

PENEFIL 400HR

PENEFIL™ Products PORTFOLIO

The PENEFIL portfolio features proprietary, two-component closed cell resin systems designed for geotechnical applications, encompassing precision slab lifting, soil compaction, soil stabilization, and void filling. Each production batch undergoes exhaustive quality-controlled analysis, mechanical property validation, and ISO-compliant quality assurance protocols to guarantee uncompromised field efficacy and long-term durability.

RECOMMENDED USES

Concrete Slab Lifting and Stabilizing | Foundations repairs and leveling | Erosion Restoration | Sidewalks | Patios | Pool Decks | Porches | Basement Slabs | Concrete Stoops | Foundations | Tanks

REACTIVITY PROFILE at 110 °F

Cream Time	3-5
Gel Time	5-10
Tack Free Time	10-15
Rise Time	15-20
Cure Time	>90% in 30 min, Full cure in 24 Hrs.

RECOMMENDED PROCESSING PARAMETERS

A-Side Temperature	85-140 °F
B-Side Temperature	105-140 °F
Hose Temperature	110-140 °F
Pressure	1000 psi
Ground Temperature	>50 °F
Mix Ratio	1:1

PENEFIL 4.0H

PENEFIL™ 400HR is 4.0 lbs. hydrophobic/hydro-insensitive, water- blown, rigid, slab- jacking foam designed to raise and stabilize concrete slabs or asphalt roadway in residential uses. PENEFIL 400HR delivers a low-viscosity, dual-component resin system optimized for effective remediation of settlement issues in foundations, roadways, sidewalks, and slabs—particularly ideal for injection equipment with limited capacity for high-viscosity materials.

ADVANTAGES

- Contains NO Solventes, ZERO-ODP, ZERO-GWP
- Water Blown System
- Low Viscosity
- Compacts loose soil
- Fast expansion and reactivity

PHYSICAL PROPERTIES

Physical Properties	Test Method	Free Rise
Density	ASTM D1622	3.8 – 4.2 pcf
Compressive Strength	ASTM D1621	70 - 80
Close Cell Content		>90%

COMPONENTS PROPERTIES

Properties	Isocyanate	PENEFIL 4.0H
Color	Brown	Clear
Viscosity (77 °F)	180-200 cps	600-900 cps
Shelf-life (unopened drums)	12 months	6-months
Storage Temperature	50-105 °F	50-105 °F

The viscosity of both components decreases with increasing temperature. The foam reactivity increases with increase in temperature.

REQUIREMENTS

PENEFIL 400HR is an injection concrete lift foam system intended for installation by qualified contractors trained in the processing and application of systems, as well as the plural-component polyurethane dispensing equipment required to do so.

Handling/Storage Conditions/Shelf-Life

The shelf life of PENEFIL 400HR Foam is 6 months from the date of manufacture when stored in original unopened containers at temperatures between 50-75 °F (10-24 °C). Note: Storage for prolonged periods of time at high temperatures may alter the reactivity profile of the product. Additionally, storing the B component at increased temperatures or direct sunlight for prolonged periods may cause a buildup of pressure in the storage vessel. Use caution in opening containers of PENEFIL 400HR. Containers should be opened slowly to allow the release of any pressure buildup. Material temperature should be confirmed with a thermometer or an infrared gun. Do not expose A-side component to low temperatures as it may freeze.

Application Guidelines

When applying PENEFIL 400HR, it is important to note the application of foam is dependent on temperature, humidity, elevation, substrate, equipment and other factors. The applicator must constantly observe the characteristics of the sprayed foam and adjust processing temperatures and pressures to obtain the correct cell structure, adhesion, cohesion and general quality of foam. When changing between

different resin systems, flush adequate amount of material through the gun to clear hose lines of previous material. Application of slab-jacking foam requires specialized gun adapter parts.

CAUTION

This product is not combustible. Not intended or fire classified for interior use. Wear proper protective equipment while handling this product.

LIMITED WARRANTY. We warrant our Products to be free of manufacturing defects and to comply with the Product's current published physical properties when tested under controlled conditions. Our sole responsibility is limited to replacement of that portion of any Products found to be defective at the time of manufacture. There are no other warranties of any nature whatsoever, whether expressed or implied, including an express disclaimer of any warranty of merchantability or fitness for a particular purpose. Further, we disclaim any liability for damages of any type, however caused, including remote, consequential damages, or special damages resulting from any theory of liability, whether based on tort, negligence, or strict liability. We disclaim responsibility for any claims of intellectual property infringement through use of our Products in any manner. Where Products are used as a waterproofing membrane or floor coating, no warranty or guarantee is issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, abnormal wear and tear, or improper application by the applicator. Damage caused by abuse, neglect, lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are aLPo excluded. In all instances and as a pre-condition to any available remedy, we reserve the right to conduct sample testing and performance analysis on any materialLP claimed to be defective, performed prior to any repairs being made by owner, general contractor, or applicator. Our limited warranty is void if repairs have been made or attempted, or if the claimed defect has been adulterated prior to our ability to conduct a formal investigative analysis.

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