SAUEREISEN

HYDROACTIVE POLYURETHANE GROUT NO. F-370

Sauereisen No. F-370 is a catalyzed hydrophobic polyurethane liquid. No. F-370 expands when it meets any source of water or moisture before curing. No. F-370 adheres tenaciously to practically any substrate - wet or dry.

Grout No. F-370 is used to stop leakage through cracked or honeycombed concrete, voids, expansion joints and pipe intrusions. Applied by injection, the grout is commonly specified to repair concrete walls, ceilings and floors. It is also recommended for use in tunnels, manholes, sewer lines, tanks, dikes, and dams. Sauereisen No. F-370 has excellent chemical resistance and may be used in a wide range of chemical environments.

No. F-370 packaged in a 5 Gallon unit is a hydrophobic grade non-flexible system

No. F-370 packaged in a 22-ounce, (300 ml) dual-cartridge is a hydrophobic grade flexible system

CHARACTERISTICS

- Stops active leaks.
- Bonds to wet or dry surfaces.
- Expands to 20 times its original volume when exposed to moisture.
- Chemical resistant.
- A 22-ounce (300 ml) dual cartridge system is available for smaller appli cations

AREA PREPARATION

Temperature of Working Area

Maintain a temperature of 40 - 90ºF on air and substrate. Sauereisen No. F-370 should be stored at 65 - 75ºF. No. F-370 thickens in cooler weather and will react to moisture more rapidly in hot weather, including atmospheric moisture. **Material freezes at 40ºF; do not allow material to freeze.** If No. F-370 freezes, warm to 70-80ºF and stir thoroughly to reconstitute. Do not allow material to come into contact with temperature in excess of 175ºF.

PHYSICAL PROPERTIES

Component	Polyurethane resin and catalyst
Density, molded core (ASTM D-1622)	2.03 pcf (0.03 gm/cm^3)
Elongation (ASTM D-1623)	
Perpendicular	9.8%
Low temperature aging (% volume change at -25ºF)(ASTM D-2126)	
1 Day	0.00%
7 Days	0.10%
Maximum service temperature	175ºF (79ºC)
Shear modulus (ASTM C-273)	
Perpendicular	117 psi (8.2 kg/cm^2)
Shear strength (ASTM C-273)	
Perpendicular	14.5 psi (1.0 kg/cm^2)
Tensile strength (ASTM D-1623)	
Perpendicular	15.6 psi (1.1 kg/cm^2)
Viscosity	500 cps
Water absorption (% weight change) (ASTM D-2127)	< 1%

Physical properties were determined on specimens prepared under laboratory conditions using applicable ASTM procedures. Actual field conditions may vary and yield different results; therefore, data are subject to reasonable deviation.

Surface Preparation

It is recommended that cracks containing contaminants such as bentonite clay be flushed with Sauereisen Pump Flush prior to pumping No. F-370.

APPLICATION

Mixing

Open the pail of resin and slowly stir in the pint of catalyst. If using an electric paddle mixer, use slow speed to avoid whipping air, which contains moisture, into the grout. The grout may begin to react if too much moisture contaminates the mixture.

It is rare that more than one pint of catalyst is needed for each 5-gallon pail of resin. It is best to use less than a pint and then increase depending on need. When in doubt, under catalyze approximately 10%.

Mix only the amount of material that can be used within eight hours. If thickening occurs, Sauereisen Pump Flush can be added to return the material to its original viscosity (no more than 10% by volume).

It is normal for a thin crust to develop on the surface of the material, removal is not required. This crust is formed as a result of moisture in the air. Simply pump the material underneath the crust. Do not use the crusted material.

Installation

Injection Packers - Injection Packers should be placed in pre-drilled holes at strategic locations to ensure complete injection of the No. F-370. Consult Sauereisen for recommendations.

No. F-370 - Flush the pump and all lines with Pump Flush prior to pumping the Grout No. F-370 to remove all traces of water and other contaminants. Do not add this contaminated material to the mixed grout.

Pump No. F-370 into or behind fissures or voids to block infiltration and/or exfiltration. No. F-370 is pumped through preplaced injection packers (available from Sauereisen). Pumping equipment must be capable of attaining 250 psi, but most projects will require at least 1,000 psi.

Pump the No. F-370 for a short time and wait for the material to flow into all of the cracks and crevices under its own pressure. This will eliminate material waste and will prevent surrounding areas from exposure to traveling material.

Watch for material flow to appear in surface cracks, and for water leakage to decrease. After the material stops moving, drill another hole near the end of the material vein and repeat.

It is desirable, although not necessary, that the No. F-370 be injected into active leaks. No. F-370 reacts with water to generate its expansion. "Dry" concrete does contain enough moisture to allow the No. F-370 to cure, although set times will be greatly extended.

If very fast set times are required, for example, in a gushing leak, additional catalyst may be added to the base resin.

Addition of extra catalyst will significantly reduce pot life. A 1:1 ratio will catalyze almost instantaneously. This rich mix is only recommended when using a two-component pump. When using more than one pint of catalyst, test in a separate container to determine pot life.

As the job progresses, return at least twice to previously injected ports and reinject with more grout. This procedure aids in getting a denser resin into all sections of the void. Sauereisen recommends injecting each port three separate times.

After completion of grouting, the injection packers may be cut off flush with the concrete surface, or left in place.

If the grout is to be exposed to ultraviolet light, i.e. sunlight, it is recommended that it be topcoated within 24 hours with an ultraviolet resistant coating compatible with urethanes.

EQUIPMENT

Pumps

A variety of pumps may be used to dispense No. F-370. When utilizing the injection packers, the pump must have the capacity of producing a minimum pressure of 250 psi to bypass the check valve. (Most chemical grouting contractors use pressure exceeding 1,000 psi). CFM capacity must be suitable for void size and water flow rate. Generally four gpm will handle most conditions.

For small projects, a hand or electric pump can be used which attaches to a five-gallon bucket. The Lincoln bucket pump models 1297 and 1292 are suitable for this purpose. The Lily CP-5 Grouter is also an excellent choice.

For very small projects, a grease gun or daul cartridge gun can also be used.

Injection Packers

Sauereisen recommends the use of a 5/8 inch diameter by 2.25 inch long packer with a male zerk fitting and check valve.

For larger projects, there are a variety of pumps that can be used. Essentially any airless spray pump that is capable of attaining 2500 psi at 2-6 gallons/minute pumping rate is sufficient. The following are commonly used:

Manufacturer	Model
Binks	Super Bee Wasp
Graco	590 433 President Tradeworks 170
Speeflo	Commander Classic

Packers are used to inject No. F-370 into concrete, not soil. After drilling a 5/8 inch diameter hole into concrete, insert the packer with the zerk fitting pointed outward. Tighten the packer very tight to prevent it from coming out of the concrete. Packers are not reusable.

PUMP FLUSH

Immediately after using a pump, it should be flushed so that all the No. F-370 is cleared from the pump and lines. If grout is left in the pump and/or hoses, it will react with moisture (even from the air), and could render the pump useless. **NEVER FLUSH THE PUMP WITH WATER!**

Pump Flush is clear, nonflammable and odorless. It is a medium viscosity, solvent-free liquid which can be used as a flush for urethane pumps. Pump Flush is not harmful to the pump, hose or rings, and can be left in the pump and hoses. This practice is recommended during breaks in grouting.

PACKAGING

When ordering, specify amounts of Grout No. F-370, Pump Flush, Extra Catalyst and Packer Injection Nozzles separately. The products are packaged as follows.:

No. F-370 - Hydrophobic/Non-Flexible
5-gal pail of Part B Resin (liquid)
1 -pint can of Part A Catalyst (liquid)

Pump Flush 5-gal. pail

Extra Catalyst - 1-pint can

Packer Injection Nozzles -
Packaged per order requirement

No. F-370 - Hydrophobic/Flexible
A 22-ounce (300ml) dual cartridge system is available for smaller applications

**** A dual cartridge caulk gun is required***

*Containers are filled by weight, not volume. Container size does not indicate volume of contents.

CLEAN-UP

All equipment should be cleaned with MEK before material cures. If removal is required after cure, consult Sauereisen for specific recommendations.

SHELF LIFE

Grout No. F-370, Pump Flush and Catalyst have a shelf life of one year when stored in unopened containers in a dry location at 70ºF. If there is a doubt as to the quality of the materials, consult a Sauereisen representative.

CAUTION

Consult Material Safety Data Sheets and container label Caution Statements for hazards in handling these materials.

WARRANTY

We warrant that our goods will conform to the description contained in the order, and that we have good title to all goods sold. WE GIVE NO WARRANTY, WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED, OTHER THAN AS EXPRESSLY SET FORTH HEREIN. We are glad to offer suggestions or to refer you to customers using Sauereisen cements and compounds for a similar application. Users shall determine the suitability of the product for intended application before using, and users assume all risk and liability whatsoever in connection therewith regardless of any suggestions as to application or construction. In no event shall we be liable hereunder or otherwise for incidental or consequential damages. Our liability and your exclusive remedy hereunder or otherwise, in law or in equity, shall be expressly limited to our replacement of nonconforming goods at our factory or, at our sole option, to repayment of the purchase price of nonconforming goods.

- **Distributors and agents in major cities throughout the world. Consult manufacturer for locations.**
- **Information concerning government safety regulations available upon request.**
- **Sauereisen also produces inorganic compounds for assembling, sealing, electrically insulating and grouting.**

SAUEREISEN

...since 1899

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