

CX-941

Trowel-Grade Polyurethane Adhesive for Wood Flooring

Description

CX-941 is a one-component polyurethane-based trowel-grade, structural adhesive. 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. CX-941 provides excellent initial grab and outstanding bond strength. It is formulated for indoor and outdoor applications.

Typical Application

Use CX-941 to bond

- Recycled rubber tiles
- Laminated hardwood flooring
- Solid hardwood planks
- Parquet flooring
- Rubber tiles
- Cork flooring and underlayment
- Stair treads
- Stair nosing
- Transitions
- 3/4" Subfloor underlayment

Use CX-941 over

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

The above list is only a guideline; for information on other applications, call ChemRex Technical Service at 1/800/ChemRex (1/800/243-6739).

Advantages

- Patented formula
- VOC compliant, extremely low odor
- No chlorinated solvents—improves worker safety
- No water—freeze/thaw stable
- Suitable for indoor or outdoor applications
- Nonflammable

How to Apply CX-941

Read the entire data sheet before beginning installation.

Follow industry standards and the wood floor manufacturer's recommendations for design, layout and application of wood flooring materials.

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 <3.0 lbs. per 1,000 sq. ft. in 24 hours.
2. When test results are >3.0 lbs. per 1,000 sq. ft. in 24 hours see Technical Data Guide ID-201, CX Concrete Floor Primer.
3. Repair concrete and install joint sealants and fillers as necessary. Use patching materials as appropriate.
4. Low spots must be filled with PCI Periplan 300 self-leveling underlayment.
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. Mechanically profile the floor to medium-grit sandpaper texture. Remove curing and parting compounds and other surface hardeners and floor coatings in accordance with the manufacturer's instructions.
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 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.
3. A 100 lb. roller must be used in the wet-lay method but after all installations. Uneven flooring should be tacked, weighted, or rolled to ensure good contact between the flooring and the substrate.
4. Clean up tip: Before troweling 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, Section III, ref. Dec. 99)

1. Radiant Heat Installations
 - Check for subfloor moisture
 - The heating system must be turned off before installation
 - Maximum surface temperature - 85° degrees F
 - Expect some heating season shrinkage
2. Sound control products
 - Cork underlayment use 1/8" x 1/8" V notched trowel
3. Stair treads and nosings
 - Lightly water mist the 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, Section II, Chapters 3 and 4, ref. Dec. 99)

1. Properly moisture test according to NWFA standards
2. Add moisture barrier before applying underlayment
3. 3/4" CDX grade plywood underlayment
4. 2' x 8' or 4' x 4' sections scored on the back 3/8" deep on a 12" by 12" grid laid in a staggered joint pattern in CX-941 using 1/4" x 1/4" notched trowel
5. 1/8" - 1/4" spacing between sheets
6. 3/4" expansion space at all vertical obstructions

Clean Up

Clean all tools and excess 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.

For Best Performance

- Wear gloves during application; 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" in 10 feet or 1/8" in 6 feet (NWFA Installation Guidelines, Section II, Chapters 3 and 4, ref. Dec. 99).
- Make certain the most current version of this data guide is 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 ChemRex Inc. personnel are for the purpose of making technical recommendations only, and are not to supervise or provide quality control on the job site.

Coverage

<u>Trowel Size</u>	<u>Coverage/Gallon</u>	<u>Typical Uses</u>
1/8" x 1/8"	80 - 90 sq. ft.	Smooth surface tiles Finger block parquet
3/16" x 1/4" x 1/2"	60 - 70 sq. ft.	Semi-smooth tiles Laminated planks
1/4" x 1/8"	40 - 50 sq. ft.	Rough surface tiles > 1/2" Laminated planks 3/4" parquet
1/4" x 1/4"	35 - 40 sq. ft.	Plywood to concrete Solid planks

Curing Rate

Firm Set	1-2 Hours
Light Foot Traffic	8-10 Hours
Normal Traffic	24 Hours

Cure time is dependent on temperature and humidity. Above times are based on 75°F and 50% relative humidity. Higher temperatures and humidity shorten the cure rate, while lower temperatures and humidity lengthen the time required before use.

Engineering Data

Property	Typical Results	Test Method
Polymer type	Polyurethane	
Viscosity	Creamy, trowelable	
Working time, minutes	45 - 60	
Solids, %	95 ± 2	ASTM D 1259
Specific gravity	1.25 ± 0.10	ASTM D 1475
Tensile strength, psi	1,600 ± 200	ASTM D 412
Elongation, %	50 ± 5	ASTM D 412
Freeze-thaw stability	Unlimited cycles	
Application temperature	40°F to 120°F	

Flame Spread*	ASTM E 84-95B
1/8" by 1/8" trowel-applied thickness	5 flame spread 15 smoke density
1/4" by 1/4" trowel-applied thickness	10 flame spread 30 smoke density

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

Perm Ratings and Water Vapor Transmission

1/4" by 1/4" trowel at 35 sq. ft. per gallon	WVT 2.67 lbs./1,000 sq. ft./24 hours	U.S. Perms 1.88
1/8" by 1/8" trowel at 90 sq. ft. per gallon	WVT 3.05 lbs./1,000 sq. ft./24 hours	U.S. Perms 2.15

Packaging

- 2 gallon pails
- 5 gallon pails

For other packaging, contact ChemRex Inc. Customer Service.

Color

Light Brown

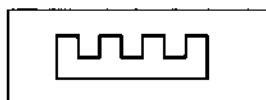
Shelf Life

One year when stored at 75°F and 50% relative humidity.

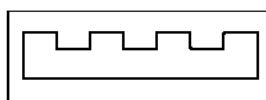
Protect unopened containers from heat and direct sunshine. In cool weather, store containers at room temperature for at least 24 hours before using.

Compliance Specification

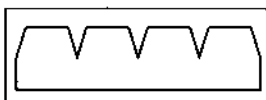
- ASTM E 84-95B
NFPN, class A and UBC, Class 1
- Chemically acceptable to the United States Department of Agriculture (USDA) for use in federally inspected meat and poultry processing areas.



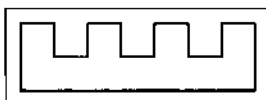
1. 1/8" x 1/8" square notch: finger black parquet. Approximate coverage: 80 sq. ft. per gallon



2. 1/4" x 1/4" x 1/8" square notch: >1/2 laminated plank and 3/4" parquet. Approximate coverage: 40 sq. ft. per gallon.



3. 3/16" x 1/4" x 1/4" flat V-notch: 3-ply and 5-ply laminated plank and 3/4" parquet. Approximate coverage: 60 sq. ft. per gallon.



4. 1/4" x 1/4" square notch: flat milled solid and shorts or plywood. Approximate coverage: 35 sq. ft. per gallon.

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 larger notched trowel to provide the appropriate coverage.

WARNING

Contains light petroleum distillate, talc, methylene bisphenyl diisocyanate, polymethylene polyphenol isocyanate, silicon dioxide

Risks

May cause skin and/or 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 and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. **INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.**

Precautions

KEEP OUT OF THE REACH OF CHILDREN. 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 containers 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

116 g/L or 0.97 lbs/gallon less water and exempt solvents

**For medical emergency only, call ChemTrec
1/800/424-9300**