

Contite® PUE 500/501

2 PART RIGID POLYURETHANE FOAM FOR SOIL & ROCK CONSOLIDATION AND BELOW GRADE WATER STOPPAGE

DESCRIPTION

A new generation phthalate free high performance low viscosity hydrophobic rigid polyurethane injection grout used to increase the load bearing capacity of loose soils, void filling or underpinning. **Contite PUE 500/501** reacts into either a hard foam or very hard plastic. Reaction times may be adjusted by varying the **Contite PUE 500/501** ratio. **Contite PUE 500/501** does not foam on its own, it needs water present to foam. Complies to EN1504 Part 9 and EN1504 Part 5 Class (S)

- Principle 4 : Structural Strengthening (SS).
 - Method 4.5 - Injecting in Cracks, Voids or Interstices.
 - Method 4.6 - Filling Cracks, Voids or Interstices.

USES & ADVANTAGES

Contite PUE 500/501 may be used for soil and rock consolidation, filling of large voids, cracks and crevices, pre injection for waterproofing and consolidation in front of TBM and drill and blast, filling of fissures, gravel layers, in wet and dry conditions.

Advantages Include:-

- Phthalates free resins.
- Solvent free.
- Fast or slow reactions available.
- Easy mixing 1:1 by volume.
- Can be applied in dry or wet conditions.
- Environmentally friendly.
- Expands 20-30 times.
- High strength.
- Non shrink.
- Bonds with soil and concrete.
- Stops repeated water erosion.
- Suitable for long distance injection.

PROPERTIES

	For Part A	For Part B
Appearance:	Yellow	Dark brown
Viscosity: (mPa.s)@25°C	70-120	170-270
SG:	1.04-1.06	1.22-1.25
pH Value:	5.5-6.5	7.0-8.0

	Mixed Material
Appearance:	Light brown
Viscosity:	100-200
Density:	1.13-1.16
pH Value:	6.0-7.0

	Foam Properties
Pot Life:	5 minutes
Reaction Time:	20-30 seconds
Expansion Time:	Approx. 5 minutes
Compressive Strength:	> 40 N/mm ² at 7 days (with fine sand)
Tensile Strength:	1.5 MPa
ASTM D638	
Young's Strength:	50 MPa
ASTM D638	
Foam Density:	96.8 kg/m ³
ASTM D1622	
Foam Compressive Strength:	0.495 N/mm ² at 7 days
ASTM D1621	

(**Contite PUE 500/501**) + 1% water : Rigid Foam (Less Expansion)
 (**Contite PUE 500/501**) + 5% water : Less Rigid Foam (More Expansion)

MIX RATIO

Contite PUE 500 : Contite PU 501 = 1:1 by volume

APPLICATION

- **Contite PUE500/501** is injected using a 2 component injection machine such as GRACO REACTOR E-30 (plural component proportioner) where the two hoses are connected with an injection gun before injecting into the drilled holes.
- Clean and flush all equipment with **Contite PU Purge** prior to the injection.
- Check the mixing ratio of **Contite PUE 500** and **Contite PU 501** at the GRACO REACTOR by injecting the Part A & Part B under pressure initially, to ensure this is 1:1 mix ratio by volume.
- Fill the machine & hoses with **Contite PUE 500** Part A and **Contite PU 501** Part B and first flush the liquid into waste drums until fresh liquid is observed from the hoses.
- Insert the injection head into the drilled holes.
- Adjust pressure at the GRACO Reactor for Part A and Part B and start the injection, so as to achieve 1:1 mix ratio by volume.
- The injection should be continued until the water flow stops, or until the pre-measured amount of product has been injected in each drilled hole.
- After injecting into the first hole, remove the injection gun & start injecting into adjacent drilled hole situated at 30 cm interval from the previous drilled holes.
- Continue and repeat the injection steps with the adjacent drilled hole.
- When the injection has finished, clean and rinse all equipment with **Contite PU Purge**.
- All opened drums should be capped when not in use.

PACKAGING

400 litres set; available in **Contite PUE 500** 200 litres & **Contite PU 501** 200 litres in 200 litres steel drums. Other packing units are available on request.

STORAGE CONDITIONS & SHELF LIFE

Store in the shade in dry conditions. Stored in unopened sealed drums, in a dry area, at temperatures of 5°C-35°C, the shelf life is approximately 12 months.

HEALTH & SAFETY

Avoid skin and eye contact. Wear rubber gloves and safety goggles. Hands should be cleaned with cleaner, followed by soap and water. Avoid breathing of vapours; use with adequate ventilation. Please consult our MSDS for more information (available upon request).

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TECHNICAL SERVICE

The Cormix International Limited Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001: 2015 verified by TUV Nord.
ISO 14001 : 2015 verified by Lloyd's Register International.

DISCLAIMER

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc. Cormix does not take responsibility nor need to defend others testing that does not achieve the published data. The user must test the products suitability for the intended application and purpose. Cormix reserves the right to change the properties of the product. Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advice offered.

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