

CASE STUDY

Pepsi Bottling Plant in Nashville, TN Uses TerraThane™ by NCFI to Save Spillage and Lost Product



PROBLEM

Erosion beneath warehouse's concrete slab floor causes uneven joints and rocking slabs. Forklift drivers experience jolts, and bumps, and lose product, which in turn costs the company money.

Concrete floors are cut into smaller slabs not long after the concrete is poured and the cuts create control joints that separate a large concrete floor into smaller squares. Over time the earth beneath the concrete slabs erodes, voids form, and the slabs become uneven. Heavy machinery, like forklift traffic, traveling over the unsupported slabs can cause them to rock up and down, jarring the forklift, discomforting the driver, and costing the plant money in ruined product. Eventually breaks or fractures called "joint spalling" occur and it gets even more costly. Left unchecked spalling can spread and ruin the entire slab.

SOLUTION

Pepsi called in specialist Eddie Bolton and his company, Mid-South Concrete Leveling, Milan, TN, to help save "The Choice of a New Generation" for the millions served by the plant.

Bolton applied a new technology solution: TerraThane™ Geotechnical Polyurethane Foam. "Geotech polyurethane foam provides a low-impact and reliable means for stabilizing concrete joints," says Bolton, who has been using the TerraThane™ for over a year. "We cleaned out all the joints, removed the debris, drilled 5/8-inch holes about every three-to-four feet, and pumped in TerraThane™ void fill foam to fill the joints. It worked great, and quickly so no real downtime for the warehouse."

RESULTS

"Pepsi was so pleased they asked us to patch about 130 feet of cracks in the slabs. The floor was ready to use by the time we left the plant. We're already getting more work from Pepsi."

Bolton says his company chose TerraThane™ because it's faster, requires less set-up time (generally reaches ninety percent strength within 15 minutes of injection), requires very little clean-up after the work is complete, and

"They go overboard supporting us too, which is unique in the construction business."

provides long-term stability for stabilizing concrete floor joints. "NCFI is a great partner in this business," says Bolton. "Unlike some other companies, they've been around for more than 40 years so they know what they're doing, and their products are the best in the industry. They go overboard supporting us too, which is unique in the construction business. It's why I branded my trucks with the NCFI logo."

Learn more at
www.TerraThane.com

1-866-NSULATE
(1-866-678-5283)



NCFI Polyurethanes
A Division of BMC
P.O. Box 1528
Mount Airy, NC 27030
www.TerraThane.com

Phone: 866.678.5283
Spray Equipment and Parts
Ordering Hotline: 866.812.7320
E-mail: moreinfo@ncfi.net
www.NCFI.com

TECHNICAL SPECIFICATIONS

TERRATHANE™ 24 SERIES SYSTEM

DESCRIPTION

TerraThane™ 24 series, geotechnical polyurethane systems are two-component, closed-cell, rigid polyurethane foam designed for concrete raising/lifting/leveling, void fill and cavity fill applications. These are specially designed for bridge approaches and departures, highway and street sections, airport runways and taxiways and residential and commercial concrete slabs. Polyurethane foam has been used in these applications for over 40 years, and NCFI Polyurethane has manufactured these foams for over 20 years.

- Available in hydrophobic or hydro-insensitive formulations.
- Injectable through 5/8" hole making the process less intrusive.
- Flows well to ensure complete void fill and support before raising and lifting.
- Conforms to all irregular shapes.
- Controlled expansion rate to minimize over lifting.
- Fast cure enabling concrete section(s) to be put back into service quickly.
- Lightweight, minimizing pressure on potentially shifting substrate.
- Mixing of two components done by machine for speed and accuracy.
- No minimum batch size and no pre-mixing required, resulting in little to no waste.
- Only one mix design required for entire job: no re-mixing required.

TYPICAL PHYSICAL PROPERTY RANGES FOR TERRATHANE™ 24 SERIES SYSTEMS

Densities: 2.0lb/ft³ upwards to 6.0lb/ft³

Compression Strengths: 32 psi upwards to 120 psi (free rise, ASTM D1621)

TerraThane™ systems reach 90% of compression strength within approximately 15 minutes of application.

TerraThane™ polyurethane foams are tested to ASTM test methods including but not limited to, D1622, D1623, D2127, C518, D2842, Closed-cell content NCFI TM-300 and D2126. TerraThane™ polyurethane systems have excellent resistance to solvents. Maximum service temperatures range from 180°F (82.2°C) to 200°F (93.3°C).

The above values are average values obtained from laboratory experiments and should serve only as a guide. Consult NCFI for detailed technical data sheets and MSDS sheets for further details.

The information on our data sheets is to assist customers in determining whether our products are suitable for their applications. The customers must satisfy themselves as to the suitability for specific cases. NCFI Polyurethanes warrants only that the material shall meet its specifications; this warranty is in lieu of all other written or unwritten, expressed or implied warranties and NCFI Polyurethanes expressly disclaims any warranty of merchantability, fitness for a particular purpose, or freedom from patent infringement. Accordingly, buyer assumes all risks whatsoever as to the use of the material. Buyer's exclusive remedy as to any breach of warranty, negligence or other claim shall be limited to the purchase price of the material. Failure to adhere strictly to any recommended procedures shall relieve NCFI Polyurethanes of all liability with respect to the material or the use thereof.



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