

GLOBALFOAM SP

Resins for tunnelling and mining

INTRODUCTION

Organic-mineral two components resin foam, characterized by low viscosity, excellent chemical stability, mechanical resistance and good adhesion on rock stabilization, cavity filling, protection and water proofing of reservoirs and aqueducts, water conveyance in water bearing stratum and for consolidation, waterproofing, gas sealing in coal mines.

The reaction between the two components (A and B) proceed very quickly (in 20 – 25'' at +25°C) with an expansion's factor > 40 in comparison with the initial volume (considered = 1).

Strength of the resulting injection body depends on soil's compaction degree and on volume of the cavity to fill, as well as injection pressure.

For special or low temperature applications, it is possible to accelerate the reaction speed by adding ACCELERATOR K1 (1-2% by weight) to the A compound.

Foaming reaction doesn't suffer from presence of water. GLOBALFOAM SP is self extinguishing, absolutely non-toxic and non-pollutant.

TECHNICAL PROPERTIES

(at +25°C and 60% R.H.)

Chemical composition of component A	: inorganic silicate, water, tertiary amino compounds, additives.
Chemical composition of component B	: prepolymer of diphenylmethane 4.4 diisocyanate with silicone additives, surfactants
Density of component A	: 1.310 ± 0.03 (g/cm ³)
Density of component B	: 1.230 ± 0.05 (g/cm ³)
Viscosity of component A	: 60 ± 30 mPas. (Brookfield viscosity)
Viscosity of component B	: 250 ± 50 mPas. . (Brookfield viscosity)
pH component A	: 11.5 ± 0.05
pH component B	: neutral
Colour component A	: yellow - reddish
Colour component B	: brown
Mixing ratio (A+B)	: 100 + 100 parts in weight or volume
Application	: by injection, using suitable pumps with static mixer, pressure up to 100 atm.
Start of reaction	: 20 – 30 seconds
Complete reaction	: after 2 – 3 minutes
Max. reaction temperature	: 90 – 100°C (for a mass of 200 gr.)
Compressive strength (Kg./cm ²)	: 1 – 180. It depends on expansion's factor.
Shelf life	: 1 year, stored in their original tightly closed containers at temperatures in the range from +10°C to +35°C.
Service temperature*	: -40°C/+100°C

NOTE:

Both components A and B should be well stirred before use, in order to homogenize the settled additives. Viscosity of component A can greatly increase at temperatures lower than +5°C

The information given to users is based on our best experience. However, because of the many possible applications, which are outside of our knowledge and control, we cannot accept liability for loss or damage resulting from reliance upon such information.

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**Service temperature: it's the "working temperature" of the product; that is to say, the temperature to which can resist the product once it has been applied.*

APPLICATION METHOD

The GL140 is a pump that is well suited to be used for water sealing in tunnelling, mining and buildings even under bounded conditions.

It is a pneumatic driven single acting plunger pump. It works according to the principle of pressure transmission. The pump consists of a pneumatic drive component and a high pressure component.

The separation of drive and high pressure component prevents the contact between resin and drive component.

This pump is optimal suited for the use of all 2 component injection resins of GLOBALCHIMICA. These are e.g. the 2 component polyurethane resin GLOBALFOAM-PU-NF or the silicate resin GLOBALFOAM-SP.

Warnings:

The product does not stand frost (especially component A) and must be stored at temperatures between +10°C and + 35 °C.

In case the product is transported at lower temperatures, the product must be conditioned for at least 12 hours at +15/20°C, until it reaches the temperature of 15°C. Then it can be used. The ideal application temperature is between 15 and 30°C.

Component B contains isocyanate and it is therefore sensitive to humidity. It is preferable to use the entire content of the can once opened in order to avoid damp absorption while stocking.

*Cans with component A always have a black lid; cans with component B (isocyanate) always have a red lid.
Please keep to the recommended storage procedures.*

For applications at temperatures below 10/15°C, product and pump must be kept in a heated warehouse/container and conditioned at 15°C before application.

Taking this precaution and using special pipes with heating mantle, it is possible to inject the product at temperatures below 0°C (for any applications at extreme weather conditions, we suggest to contact the technical office at Globalchimica srl).

In case the product is stored at temperatures exceeding +40°C, please be aware that reaction time drastically decreases, causing a probable clogging of the mixing coil; we therefore suggest to condition both component A and B storing them for some hours at lower temperatures (below 30°C).

In winter time, we suggest transportation inside insulated containers.

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PACKING
23kg drums

