



Very
High
Durability
Repair &
Prevention
System



Certified Quality System since **FEBRUARY 1993**

From Project to Jobsite

BS 37 A COLARE

ONE and TWO-COMPONENT FIBRE REINFORCED

RHEOPLASTIC GROUT FOR THE STRUCTURAL REPAIR OF CONCRETE WITH COMPENSATED SHRINKAGE

R4

EN 1504-3

NORMA EUROPEA

CE approved – Certificate n. 1305 - CPD - 0808
EN 1504-3 Class R4

Description Cement based mixture ready to use, which forms, after mixing with water, a perfect flowable mortar for concrete repair jobs in formwork and moulds.
It is formulated to obtain repairs and objects with very high adhesion, impermeability, and high mechanical resistances.
The product can be obtained on request with MuCis[®], contact and migrating corrosion inhibitors for the additional protection against corrosion of the reinforcement: BS 37 A COLARE MuCis[®].

Advantages and characteristics

- The product, auto-levelling and flowable, fills all the cavities even the most difficult or between reinforcement steel.
- No bleeding.
- Very high adhesion to the substrate and reinforcement.
- Elimination of plastic shrinkage and compensation of hygrometric shrinkage.
- Optimal durability against chemical attack, frost/thaw cycles, resistant to fat and oil.
- Very low permeability for water, even under pressure.
- Very high mechanical resistance.

Fields of use BS 37 A COLARE is advisable for all repairs and restorations by pouring in formwork, with maximum thickness 4 cm.
For thickness of more than 4 cm, to be realised by using a flowable mortar, it is recommended to use the micro-concrete BS 66 MuCis[®].
For eventual applications by spraying or by trowel, as alternative, the products BS 37 tixotropic – BS 38 MuCis[®] Bicomponent – BS 39 MuCis[®] Bicomponent can be used.
BS 37 A COLARE is particularly indicated for :

- Repair or restructure concrete elements like pillars, beams, by-passes, pre-compressed or not, etc...
- For the restoration and protection of concrete in contact with sulphate or chloride rich water.
- Repair of structures subject to movements and vibrations.
- For the anchoring of prefabricated pillars to the concrete fundaments.
- Repair of the ceilings of bridges and viaducts.
- For the repair and maintenance in harbour or industrial areas (presence of oil spillages)

Method of use Please note: the adhesion to the substrate is the main characteristics for the durability and the structural cooperation of the repair mortars.
We recommend to consult the data sheet contained at the end of the Manual: *“Appraisal and preparation of substrates to obtain better adhesion of repair and restructuration mortars - recommendations for the correct finishing”*

Emission date : 01/2006
Revision date : 09/2013

Nr Rev: 7

BS 37 A COLARE
pag. 1/3

TECNOCHEM ITALIANA S.p.A.
24030 BARZANA (BERGAMO) ITALY – VIA SORTE 2/4,
TEL. **39 035 55.48.11 – TELEFAX **39 035 55.48.16
E-mail: info@tecnochem.it - www.tecnochem.it



Very
High
Durability
Repair &
Prevention
System



Certified Quality System since **FEBRUARY 1993**

From Project to Jobsite

- Remove with care all the incoherent parts, and all substances which can jeopardise normal hardening and adhesion. It is advisable to scabble the substrate to allow a minimum coverage of 1 cm of BS 37 A COLARE .
- It is recommended to make vertical cuts of 1 cm as the product needs surface roughness to assure good adhesion . Sandblasting is not sufficient, but a heavy scabbling is advised.
- The exposed rebars must be completely cleaned from rust and immediately treated with MuCis® PROTEZIONE FERRO. Eventually can it be beneficial to add some additional rebars or to replace the damaged ones.
- The metal reinforcement 'in contrast' must be positioned 3 cm from the substrate, and thus allowing a minimum coverage of 1 cm of 37 A COLARE .
- In the case, thickness is less than 2 cm, the repair with BS 37 A COLARE can be done anyhow, providing the substrate is very rough and completely open (in order to create the contrast for the expansive forces of the mortar).
- Saturate the substrate with water after the preparation and positioning of the rebars, and remove the excess of water prior to the application of the grout.
- Use formwork in "non absorbent" materials to avoid loss of mixing water, with reduced flowability as consequence.
- Mix with a suitable mixer (we advise a vertical axes mixer) adding the powder gradually to the mixing water (don't use the total amount). Mix for 3 minutes till a smooth grout is obtained, and add than the remaining water to obtain the ideal consistency for the specific pouring repair job.

Medium amount of water for a plastic consistency is about 2,25-2,50 litre per bag of 25 kg. For more fluid mixes, use about 3,00 – 3,50 litre per bag of 25 kg.

Once the mix is ready, pour the grout into the formwork in one manipulation, allowing the entrapped air to escape.

Try to finish the pour in one operation.

In order to assure that all the cavities and pores between grout and substrate are filled, assist the mortar in flowing by means of simple vibration with a piece of wood or rebar.

- Remarks**
- Do not demould before 24 hours.
 - For horizontal substrates, it is necessary to apply CURING COMPOUND UR-19.
 - Use the product in the temperature range between + 5°C and + 45°C. In case the temperature is between + 0°C and + 5°C, it is advisable to store the bags in hot areas and use tepid water to prepare the mix. Do not use the product if temperature drops below 0°C.
 - In case of torrid temperatures, it is advisable to store the bags in cool areas and in the shade, executing the casting in the less hot hours, possibly using cool water.
 - Information according to 2003/53/CE
Storage: The product can be kept for at least 12 months if stored in dry and protected conditions, in the original packaging, between + 5°C and + 35°C.
Do not use the content of open bags in case of agglomeration of the powder. Avoid freezing of the liquid component B.

Packaging BS 37 A COLARE ONE COMPONENT:
25 Kg bag

BS 37 A COLARE TWO COMPONENT:
25 Kg bag (comp. A) + 0,25 Kg bottle (comp. B sra)

Emission date : 01/2006
Revision date : 09/2013

Nr Rev: 7

BS 37 A COLARE
pag. 2/3



Very
High
Durability
Repair &
Prevention
System



Certified Quality System since **FEBRUARY 1993**

From Project to Jobsite

Technical characteristics (typical values) Initial setting time: approx 1 hour at 20 °C.

• Compressive strength	N/mm ²	70÷80 (28 d.)
• Flexural strength	N/mm ²	10÷11,5 (28 d.)
• ELASTICITY MODULUS	N/mm ²	28.000÷32.500 (28 d.)
• Adhesion to concrete	N/mm ²	2,5 (28 d.)
• Pull-out	N/mm ²	> 20 (28 d.)

• Carbonation in time	8 years mm	1,0
	18 years mm	2,5
	25 years mm	4,5
• Resistance to CO ₂ penetration	μ	9.500
• Resistance to water vapour diffusion	μ	60
• ① Resistance to FROST/THAW	gr/m ²	48
• ② Permeability to CHLORIDES	Coulomb	250

• Type of conglomerate		Pouring mortar
• Number of components		Mono
• Advised thickness	mm	10÷50 (steel net)
• Application		formwork
• Curing : wet		YES
• Curing : protected		SE
• Typical application		Struct.repair

• Setting time		Normal
• Hardening		Normal
• Shrinkage compensation		YES (MONO) YES+++ (BIC*)
• Dosage/yield	Kg/m ² /mm	1,9

1N/mm² = 1MPa = 10,19 Kg/cm²

* the formulation for this type of products can be also made with the addition of corrosion inhibitors and MuCis[®].

① Freeze and thaw resistance in the presence of salt: SIA 162 11/91 (< 600 gr/sm= very high freeze and thaw resistance)

② Chlorides permeability, FH WA RD/81 (100 ÷ 1000 COULOMB = very low chlorides permeability)



Note *: restrained expansion according to UNI 8147, also in high humidity curing, equal to 0.04% at 1 day and 0.06% at 28 days.

Safety indications Read carefully the safety indications on the packaging, or consult the relevant safety data sheet of this product.

The above information is based on our best experiences and lab results and on results of the application of the product in various fields. Tecnochem Italiana is not responsible for negative performances due to not proper use of the product or for defects due to elements not connected with the quality of the product included wrong storage. Technical characteristic in this technical data sheet are up-to-dated periodically. Revision date of this technical data sheet is indicated below. Changes of this data sheet can be found in our web-site www.tecnochem.it where you can find the same technical data sheet updated in real time.

Emission date : 01/2006
Revision date : 09/2013

Nr Rev: 7

BS 37 A COLARE
pag. 3/3

TECNOCHEM ITALIANA S.p.A.
24030 BARZANA (BERGAMO) ITALY – VIA SORTE 2/4,
TEL. **39 035 55.48.11 – TELEFAX **39 035 55.48.16
E-mail: info@tecnochem.it - www.tecnochem.it