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Technical Datasheet

Hydro Gel™ SX



Water-activated, flexible polyurethane foam or gel injection resin

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Description

Prime Flex Hydro Gel SX is a versatile, easy-to-use single component, water activated, hydrophilic polyurethane injection resin for sealing actively leaking joints and cracks in below-grade concrete structures. It forms either a closed cell, watertight foam or impermeable gel depending on the water to resin mix ratio. Cured material remains flexible and has excellent adhesion. It can also be used for soil binding for slough control.

Primary Applications

Crack injection to seal leaks, particularly structures subject to movement or vibration. Curtain grouting manholes to seal cracks and penetrations Soil binding for slough control and sidewall support Example structures and settings:

- Manholes
- Sanitary sewers
- Dams
- Below-grade concrete walls
- Tunnels
- Elevator service pits
- Utility vaults
- Tanks
- Excavation pits
- Tunneling launch pits

Advantages

- Phthalate-free
- Low to medium viscosity yields quicker reaction and superior mix, especially in cold water
- Forms flexible foam or gel with excellent adhesion
- Versatile and easy to use; seals tight or wide cracks
- High elongation allows for thermal or structural movement
- Can be used with oakum to seal wide gaps
- Non-flammable, non-corrosive
- Available in convenient cartridges. Quick Mix cartridge jump starts the reaction; ideal for cold water applications.
- Can be used underwater

Packaging

- 5 gallon pail
- 10 oz Single Shot cartridge (case of 20)
- 1:1 Quick Mix cartridge (case of 10 includes Gel Reinforcing Agent)

Technical information

Typical Data: Physical Properties at 73°F (23°C) - Liquid. Properties will vary depending upon site conditions, application method and equipment, material temperature, and curing conditions. Gel time 70°F (21°C) @ 8:1 Mix ratio - 50-83 seconds

Typical Properties	Results	Test Method
Viscosity	350 - 550 cps (neat resin)	-
Viscosity @ 8:1	20 cps (8:1 water to resin)	<i>Note: Viscosity scale for Prime Resins products: 50 and under= super low, 51-100= very low, 101-400= low, and 401-1000= medium viscosity</i>
Physical properties– cured		
Tensile Elongation	100 - 150%	ASTM D-1564
Shrinkage	(1 week @ 100% R.H. 70°F or 21°C) None when wet	
Toxicity	Non-toxic in cured form	

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Reaction Times

Gel time 70°F (21°C) @ 8:1 mix ratio 50 - 83 seconds

Accessory Products

- Gel Reinforcing Agent
- Eco Flush (flush uncured resin from hoses)
- CGC (clean cured resin from equipment)
- Oil-free oakum
- Injection ports (Bang-in Ports or mechanical packers)

Directions For Use

Mixing Ratio

Uses available water to initiate reaction. Inject as a single component or “twin stream” with water in the recommended range of 1:1 to 10:1 water:resin depending on the desired foam or gel consistency. Material goes from a foam to a gel at about 4:1.

Material Preparation

Store material overnight to precondition to 70-80°F (21-27°C) prior to use. It is not necessary to pre-mix Prime Flex Hydro Gel SX prior to use.

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.