



The Chemical Company

September 1, 2007

Chemrex® CX-941 LEED Product Information

Chemrex® CX-941 is a trowel-grade polyurethane flooring adhesive for use either interior or exterior.

Manufacturing Locations

Mattawan, MI

Recycled Content

BASF Building Systems certifies that Chemrex® CX-941 is manufactured with less than 5% of post-consumer material recycled content from the normal recovery of raw materials in manufacturing processes.

VOC Content

BASF Building Systems certifies that the VOC (volatile organic content) of NP 1™ is 45 g/l and will therefore contribute toward LEED EQ Credit 4.1: Low Emitting Materials: Adhesives & Sealants. Please refer to BASF Form No. 1019753 for more information.

Respectfully,

LEED Administrator

BASF Construction Chemicals, LLC

Tel: 800-243-6739



"LEED" is a trademark of the
U.S. Green Building Council

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PRODUCT DATA

9 09 60 00 **Flooring****CHEMREX[®] CX-941**

Trowel-grade polyurethane adhesive for wood flooring

Description

CHEMREX[®] CX-941 is a one-component, polyurethane-based trowel-grade, waterproof structural adhesive with vapor reducing characteristics. Its elastomeric properties enable it to move with wood as it expands and contracts. The patented formula is VOC compliant and it contains no solvents or water, so it will not cause wood to expand. CHEMREX[®] CX-941 provides excellent initial green strength and outstanding bond strength. It is formulated for indoor and outdoor applications.

Yield

See page 3 for chart.

Packaging

2 gallon (7.6 L) pails, 80 pails per pallet

5 gallon (18.95 L) pails, 36 pails per pallet

Color

Light brown

Shelf Life

1 year when properly stored

Storage

Store at 75° F (24° C) and 50% relative humidity. Protect unopened containers from heat and direct sunshine. In cool weather, store containers at room temperature for at least 24 hours before using.

Features

- Patented formula
- VOC compliant
- No chlorinated solvents, nonflammable
- No water
- Suitable for indoor or outdoor applications
- Contributes to LEED credit, South Coast Bay compliant
- Non-ozone depleting solvents

Benefits

- Contains no solvents or water, wood will not expand
- Extremely low odor
- Improves worker safety
- Freeze/thaw stable
- Single adhesive required
- Suitable for use in all 50 states
- Environmentally friendly

Where to Use

APPLICATION

- Recycled rubber tiles
- Laminated hardwood flooring
- Solid hardwood planks
- Parquet flooring
- Rubber tiles
- Cork flooring and underlayment
- Stair treads
- Stair nosing
- Transitions
- Code-approved subfloor application
- Underlayment grade OSB
- Recycled rolled rubber goods

LOCATION

- Interior and exterior

SUBSTRATE

- Concrete
- Plywood
- Particle or chip board or scarify
- Cement and gypsum underlayment
- Radiant heat flooring
- Asphalt

How to Apply**Surface Preparation**

1. Ensure that floors are structurally sound and fully cured a minimum of 28 days. Test floor for vapor drive in accordance with anhydrous calcium chloride test. Vapor drive should not exceed the industry standard of less than 3.0 lbs per 1,000 ft² in 24 hours.
2. When test results are greater than 3.0 but less than 12 lbs per 1,000 ft² in 24 hours, refer to the product data sheet for CHEMREX[®] Concrete Floor Primer (Form No. 1019775).
3. Repair concrete and install joint sealants and fillers as necessary. Use patching materials as appropriate.
4. Low spots must be filled with CHEMREX[®] Self-Leveling Underlayment or LevelPrep[™].
5. Mechanical surface profiling is the preferred floor preparation method. It is the only acceptable preparation method where warranties are issued. Acid etching is not recommended. Shotblast the floor to medium-grit sandpaper texture, to remove curing and parting compounds and other surface hardeners and floor coatings.

Technical Data

Composition

CHEMREX® CX-941 is a one-component, polyurethane-based, waterproof structural adhesive.

Compliances

- ASTM E 84-95B; NFPN, class A and UBC, Class 1
- USDA compliant for use in meat and poultry areas

Typical Properties

| PROPERTY | VALUE |
|--------------------------------|----------------------|
| Polymer type | Polyurethane |
| Viscosity | Creamy, trowelable |
| Working time, min | 45 – 60 |
| Freeze-thaw stability | Unlimited cycles |
| Service temp, ° F (° C) | -40 – 150 (-40 – 66) |
| Slab temp, ° F (° C) | 50 – 100 (10 – 38) |

Test Data

| PROPERTY | RESULTS | TEST METHODS |
|--|--------------------------------|------------------|
| Solids, % | 95 ±2 | ASTM D 1259 |
| Specific gravity | 1.25 ±0.10 | ASTM D 1475 |
| Tensile strength, psi | | |
| Hardwood/concrete | 300 | ASTM D 412 |
| Plywood/concrete | 120 | ASTM D 412 |
| Elongation, % | 50 ±5 | ASTM D 412 |
| Flame spread* | | |
| 1/8 x 1/8" trowel-applied thickness | 5 flame spread | 15 smoke density |
| 1/4 x 1/4" trowel-applied thickness | 10 flame spread | 30 smoke density |
| Perm Ratings and Water Vapor Transmission (WVT) | | |
| | WVT (per 24 hours) | US Perms |
| 1/4 x 1/4" trowel at 35 ft ² /gallon | 2.67 lbs/1,000 ft ² | 1.88 |
| 1/8 x 1/8" trowel at 90 ft ² /gallon | 3.05 lbs/1,000 ft ² | 2.15 |

* Meets flame spread requirement at both NFPA, Class A, and UBC, Class 1.

6. Clean floors of oil, grease, and other bond-inhibiting materials not removed by shotblasting or other mechanical means with a commercial degreaser.

Application

1. Ensure that starter rows are firmly in place by wedging or face nailing. Once initial rows are secure, use CHEMREX® CX-941 in a wet-lay or walk-on-work method of installation.

2. Wet-lay method: Apply adhesive to substrate with an appropriate trowel. Immediately place flooring into the wet adhesive. No flashing required.

NOTE: Do not apply more adhesive than can be covered in 30 minutes or the adhesive transfer could be jeopardized.

3. A 100 lb roller must be used in the wet-lay method during all installations. It must be rolled again within 30 minutes. Uneven flooring should be tacked, weighted or rolled to ensure good contact between the flooring and the substrate.

4. Clean up tip: Before troweling CHEMREX® CX-941, cover the unused portions of the trowel with duct tape. After troweling, tear off the tape before the material cures.

Special Installation Requirements

NWFA INSTALLATION GUIDELINES SEC. III, DEC. 99

- Radiant Heat Installations
 - Check for subfloor moisture
 - The heating system must be turned off 24 hours before installation to prevent accelerated curing
 - Maximum surface temperature is 85° F (29° C)
 - Expect some heating season shrinkage
- Sound control products
 - Cork underlayment use 1/8 by 1/8" (3 by 3 mm) v-notched trowel
- Stair treads and nosings
 - Lightly water mist the CHEMREX® CX-941 to accelerate cure
 - Depending on manufacturer, treads and nosings may require solvent wipe to remove residual mold release

Glue Down of 3/4" Subfloor Underlayment

NWFA INSTALLATION GUIDELINES SEC. II, CH. 3-4, DEC. 99

- Properly moisture test according to NWFA standards
- Add moisture barrier before applying underlayment
- 3/4" (19.05 mm) CDX grade plywood underlayment
- 2 by 8' (51 by 203 mm) or 4 by 4' (102 by 102 mm) sections scored on the back 3/8" (9.5 mm) deep on a 12 by 12" (305 by 305 mm) grid laid in a staggered joint pattern in CHEMREX® CX-941 using 1/4 by 1/4" (6 by 6 mm) notched trowel
- 1/8 - 1/4" (3 by 6 mm) spacing between sheets
- 3/4" (19 mm) expansion space at all vertical obstructions

Curing

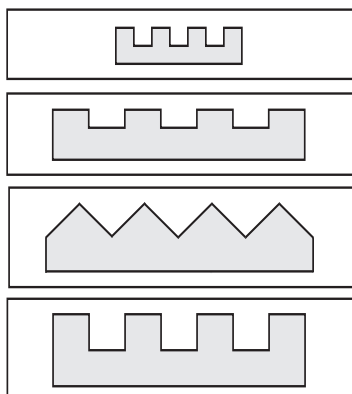
Cure time is dependent on temperature and humidity. Times are based on 75° F (57° C) and 50% relative humidity.

Firm set: 1 – 2 hours

Light foot traffic: 8 – 10 hours

Normal traffic: 24 hours

Higher temperatures and humidity shorten the cure rate, while lower temperatures and humidity lengthen the time.



Yield

| TROWEL SIZE (INCHES) | YIELD (FT ² /GALLON) | TYPICAL USES |
|--------------------------------|---------------------------------|--|
| 1/8 by 1/8 square notch | 80 – 90 ft ² | Smooth surface tiles, finger block parquet or cork |
| 1/4 by 1/8 square notch | 40 – 50 ft ² | Rough surface tiles, laminated planks greater than 1/2" and 3/4" parquet |
| 3/16 by 5/32 V-notch | 60 – 70 ft ² | Semi-smooth tiles, 3- and 5-ply laminated planks and 3/4" parquet |
| 1/4 by 1/4 square notch | 35 – 40 ft ² | Plywood to concrete, solid planks, flat milled solids and shorts |
| 1/16 V-notch | 75 ft ² | Recycled rubber tile or rolled goods |
| 1/8 V-notch | 60 ft ² | Recycled rubber exterior |

The trowel sizes suggested will maximize adhesive coverage. The coverage required for laminated plank is 80%; for solid woods, 95%. Check periodically during installation. If subflooring is uneven, use a leveling or patching material beforehand or use a large notched trowel to provide the appropriate coverage. If insufficient transfer occurs, additional CHEMREX® CX-941 will need to be applied.

Clean Up

Clean all tools and excess CHEMREX® CX-941 immediately after use with mineral spirits. Use proper precautions when handling solvents. Cured adhesive can be removed by cutting with a mechanical tool.

NOTE: Do not clean up with water. It will accelerate the cure of the adhesive.

For Best Performance

- Wear gloves during application; CHEMREX® CX-941 is difficult to remove from skin and clothing. If adhesive gets on skin, immediately wipe it off with a dry cloth.
- Do not apply on frozen surfaces or standing water.
- Avoid contact with water or alcohol before use and before complete cure.
- Do not use in areas subject to hydrostatic head pressure.
- Do not use on wet, contaminated, or friable substrates.
- The maximum acceptable floor variation is 3/16" (4.76 mm) in 10 feet (3 m) or 1/8" (3.75 mm) in 6 feet (1.8 m).
- Do not use as a leveling agent.
- Do not set flooring into an adhesive that has a dry skin.

- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

Health and Safety

CHEMREX® CX-941

Caution

CHEMREX® CX-941 contains methylene bisphenyl diisocyanate; Talc; Hydrotreated light petroleum distillate; Polymethylene polyphenol isocyanate; Silica and crystalline quartz.

Risks

May cause skin and eye irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Inhalation of vapors may cause irritation and intoxication with headaches, dizziness and nausea. Ingestion may cause irritation. Reports have associated repeated or prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. Contains crystalline silica. NTP and IARC recognize respirable crystalline silica as a human carcinogen. The exposure to crystalline silica during the normal use of this product will be little or none. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

Precautions

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Avoid breathing vapors. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or if used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations. DO NOT take internally. Keep container closed. Empty container may contain hazardous residues. All label warnings must be observed until container is commercially cleaned or reconditioned.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

VOC Content

45 g/L or 0.38 lbs/gal less water and exempt solvents.

**BASF Construction Chemicals, LLC –
Building Systems**

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