subjected to steam cleaning, harsh chemicals or heavy impact.
*Do not use over existing floor without testing both the intercoat adhesion as well as the adhesion of the existing floor to concrete.
*Not recommended as a water-proofing coating in suspended boiler rooms or commercial parking garages.
*Do not apply in areas where the humidity is greater than 85%.
*May discolour under direct constant exposure to UV, and due to some chemical exposures.
*Do not use on exterior slab-on-grade without vapour barrier.

THEORETICAL COVERAGE

Neat: 15 mil dry film thickness:
Prime Coat: (5 mils): 8 m²/litre (325 f²/U.S. gallon)
Second Coat (10 mils): 4 m²/litre (160 f²/U.S. gallon)

Broadcast: 2 mm (3/32") in thickness:
Prime Coat: (5 mils): 8 m²/litre (325 f²/U.S. gallon)
Second Coat: (20 mils): 2 m²/litre (80 f²/U.S. gallon)
Aggregate: (31 mesh silica): 5 kg/m² (1 Ib/f²)

CLEAN UP

Clean all equipment and installation tools immediately with xylene.

SAFETY PRECAUTION

Consult the Materials Safety Data Sheet (MSDS) for specific instructions.

STORAGE

Stored in a heated warehouse. Do not freeze.
2 year from the date of manufacture if kept in original unopened containers.