Product Information
ChemXP™-Nov

PRODUCT DESCRIPTION

ChemXP™-Nov is a high performance, chemical resistant flooring system based on Epoxy Novolac resin.

FLOORING LAYERS COMPOSITION

This two component resin system can be applied as a standalone coating, a broadcast or slurry broadcast flooring, and as a heavy-duty trowel applied floor top-ping.

FIELDS OF APPLICATION

ChemXP™-Nov has excellent chemical resistance to alkalis, salts, mineral acids and many other chemicals. It exhibits particularly good resistance to 98% sulfuric acid and all concentrations of sodium hydroxide. It is used for the protection of concrete floors in chemical process and storage areas, truck loading/unloading areas, secondary containment and high traffic areas in a wide range of industries with chemical processes.

FEATURES

- Versatile design (multi-purpose applications)
- Easy to apply
- Good chemical resistance
- Locally sourced aggregate can be used
- 100% solids, Solvent free, low odor

CHEMICAL RESISTANCE

Information on the chemical resistance properties is available upon request.

SURFACE PRE-TREATMENT

Concrete

The concrete shall have a minimum compressive strength of 3500 psi (25 N/mm²) and a minimum surface strength of 200 psi (1.4 N/mm²) for coatings and 300 psi (2.1 N/mm²) for linings. The concrete must be thoroughly cured and dry at the time of application. The residual moisture content should not exceed 4%. ASTM D 4263 plastic sheet test method is recommended to ensure concrete is moisture free. If moisture is detected, repeat test until dry.

Abrasive blast or mechanically abrade surface to remove the weak laitance and surface contaminants.

APPLICATION

Primer:

ChemXP™-Nov Primer is recommended when **ChemXP™-Nov** is used as an unfilled coating system and, when required, as a dry* primer coat for **ChemXP™-Nov** broadcast and trowel applied systems. **ChemXP™-Nov** resin and hardener mixture is also acceptable for dry priming and is typically used as a wet primer for trowel applied flooring applications. * Dry priming is recommended for applications in direct sunlight, on existing or porous concrete floors, or where potential concrete breathing issues exist. Mix and apply primer by roller, brush or spray. Allow it to dry (cure) before applying subsequent coats.

Floor Coating System:

- **ChemXP™-Nov** is normally applied in two (2) coats at 8-12 mils (200-300 microns) per coat by roller or squeegee and back roll method.

Broadcast Floor Coating System:

- Apply catalyzed **ChemXP™-Nov** resin basecoat at 20-24 mils (500-600 microns) by roller or notched squeegee.
- While the resin basecoat is still wet apply 30-50 mesh broadcast aggregate in excess to cover the entire resin surface until no wet areas are evident.
- After the basecoat has cured vacuum or sweep excess aggregate from the flooring surface.
- Mix and apply **ChemXP™-Nov** as a topcoat over the exposed aggregate surface at 20-24 mils (500-600 microns) to seal the system. More or less resin can be used to achieve the desired degree of surface texture.
- Thicker and/or multiple broadcast layers can be applied to meet specification requirements.

Trowel Applied Flooring:

- Mix and apply **ChemXP™-Nov** as a wet primer immediately before placement of the Body Coat.
- Premix **ChemXP™-Nov** resin and hardener and pour mixture into a mortar mixer. Gradually add aggregate at an approximate aggregate to resin mix ratio of 8:1. Mix until aggregate is thoroughly wetted before discharging from the mixer.
- Apply the Body Coat mixture and trowel to the desired thickness (typically 1/4"). Allow to cure.
- Apply 1 or 2 grout coats of **ChemXP™-Nov** as required to seal the system. **ChemXP™-Nov Flake** or **ChemXP™-NovF Flake** can also be used as a final grout coat/topcoat.

ChemXP™-Nov

Note: During application the lined surface should be shaded from direct or indirect sunlight when possible.

MIX RATIO

Mixing ratio of **ChemXP™-Nov Primer Resin** to **ChemXP™-Nov Primer B** is 2:1 by volume. Mixing ratio of **ChemXP™-Nov Resin** to **ChemXP™-Nov B** is 2:1 by volume. Filler and aggregate loading varies with the floor system design type.

CONSUMPTION

Layer	Thickness mils (microns)	Typical Practical Coverage
PRIMER on concrete **ChemXP™-Nov** :	2-5 (50-125)	160-200 ft^2/gal
System Design Type:		
Coating system (per coat)	8-12 (200-300)	120-180 ft^2/gal
Broadcast Flooring (1/6")	60 (1500)	
Resin Basecoat	20-24 (500-600)	60-72 ft^2/gal
Broadcast Aggregate	-	1 lb./ ft^2
Topcoat	15-20 (375-500)	72-96 ft^2/gal
Troweled Flooring (1/4")		
Body & Grout Coat Resin	250 (6250)	24-26 ft^2/gal
Body Coat Aggregate		2 lb/ ft^2

WORKING TIME & RECOAT TIME

Temperature	Working Time	Min Recoat	Max Recoat
50°F (10°C)	approx. 80 min	16 hrs	14 days
70°F (21°C)	approx. 40 min	8 hrs	14 days
90°F (32°C)	approx. 20 min	4 hrs	7 days

CURE TIME (to place in service)

Temperature	Minimum Cure time
50°F (10°C)	5 days
70°F (21°C)	3 days
90°F (32°C)	2 days

Generally **ChemXP™-Nov** can be placed into service after the final cure time intervals have been achieved. Shorter or longer intervals may apply depending on service conditions. Consult Tennant Coatings for specific recommendations.

CLEANING: Acetone

SAFETY MEASURES

The material safety data sheets of the individual components as well as the legal requirements for handling hazardous materials must be observed.

PACKING UNITS

The products are supplied in the following standard package sizes:

Description	Package Size
ChemXP™-Nov Primer B	.75, 3, 15, 45 gal kits
ChemXP™-Nov	3, 15, 45 gal kits

STORAGE

The materials must be stored in a cool and dry place. At storage temperature of 70°F (21°C) the shelf life is as follows:

ChemXP™-Nov (resin)	24 months
ChemXP™-Nov Primer B	24 months
ChemXP™-Nov (resin)	24 months
ChemXP™-Nov B	24 months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof.

Technical Data	Testing Standard	Unit	Value
Color			Clear, Industrial Gray or Crimson
Density	ASTM D1475	lbs/gal kg/l	9.47 ± 0.25 1.13
Viscosity – mixed (colored resin)	ASTM D2196	cps (mPa·s)	1000
Adhesion Strength - Concrete	ASTM D7234	Psi (N/mm²)	Exceeds concrete strength
Compressive strength (Troweled/filled system)	ASTM C579	Psi (MPa)	9,500-11,500 (66-79)
Tensile Elongation (Binder Only)	ASTM D 638	%	5%
Tensile Strength (Binder Only)	ASTM D638	Psi (MPa)	2800 (19)
Volatile Organic Compounds	EPA Method 24	g/L (lbs/gal)	62 (0.52)
Maximum Operating Temperature* Frequent Splash/Spill Concrete Occasional Splash/Spill Concrete		°F °C °F °C	140 60 200 93

***Maximum operating temperature limits may vary depending on actual service conditions**

All data provided in this Product Information are based on the best of our knowledge and they are to inform generally about our products and their application spectrum. In view of the multitude of possible operating conditions and parameters, the given specifications can only be seen as general information, which do not guarantee special product properties for each particular case. In case of order all essential properties for an individual application should concretely be enquired. On request our Technical Service will furnish a feature profile for such application without undue delay.

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