

CE  
Labeled



**Bostik**

# Grout XL

**GROUTING MORTAR**





## Why do we need Anchoring Grouts?

Due to their non-shrinkage, high final strength, flowability and excellent bonding characteristics, cement based grouts are used for filling and grouting gaps, withstand high dynamic loadings and give additional strength to the foundations of load-bearing heavy structures.



## Where do we use Anchoring Grouts?

Cement based grouts are used in a wide variety of application areas. Most common applications are filling and grouting of multi-purpose moulded anchorage details such as; column bases, anchor bolts, machinery base plates, void filling and concrete repairs, base plates in steel framed buildings.

SUITABLE TO APPLY UP TO 10 CM IN ONE LAYER

DOES NOT SHRINK

R4 CLASS - CE LABELLED ACCORDING TO EN 1504-3



## R4 Classification

The EN 1504-3 standard for cement and resin based mortars and concrete describes four classifications;

- R1 and R2 for non-structural repairs
- R3 and R4 for structural repairs.

Please see a detailed explanation on page 5 as well. Bostik Grout XL conforms to the highest (R4) classification as a structural grouting mortar with a compressive strength of up to 90 Mpa after 28 days.



# Advantages of Grout XL

- Apply up to 10cm in 1 layer
- Multi-purpose use, wide range of different applications
- Non-shrinking
- Pumpable
- High final strength
- High durability
- Excellent fluidity characteristics
- Excellent bonding to steel and concrete
- Non-corrosive
- Not flammable, non-toxic
- Easy to mix, only add water
- Impact and vibration resistant
- Economical comparing to mechanical fixings

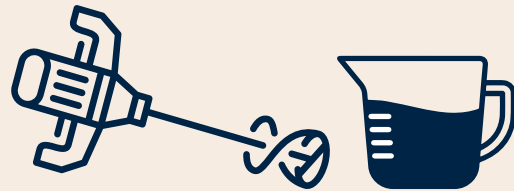
## Why Grout XL?

Grout XL is a mineral and cement based, CE certified EN 1504-3 R4 class, anchoring grout, which is produced with reinforcement of high quality granulometric sand, cement and high quality chemical additives. Due to its unique formulation Grout XL can be applied by up to 10 cm per layer.



### Preparation of the substrate :

- The application surface should be dry, clean, strong and free from dirt and other adherence reducing materials as well as crack-free, stable and strong enough to bear burden.
- When necessary, application surface should be cleaned with sanding, pressure water or pressure air spraying method.
- Before the anchorage, the surface should be wetted sufficiently, however water accumulation on the surface should be avoided.



### Application:

- Water at normal environment temperature is poured into a clean container. Then, some dry mortar is added in the container which is full of water and mixed with a suitable mixing machine or device without stopping. It is mixed until a smooth and homogenous mixture is obtained.
- Some amount of water, which should not exceed the amount stated on the technical data chart, can be added in the mortar prepared in order to obtain the desired consistency.

### Notes:

Please refer to our Technical Data Sheet for complete application method. Consumption is approx. 18 – 22 kg/m<sup>2</sup> for 100 mm thickness. The coverage amounts are theoretical and it is recommended to do coverage-controlled sample application before treatment. For further information please contact Bostik Turkey's technical team.

## FEATURES

- Highly fluid (ideal for densely reinforced and narrow moulded areas)
- Long applicability period
- Self-settles due to its fluidity and easily gets the shape of any mould, allows gap-free concrete pouring, penetrates into the cracks and gaps easily
- For fastening the industrial machines and joint elements of the machines to the floor, and filling the edges and lower parts with concrete
- For concreting the joints of steel elements and concrete elements
- For making all kind of anchorage, assembly and concrete repair; and filling piers
- For installing railways, placing lids of sewages and water channels
- For fastening bridge parapets, traffic lights, billboards to the floor and fastening the reinforcements while enhancing girder-columns
- High first and second compressive strengths
- Adheres to steel very strongly, absorbs the tension
- Resistant to water, constant wetness, frost and heavy weather conditions
- No shrinkage
- Fireproof, therefore it is used safely in the areas where epoxy use is risky.

## AREAS OF APPLICATIONS

- Interior and exterior
- In concrete fastening and tasks of reinforced concrete
- In multi-purpose moulded anchorage tasks
- In crane rails and piers
- In the joints of roads and bridges
- For fastening the industrial machines and joint elements of the machines to the floor
- For installing railways, placing lids of sewages and water channels

## TECHNICAL DATA

Dmax (mm)	4
Colour	Grey
Applicable Thickness (mm)	100
Dry Unit Volume Weight (kg / lt)	1,5 ± 0,2
Wet Unit Volume Weight (kg / lt)	2,2 ± 0,2
Pot Life (min)	~ 60
Curing Time (hour)	~ 24
Compressive Strength 7 days (N/mm <sup>2</sup> ) 28 days (N/mm <sup>2</sup> )	55 - 65 70 - 90
Flexural Strength (28 days) (N/mm <sup>2</sup> )	≥ 9
Adhesion Strength (concrete) (28 days) (N/mm <sup>2</sup> )	≥ 2
Water Mixing Ratio (for 25 kg dry mortar)	3,0 - 3,5 lt
Environment temperature for application	Between +5°C and +35°C

Technical data is obtained according to +23°C air temperature and 50% relative humidity.

## Storage

- Dry mortar bags should be protected from water, frost and adverse air conditions.
- They should be kept dry and cool on wooden pallets at between +10°C and +25°C in moisture free conditions.
- The torn and opened drums should be closed immediately and consumed first.
- Maximum 8 bags are stacked on each other.
- Shelf life is maximum 12 months conditional to complying with the above mentioned storage conditions.

**EN 1504: Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity**  
**Part 3: Structural and nonstructural bonding**

PERFORMANCE CHARACTERISTICS	TEST METHOD	REQUIREMENT			
		STRUCTURAL		NON-STRUCTURAL	
		Class R4	Class R3	Class R2	Class R1
Compressive strength	EN 12190	≥ 45MPa	≥ 25MPa	≥ 15MPa	≥ 10MPa
Chloride ion content	EN 1015-17	≤ 0.05%	≤ 0.05%	≤ 0.05%	≤ 0.05%
Adherence bond	EN 1542	≥ 2.0MPa	≥ 1.5MPa	≥ 0.8MPa	≥ 0.8MPa
Contrasted expansion/shrinkage	EN 12617-4	Bond strength after test ≥ 2.0MPa	Bond strength after test ≥ 1.5MPa	Bond strength after test ≥ 0.8MPa	No requirement
Durability – resistance to carbonation	EN 13295	dk ≥ control concrete (concrete of reference type MC 0,45)		No requirement	
Modulus of elasticity	EN 13412	≥ 20GPa	≥ 15GPa	No requirement	
Thermal compatibility: Freezing-thawing	EN 13687-1	Bond strength after 50 cycles ≥ 2.0MPa	Bond strength after 50 cycles ≥ 1.5MPa	Bond strength after 50 cycles ≥ 0.8MPa	Visual inspection after 50 cycles
Thermal compatibility: Storms	EN 13687-2	Bond strength after 30 cycles ≥ 2.0MPa	Bond strength after 30 cycles ≥ 1.5MPa	Bond strength after 30 cycles ≥ 0.8MPa	Visual inspection after 30 cycles
Thermal compatibility: Dry cycles	EN 13687-4	Bond strength after 30 cycles ≥ 2.0MPa	Bond strength after 30 cycles ≥ 1.5MPa	Bond strength after 30 cycles ≥ 0.8MPa	Visual inspection after 30 cycles
Slip resistance	EN 13036-4	Class I: > 40 units with damp test		Class I: > 40 units with damp test	
		Class II: > 40 units with dry test		Class II: > 40 units with dry test	
		Class III: > 55 units with damp test		Class III: > 55 units with damp test	
Capillary absorption (permeability to water)	EN 13057	≤ 0.5kg·m-2·h-0.5		≤ 0.5kg·m-2·h-0.5	No requirement



## REFERENCES

A few examples of prestigious projects where the Bostik Grout XL has been used.



**“Smart” help:  
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