

Prime Flex 920

Hydrophobic, water-activated polyurethane grout

Description

Prime Flex 920 is a single-component, 100% solids polyurethane injection resin used to seal high flow leaks, including wide gaps in concrete, where the structure is not subject to movement. This hydrophobic, low viscosity polyurethane reacts with water and expands to form a closed cell, watertight, rigid foam. Due to its low viscosity, 920 is also used for permeation grouting of loose soils to consolidate soil particles and increase the load-bearing capacity. It requires the use of Prime Kat or Kick Fast catalyst. Reaction time is adjustable with catalyst ratio from 4-13 seconds.

Advantages

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

Typical Properties - Cured	Results	Test Method
Compressive Strength (with fine sand)	7.08 MPa	ASTM D695
Elongation	3.4%	ASTM D695
Tensile Strength	0.28 MPa	ASTM D695
Shrinkage	None	ASTM D1042

Applications

- Highways, roads & bridges
- Airport runways & taxiways
- Railway sleepers
- Seawalls, sinkhole edges
- Earthen dams, bund walls
- Excavation pits and tunnelling launch pits
- Tunnels (transit and utility)
- Underground car parks
- Sanitary and storm sewers

Kat to resin ratio ¹	Mix quantities	Reaction time	Set time	Unconfined expansion ²
10%	100 ml to 1 L	12 seconds	30 seconds	29x
7.5%	75 ml to 1 L	12 seconds	47 seconds	28.5x
5%	50 ml to 1 L	20 seconds	70 seconds	26.5x
3.5%	35 ml to 1 L	30 seconds	80 seconds	23.5x
1%	10 ml to 1 L	90 seconds	5 min.30 sec.	13.5x
Kick Fast ³ 10%	100 ml to 1 L	< 5 seconds	11 seconds	29x
Reaction Times @ 23°C based on 2.5 ml water per 30 ml of resin				

Typical Properties @ 23°C- Liquid	Results	Test Method
Viscosity	110-130cps	ASTM D 1638
Colour	amber	

Technical information

Properties will vary depending upon site conditions, application method, mixing method and equipment, material temperature, and curing conditions.

¹ Maximum mix ratio of Prime Kat to Prime Flex 920 is 10% by volume.

² 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.

³ Not recommended to use Kick Fast below 10%.

Mixing Ratio

Use reaction times on the chart to determine amount of Prime Kat to add to the 920. For permeation grouting, use 1/2% to 1% by volume of Prime Kat.

Application Instructions

Store material overnight to precondition to between 15 and 25°C prior to use. If using less than a full pail, pre-mix material prior to adding Prime Kat.

One 976ml bottle of Prime Kat per 18.9 L of 920 equals 5% mix ratio. Two 976 ml 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 920 will react upon contact with moisture.

Flush injection equipment with Prime Flex Eco Flush. Remove cured material by soaking in Prime Flex CGC (not appropriate for contact with plastic).

Packaging

Pack sizes: 18.9 L , 189.2 L

Storage

Store in dry environment between 4-27°C. Do not allow product to freeze. Protect from moisture.

The shelf Life of Prime Prime Flex is 18 months from date of manufacture when stored correctly in unopened containers

Limitations

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

Health & Safety

Product Safety Data Sheets (SDS) are available from Nufins. SDS sheets are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product.

Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Technical contacts are available to provide further information and arrange demonstrations.