Technical Datasheet

Prime Flex 910

Water-activated rigid polyurethane soil stabilization injection resin

Description

Prime Flex 910 is an extremely thin liquid resin that reacts with moisture when injected into soil forming a rock hard, watertight mass. 910 is used to stabilize loose soil or sand, stop underground water flows, and seal leaking seawalls or other below-grade structures. Prime Flex 910 is a single-component, water-activated, hydrophobic, super low viscosity polyurethane injection resin. It requires the use of Prime Kat catalyst.

Primary Applications

- Highways, roads and bridges
- Airport runways and taxiways
- Earthen dams
- Excavation pits and tunneling launch pits
- Seawalls
- Retaining walls
- Sink holes

Advantages

- Encapsulates and strengthens loose soil
- Watertight
- Controllable set time
- Pumped as a single component

Packaging

- 45 lb. pail
- 50 gallon drum
- 300 gallon tote

Technical information: Physical properties at 73°F (23°C) - Liquid

Properties will vary depending upon site conditions, application method, mixing method and equipment, material temperature, and curing conditions. 100% solids. Viscosity: 35-50 centipoise

Note: Viscosity scale for Prime Resins products: 50 and under= super low, 51-100= very low, 101-400= low, and 401-1000= medium viscosity

Physical Properties - Cured	Results	Test Method
Tensile strength	23 psi	ASTM D-3574
Tensile elongation	3%	ASTM D-3574
Shrinkage	None	ASTM D-1042 / D-756
Compressive strength (with fine sand)	745 psi	ASTM D-695

Reaction times at 73°F (23°C) based on 2.5 ml water per ounce of resin				
Kat to 910 mix ratio[2]	Kat to 910 mix quantities	Initial reaction time	Set time	Unconfined expansion[1]
10%	13 oz. to 1 gal.	12 sec.	30 sec.	29x
7.5%	10 oz. to 1 gal.	12 sec.	47 sec.	28.5x
5%	7 oz. to 1 gal.	20 sec.	70 sec.	26.5x
3.5%	5 oz. to 1 gal.	30 sec.	80 sec.	23.5x
1%	1.4 oz. to 1 gal.	90 sec.	5 min. 30 sec.	13.5x

[1] Unconfined expansion is tested in an open cup, without soil, and in laboratory conditions. Actual expansion when injected into soil or sand will vary depending on soil conditions (soil type, porosity, compaction, water pressure, etc.) as well as temperature, pressure, catalyst content, etc. Expansion in soil or sand is significantly less than unconfined expansion. [2] Maximum mix ratio of Prime Kat to Prime Flex 910 is 10% by volume.

Head Office: 2291 Plunkett Road, Conyers, GA 30012

T: 770-388-0626 F: 770-388-0936 W: www.primeresins.com E: info@primeresins.com

A USL Company

Accessory Products

- Prime Kat
- Eco Flush
- Soil probes
- Pumps
- Pipe jack

Directions For Use

Mixing Ratio

Use reaction times above to determine amount of Prime Kat to add to the 910. For permeation grouting, use 1/2% to 1% by volume of Prime Kat. One 33 oz bottle of Prime Kat per 5 gallons of 910 equals 5% mix ratio. Two 33 oz bottles of Prime Kat is the maximum dose at 10%. Only mix the amount of material that can be used within 12 hours. Thoroughly mix materials using a low speed drill with a mixing paddle. Once Prime Kat has been added, the 910 will react upon contact with moisture.

Material Preparation

Store material overnight to precondition to 70-80°F (21-27°C) prior to use. If using less than full pail, pre-mix material prior to adding Prime Kat.

Limitations

Cold temperatures will slow down reaction time and increase viscosity. pH below 3 or above 10 may adversely affect foam properties.

Storage & Clean Up

Storage

Store in dry environment between 40 and 80°F (4 and 27°C). Shelf Life: 18 months from date of manufacture in unopened containers properly stored.

Clean Up

Flush injection equipment with Prime Flex Eco Flush. Remove cured material by soaking in Prime Flex CGC (not appropriate for contact with plastic). Clean off of skin with soap and water.

Environmental Protection

Cured material is environmentally safe. Dispose of in according to appropriate regulations. Clean up any spilled catalyzed liquid material and add a small amount of water to cure unreacted material.

Shipping

Shipping Class: Motor Freight Class 60
Hazard Classification: Non-Hazardous

Health & Safety

Safety

See SDS for complete safety precautions prior to use. Use HSE-approved personal protective equipment (PPE), including safety glasses, gloves and confined space equipment/ procedures if applicable. Avoid skin contact; do not ingest. For professional use only.

First Aid

Eye Contact: Immediately flush with large amounts of water. Seek medical attention. **Inhalation:** Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention. **Ingestion:** Seek medical attention immediately. **Skin Contact:** Wipe off contaminated area and wash with soap and water.

Manufacturing

Products are manufactured by Prime Resins, Inc. in the U.S.A. under strict quality assurance practices at our Conyers, GA plant.

Warranty & Disclaimer

Prime Resins Inc., Nufins and USL (the Manufacturer) warrants their products to be free from manufacturing defects and that products meet the published characteristics when tested in accordance with ASTM and Prime Resins standards. No other warranties by the Manufacturer are expressed or implied, including no warranty of merchantability or fitness for a particular purpose. The Manufacturer will not be liable for damages of any sort resulting from any claimed breach of warranty since it has no control over how the products are used and applied. The Manufacturer's liability under this warranty is limited to replacement of material or refund of sales price of the material. There are no warranties on any product that has exceeded the "shelf life" or "expiration date" printed on the package label.

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