PRODUCT INFORMATION

2-component indirect polyurea resins type 3P® (hard types with high thermal and chemical resistance)

ALPHA-Flume resins belong to the family of polyurea resins produced indirectly (by isocyanate- waterglass reaction), which provides stable chemical bonds. Due to their excellent thermal and heat resistance, reliable mechanical properties and their durability, ALPHA resins have been widely used as matrix material with glass reinforced mats for composites in no-dig sewer pipe repair and for the corrosion protection of different concrete and/or steel structures..

"A" component of the resins are a uniform quality, low-modulus (M) waterglass. For matching the user demands, Scott & Fyfe Ltd manufactures and delivers different "B" components producing different pot lives and viscosities in the resin mix. Moreover, these "B" components can be blended with each other allowing linear interpolation of the major parameters. Many users prefer some properties of the Alpha resins, such as their ability to harden in wet conditions and even under water. Due to their low steam tension, the material components have no odour around room temperature, bringing obvious advantages for the environment and human health.

Parameters of the liquid resin components and of the liquid resin mix, homogenized at A:B=1:2 volumetric ratio (measurements by the manufacturer)			
"A" component = Na water glass ("A" components are not produced by Scott & Fyfe but by demand, of course, delivers it. We recommend e.g. Betol 3P from Woellner GmbH & Co. KG (Germany) or Inosil Na-5120 from Van Baerle AG (Switzerland). M≈2, opal, colourless appearance). Attention! All "B" components listed below can be combined with the same water glass ("A") at the same 1:2 volumetric ratio!			
Viscosity at 20°C	**Company Stardard**	**mPa.s**	**~ 600**
pH Value	**-**	**-**	**13.5±0.5**
Density at 20°C	**EN ISO 1183-1:2004**	**g/ml**	**1.56±0.02**

"B" component = Isocyanate containing blend providing different pot lives and hardening times by type (yellow-brownish)			
3P L30E1			
Flexural strength (average)	**MSZ EN 13892-2:2003**	**MPa**	**34.0**
Compressive strength (average)	**MSZ EN 13892-2:2003**	**MPa**	**57.8**

Proposed parameters of processing	
Mixing ratio (“A” and “B” components)	**1:2 (volumetric ratio)**
Temperature of the material components	**at least +5°C**
Ambient temperature	**at least -5°C**

Attention! The rate of polymerization (hardening) is accelerated by temperature, by mixing volume, by too intensive or by too long mixing! All pot lives and hardening times in the table refer to materials at room temperature, homogenized at 100+200=300.ml volume by strictly 1 minute mixing.

Scott & Fyfe Ltd delivers the manufactured "B" components usually in 200-liter drums, or by demand also in 25-liter cans. ALPHA resins may be used only by educated trained personnel who participated at the (free of-charge) training course organized by Scott & Fyfe Ltd and who passed an exam successfully.

Before use, the material safety data sheets (MSDS) related to the concrete ALPHA product that is delivered with the components shall be read carefully and kept available at the place of use.

Both components are hazardous materials: the waterglass ("A") due to its strong alkalinity, the "B" components due to their MDI (diphenylmethyl-diisocyanate monomer and oligomer) content.

During the work the use of protective measures (gloves, glasses etc.) is compulsory, according to the material safety data sheets!

With regard to the continuous product development, Scott & Fyfe reserves the right for changes.

This resin is for use on uncoated (Naeliner) products and should be used with a calibration hose over the liner to resin out.
No calibration hose should be left in the finished installed product.