



# Product Pack for Fosroc® Conbextra BB Bridge Bearing Grout

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# PRODUCT INTRODUCTION

Conbextra BB

# Product Information

**Product Name.**

**Conbextra BB.**

**Description.**

Non shrink cementitious  
bridge bearing grout

**Photo.**



**Colour.**

Grey Powder

**Packaging:**

25 kg/bag



# System & Application Area



HIGH  
PERFORMANCE



Conbextra BB

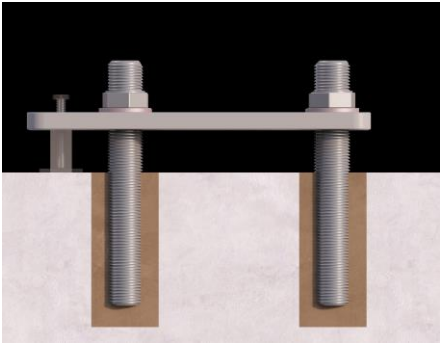


**Bridge bearings**



# Product Advantages

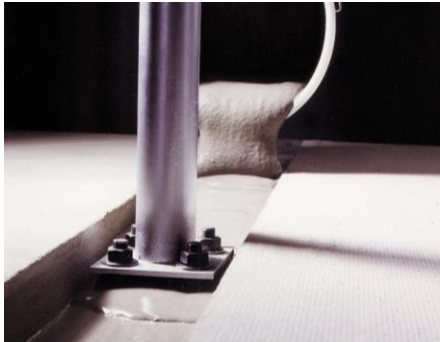
Conbextra BB is a ready to use cementitious grout supplied in 25 kg moisture resistant bags. It has been formulated specifically for grouting of bridge bearings and parapet post baseplates.



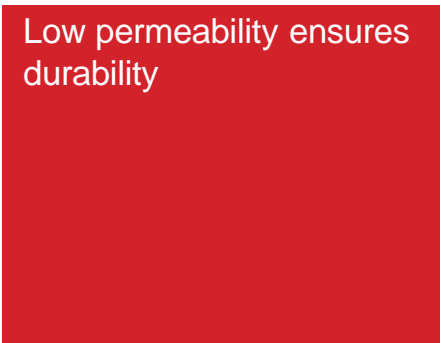
Non shrink



High strength



Excellent flow, particularly at low temperature



Low permeability ensures durability





# PRODUCT DATA SHEETS

## Non shrink cementitious bridge bearing grout

### Uses

Grouting beneath:

- Bridge bearings
- Parapet posts
- Flanged lighting columns

### Advantages

- Non shrink
- High strength
- Excellent flow, particularly at low temperature
- Low permeability ensures durability
- Can be poured or pumped

### Description

Conbextra BB is a ready to use cementitious grout supplied in 25 kg moisture resistant bags. It has been formulated specifically for grouting of bridge bearings and parapet post baseplates.

Conbextra BB can be used in section thicknesses of 10 mm to 100 mm.

The dry powder is a blend of Portland cements, graded silica sands and additives to which only a controlled amount of clean water is added in situ to produce a highly flowable, non shrink grout.

### Standards compliance

Conbextra BB has been formulated to fully comply with the requirements of the Department of Transport Specification for Highway Works March 1998 Clause 2601. The qualification of material to this Specification is by individual batch, Fosroc can arrange qualification on behalf of customers if required. Contact Fosroc for further details.

### Properties

All properties at a water : powder ratio of 0.19

Property	Test method	
Compressive strength (typical results):	BS 1881:1983 Part 116	1 day: 28 N/mm <sup>2</sup>
		7 days: 58 N/mm <sup>2</sup>
		28 days: 67 N/mm <sup>2</sup>
Expansion:	ASTM C827-87	0.25% - 1.0%
Elastic stability (compressive strain):	DTp SHW 1991 Clause 2601 (viii)	< 1%
Total chloride ion content (as % of mass of cement):	—	< 0.1%
Total acid soluble sulphate SO <sub>3</sub> (as % of mass of cement):	—	< 4%

## Specification clauses

### Performance specification

All grouting of bridge bearings and parapet post baseplates must be carried out using a pre-packaged non-shrink cementitious grout manufactured by a registered firm under the ISO 9001 quality assurance scheme.

The grout must comply fully with the Department of Transport Specification for Highway Works, March 1998 Clause 2601. Upon request in advance of an order, the supplier shall confirm this compliance by providing test results from an independent HAPAS accredited laboratory.

The storage, mixing, placing and curing of the grout shall all be in accordance with the suppliers technical data sheet

### Application instructions

#### Preparation

##### Concrete surfaces

The substrate must be free from oil, grease or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes or fixing pockets must be blown clean of any dirt or debris.

##### Pre-soaking

For a minimum of two hours prior to grouting, the area of cleaned substrate should be flooded with fresh water. Immediately before grouting takes place, any free water should be removed. Particular care should be taken to blow out all bolt holes and pockets.

##### Bearing plate / parapet post baseplate

It is essential that this is clean and free from oil, grease or scale.

##### Levelling shims

If these are to be removed after the grout has hardened, they should be treated with a thin layer of grease.

##### Formwork

The formwork should be constructed to be leak proof as Conbextra BB is a free flowing grout. This can be achieved by using Fosroc Nitoseal MS60 beneath the constructed formwork and between joints.

In some cases it is practical to use a sacrificial semi-dry sand and cement formwork. The formwork should include outlets for the pre-soaking water.

The unrestrained surface area of the grout must be kept to a minimum. Generally the gap width between the perimeter formwork and the plate edge should not exceed 100 mm on the pouring side and 50 mm on the opposite side. There should be no gap at the flank sides.

##### Mixing

For best results a mechanically powered grout mixer should be used. For quantities up to 50 kg a slow speed drill fitted with a

# Fosroc® Conbextra BB

high shear paddle is suitable. Larger quantities will require a high shear vane mixer. Do not use a colloidal impeller mixer.

It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity.

The water should be accurately measured into the mixer. Slowly add the total contents of the Conbextra BB bag, mix continuously for 5 minutes, ensuring a smooth, even consistency is obtained.

## Water addition

Add 4.5 to 4.8 litres of water to each 25 kg bag of Conbextra BB to produce a fluid grout.

## Placing

Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process.

Conbextra BB can be placed in thicknesses up to 100 mm in a single pour.

Any bolt pockets must be grouted prior to grouting between the substrate and the bearing or base plate.

Continuous grout flow is essential.

The mixed grout should be poured only from one side of the void to eliminate the entrapment of air or surplus pre-soaking water. This is best achieved by pouring the grout across the shortest distance of travel. The grout head must be maintained at all times so that a continuous grout front is achieved.

Where large volumes have to be placed Conbextra BB may be pumped. A heavy duty diaphragm pump is recommended for this purpose. Screw feed and piston pumps may also be suitable.

Once the Conbextra BB has reached trowelable consistency, the unrestrained portion should be cut back to the baseplate/ bearing plate.

## Curing

On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of Concure curing membrane, continuous application of water and/or wet hessian.

## Cleaning

Conbextra BB should be removed from tools and equipment with clean water immediately after use. Cured material can be removed mechanically, or with Fosroc Acid Etch.

## Estimating

Allowance should be made for wastage when estimating quantities required. The approximate yield per 25 kg bag is 13.5 litres.

## Supply

Conbextra BB is supplied in 25 kg bags.

## Limitations

### Low temperature working

Do not mix Conbextra BB at ambient temperatures below 5°C.

For full cold weather working limitations, refer to Department of Transport Specification clause 2601 sub-clause 3.

### High temperature working

At ambient temperatures above 35°C the mixed grout should be stored in the shade. Cool water (below 20°C) should be used for mixing the grout.

## Storage

Store unopened bags in cool dry internal conditions. Conbextra BB has a shelf life of 6 months if kept in a dry store in sealed bags.

If stored in high temperature and high humidity locations the shelf life may be reduced to less than 6 months.

## Precautions

### Health and safety

For further information refer to appropriate Product Safety Data Sheet.

### Fire

Conbextra BB is non-flammable

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### Important note

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# SDS



## SAFETY DATA SHEET CONBEXTRA BB

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name CONBEXTRA BB

Product number 1146000UK9

#### 2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Cementitious overlay

#### 3. Details of the supplier of the safety data sheet

Supplier Fosroc Limited  
 Drayton Manor Business Park  
 Coleshill Road  
 Tamworth  
 Staffordshire  
 B78 3XN  
 England  
 Tel: +44 (0) 1827 262222  
 Fax: +44 (0) 1827 262444  
[enquiryuk@fosroc.com](mailto:enquiryuk@fosroc.com)

#### 1.4. Emergency telephone number

Emergency telephone +44 (0) 1827 265 279 (Monday-Sunday 24 hours a day)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335

Environmental hazards Not Classified

**Human health** Dust or splashes from the mixture may cause permanent eye damage. Dust may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing. Dust has an irritating effect on moist skin. Prolonged contact with moist or wet product may cause burns. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

**Environmental** The product will harden into a solid mass in contact with water and moisture. The resultant material is not biodegradable.

#### 2.2. Label elements

## CONBEXTRA BB

### Hazard pictograms



### Signal word

Danger

### Hazard statements

H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H317 May cause an allergic skin reaction.  
 H335 May cause respiratory irritation.

### Precautionary statements

P264 Wash contaminated skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P501 Dispose of contents/ container in accordance with national regulations.

### Contains

ORDINARY PORTLAND CEMENT, CALCIUM SULFOALUMINATE CLINKER

### Supplementary precautionary statements

P261 Avoid breathing dust.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P310 Immediately call a POISON CENTER/ doctor.  
 P312 Call a POISON CENTRE/doctor if you feel unwell.  
 P321 Specific treatment (see medical advice on this label).  
 P332+P313 If skin irritation occurs: Get medical advice/ attention.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P405 Store locked up.

### 2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>ORDINARY PORTLAND CEMENT</b>	<b>30-60%</b>
CAS number: 65997-15-1	EC number: 266-043-4
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
STOT SE 3 - H335	
<b>QUARTZ (SiO<sub>2</sub>)</b>	<b>10-30%</b>
CAS number: 14808-60-7	EC number: 238-878-4
<b>Classification</b>	
Not Classified	

## CONBEXTRA BB

<b>CALCIUM CARBONATE</b>	<b>1-5%</b>
CAS number: 471-34-1	EC number: 207-439-9
<b>Classification</b>	
Not Classified	
<b>CALCIUM SULFOALUMINATE CLINKER</b>	<b>1-5%</b>
CAS number: 12005-25-3	
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	
STOT SE 3 - H335	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	No personal protective equipment is needed for first aid responders. First aid workers should avoid contact with wet cement or wet cement containing preparations.
<b>Inhalation</b>	Move affected person to fresh air at once. Dust in throat and nasal passages should clear spontaneously. Get medical attention if irritation persists or later develops, or if discomfort, coughing or other symptoms persist.
<b>Ingestion</b>	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
<b>Skin contact</b>	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention. Show this Safety Data Sheet to the medical personnel.

#### 4.2. Most important symptoms and effects, both acute and delayed

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
<b>Ingestion</b>	Ingestion of large doses may result in irritation to the gastrointestinal tract.
<b>Skin contact</b>	May have an irritating effect on moist skin after prolonged contact, or may cause dermatitis after repeated contact. Prolonged skin contact with wet preparation may cause serious burns without pain being felt, including through clothing.
<b>Eye contact</b>	Eye contact may cause serious and potentially irreversible injuries.

#### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	Treat symptomatically.
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### SECTION 5: Firefighting measures

## CONBEXTRA BB

### 1. Extinguishing media

**Suitable extinguishing media** The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

### 2. Special hazards arising from the substance or mixture

**Specific hazards** Water used for fire extinguishing, which has been in contact with the product, may be corrosive. No unusual fire or explosion hazards noted.

**Hazardous combustion products** No known hazardous decomposition products.

### 5.3. Advice for firefighters

**Protective actions during firefighting** No specific firefighting precautions known.

**Special protective equipment for firefighters** Use protective equipment appropriate for surrounding materials.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Use work methods which minimize dust production. Avoid contact with eyes and prolonged skin contact. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust.

### 6.2. Environmental precautions

**Environmental precautions** Collect and dispose of spillage as indicated in Section 13. Do not discharge into drains or watercourses or onto the ground.

### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. Dry material: Collect powder using special dust vacuum cleaner with particle filter. Alternatively, damp powder with fine spray (to avoid dust formation) and remove slurry. Place into container and allow to solidify before disposal as described in section 13. Wet material: Clean up wet material and place in a container. Allow to dry and solidify before disposal as described in section 13.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Avoid contact with skin and eyes. Avoid generation and spreading of dust. Avoid inhalation of dust. Mechanical ventilation or local exhaust ventilation may be required. Change contaminated clothing. Do not eat, drink or smoke when using the product.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Store in tightly-closed, original container in a dry and cool place. Unsuitable container materials: Aluminium. The product contains less than 2 mg chromate/kg dry cement, and this limit will not be exceeded for 6 months from the packing date stated on the packaging. Seal opened containers and use up as soon as possible. To be stored out of reach of children in its original packaging in a dry place.

**Storage class** Miscellaneous hazardous material storage.

### 7.3. Specific end use(s)

## CONBEXTRA BB

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### ORDINARY PORTLAND CEMENT

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> inhalable dust

Long-term exposure limit (8-hour TWA): WEL 4 mg/m<sup>3</sup> respirable dust

##### QUARTZ (SiO<sub>2</sub>)

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m<sup>3</sup> Respirable crystalline silica

##### CALCIUM CARBONATE

Long-term exposure limit (8-hour TWA): 10 mg/m<sup>3</sup> inhalable dust

Long-term exposure limit (8-hour TWA): 4 mg/m<sup>3</sup> respirable dust

WEL = Workplace Exposure Limit

##### ORDINARY PORTLAND CEMENT (CAS: 65997-15-1)

**DNEL**

Workers - Inhalation; Short term : 3 mg/m<sup>3</sup>

##### BASIC COPPER CARBONATE (CAS: 12069-69-1)

**PNEC**

- Fresh water; 7.8 µg/l

- marine water; 5.2 µg/l

- STP; 230 µg/l

#### 8.2. Exposure controls

##### Protective equipment



##### Appropriate engineering controls

Atmospheric levels of dust must be maintained within the Occupational Exposure Limit. Where mechanical methods are inadequate or impractical, appropriate personal protective equipment must be used.

##### Personal protection

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

##### Eye/face protection

The following protection should be worn: Chemical splash goggles. (conform EN 166)

##### Hand protection

It is recommended that gloves are made of the following material: Butyl rubber. Nitrile rubber. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

##### Other skin and body protection

Use barrier creams to minimise skin contact. Wear appropriate clothing to prevent repeated or prolonged skin contact.

## CONBEXTRA BB

<b>Hygiene measures</b>	<p>This product contains silica sands.</p> <p>The grain size distribution of silica sand present means that it is not classified as hazardous. However, any respirable crystalline dust generated by secondary processing may cause health effects.</p> <p>Prolonged and /or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness.</p> <p>Occupational exposure to respirable crystalline silica dust should be monitored and controlled.</p>
<b>Respiratory protection</b>	Wear a respirator fitted with the following cartridge: Particulate filter, type P2.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Dusty powder.
<b>Colour</b>	Grey.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not relevant.
<b>pH</b>	pH (diluted solution): >12 working dilution
<b>Melting point</b>	>1250°C
<b>Initial boiling point and range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Evaporation factor</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	The product is not flammable.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Solubility(ies)</b>	Insoluble in water. Hardens in contact with water.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Explosive under the influence of a flame</b>	Not considered to be explosive.
<b>Oxidising properties</b>	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.
<b>Comments</b>	Information given is applicable to the product as supplied.

#### 9.2. Other information

<b>Other information</b>	No data available.
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### SECTION 10: Stability and reactivity

## CONBEXTRA BB

### 10.1. Reactivity

**Reactivity** When mixed with water, hardens to form a stable mass that is not reactive in normal conditions.

### 10.2. Chemical stability

**Stability** Stable under the prescribed storage conditions. When stored under humid conditions, the chromate neutralization will decrease. This product contains a chromate reducing agent to reduce the risk of allergic dermatitis caused by chromium (VI). This product has a shelf life. If not stored in accordance with packaging instructions (sealed and dry), there is an increased risk of the presence of hexavalent chromate leading to an increased risk of an allergic reaction.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None known. Will not polymerise.

### 10.4. Conditions to avoid

**Conditions to avoid** Water, moisture.

### 10.5. Incompatible materials

**Materials to avoid** Acids. Chemically-active metals.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** No known hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Skin sensitisation

**Skin sensitisation** Some individuals may exhibit eczema upon exposure to wet cement caused either by the high pH which induces irritant contact dermatitis, or by an immunological reaction to soluble Cr (VI) which elicits allergic contact dermatitis. The cement contains a soluble Cr (VI) reducing agent and as long as the mentioned period of effectiveness is not exceeded, a sensitising effect is not expected.

#### **Inhalation**

Irritating to respiratory system. Inflammation of the nasal mucous membrane by exposure to cement dust.

#### **Ingestion**

May cause irritation of mouth, throat and digestive tract.

#### **Skin contact**

This product is strongly irritating. Prolonged contact may cause burns. May cause sensitisation by skin contact.

#### **Eye contact**

Irritating and may injure eye tissue if not removed promptly.

#### **Acute and chronic health hazards**

Repeated and/or prolonged contact may lead to dermatitis.

## SECTION 12: Ecological information

#### **Ecotoxicity**

The product is not expected to be hazardous to the environment.

### 12.1. Toxicity

#### Acute aquatic toxicity

## CONBEXTRA BB

**Acute toxicity - fish** Not determined.  
The product is not expected to be hazardous to the environment. The addition of cements to water will, however, cause the pH to rise and may therefore be toxic to aquatic life in some circumstances.

### 12.2. Persistence and degradability

**Persistence and degradability** The product is not biodegradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** The product is not bioaccumulating.

### 12.4. Mobility in soil

**Mobility** The product hardens to a solid, immobile substance. The product is not volatile but may be spread by dust-raising handling.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

**Other adverse effects** None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Do not empty into drains, sewers or water courses. Cement that has exceeded its shelf life: when demonstrated that it contains more than 0.0002% Cr (VI), the product shall not be used other than in controlled closed and totally automated processes. It may be recycled and/or treated again with a reducing agent.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Note that fully cured material is not considered as hazardous waste.

## SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

1. UN number

Not applicable.

2. UN proper shipping name

Not applicable.

3. Transport hazard class(es)

No transport warning sign required.

4. Packing group

Not applicable.

5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**

No.

6. Special precautions for user

## CONBEXTRA BB

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78  
and the IBC Code

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

<b>National regulations</b>	The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).
<b>EU legislation</b>	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015.
<b>Guidance</b>	Workplace Exposure Limits EH40. Respiratory protective equipment at work (HSG53).

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

<b>General information</b>	For professional users only. Only trained personnel should use this material.
<b>Revision comments</b>	NOTE: Lines within the margin indicate significant changes from the previous revision.
<b>Revision date</b>	31/05/2019
<b>Revision</b>	5b
<b>Supersedes date</b>	22/05/2017
<b>Hazard statements in full</b>	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H335 May cause respiratory irritation.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.



# METHOD STATEMENT

**NON SHRINK CEMENTITIOUS BRIDGE BEARING GROUT****Conbextra BB****1. Substrate Preparation - Concrete surfaces**

- a. The substrate must be free from oil, grease or any loosely adherent material. If the concrete surface is defective or has laitance, it must be cut back to a sound base. Bolt holes or fixing pockets must be blown clean of any dirt or debris.

**2. Pre-soaking**

- a. For a minimum of two hours prior to grouting, the area of cleaned substrate should be flooded with fresh water. Immediately before grouting takes place, any free water should be removed. Particular care should be taken to blow out all bolt holes and pockets.

**3. Bearing plate / parapet post baseplate**

- a. It is essential that this is clean and free from oil, grease or scale.

**4. Levelling shims**

- a. If these are to be removed after the grout has hardened, they should be treated with a thin layer of grease.

**5. Formwork**

- a. The formwork should be constructed to be leak proof as Conbextra BB is a free flowing grout. This can be achieved by using Fosroc Nitoseal MS60 beneath the constructed formwork and between joints.
- b. In some cases it is practical to use a sacrificial semi-dry sand and cement formwork. The formwork should include outlets for the pre-soaking water.
- c. The unrestrained surface area of the grout must be kept to a minimum. Generally the gap width between the perimeter formwork and the plate edge should not exceed 100 mm on the pouring side and 50 mm on the opposite side. There should be no gap at the flank sides.

## METHOD STATEMENT

### 6. Mixing

- a. For best results a mechanically powered grout mixer should be used. For quantities up to 50 kg a slow speed drill fitted with a high shear paddle is suitable. Larger quantities will require a high shear vane mixer. Do not use a colloidal impeller mixer.
- b. It is essential that machine mixing capacity and labour availability is adequate to enable the grouting operation to be carried out continuously. This may require the use of a holding tank with provision for gentle agitation to maintain fluidity.
- c. The water should be accurately measured into the mixer. Slowly add the total contents of the Conbextra BB bag, mix continuously for 5 minutes, ensuring a smooth, even consistency is obtained.

### 7. Water addition

- a. Add 4.5 to 4.8 litres of water to each 25 kg bag of Conbextra BB to produce a fluid grout.

### 8. Placing

- a. Place the grout within 20 minutes of mixing to gain the full benefit of the expansion process.
- b. Conbextra BB can be placed in thicknesses up to 100 mm in a single pour.
- c. Any bolt pockets must be grouted prior to grouting between the substrate and the bearing or base plate.
- d. Continuous grout flow is essential.
- e. The mixed grout should be poured only from one side of the void to eliminate the entrapment of air or surplus pre-soaking water. This is best achieved by pouring the grout across the shortest distance of travel. The grout head must be maintained at all times so that a continuous grout front is achieved.
- f. Where large volumes have to be placed Conbextra BB may be pumped. A heavy duty diaphragm pump is recommended for this purpose. Screw feed and piston pumps may also be suitable.
- g. Once the Conbextra BB has reached trowelable consistency, the unrestrained portion should be cut back to the baseplate/ bearing plate.



## METHOD STATEMENT

### **9. Curing**

- a. On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of Concure curing membrane, continuous application of water and/or wet hessian.

### **10. Cleaning**

- a. Conbextra BB should be removed from tools and equipment with clean water immediately after use. Cured material can be removed mechanically, or with Fosroc Acid Etch.



# PROJECT REFERENCES



constructive solutions

# Thame Valley Viaduct

Nr Aylesbury, UK

## CUSTOMER

FC Civils Solutions

## SECTOR

Rail

## DATE

March 2024

## PRODUCTS

- Conbextra BB



### THE PROJECT

The Thame Valley Viaduct will carry the High Speed 2 railway line in the United Kingdom. It traverses the River Thame near Aylesbury in Buckinghamshire and its construction is largely pre-fabricated and assembled onsite as a time and money saving approach, while also aiming to reduce impact upon the local community. The viaduct will have a length of 880 metres (2,890 feet) across its evenly-spaced 36 spans, while only having a height of 3 m (9.8 ft). It is intended to be an aesthetically pleasing structure, making use of modern construction techniques and innovations from international high speed railway projects. Fosroc were contacted by specialist contractor FC Civils Solutions to supply a grout which complies with and can be tested to the SHW Series 2600 clause (Specification for Highways Works). Conbextra BB was selected as it meets both of these requirements.

### THE SOLUTION

The grout of choice - Conbextra BB, is a non-shrink cementitious bridge bearing grout. Formulated specifically for grouting of bridge bearings and parapet post baseplates, it is supplied in is a ready to use cementitious grout supplied in 25 kg moisture resistant bags. On-site testing was conducted to prove the flow performance, with cone tests and compression tests taken from independently tested batches at the UKAS accredited laboratory at North West Concrete Testing. The Conbextra BB grout passed the on-site testing ready for application, and was then poured under viaduct bearing plates in small applications. As an on-going project, it is also being pumped into the gaps between the pre-cast joint sections to completely fill the spaces.

### THE BENEFITS

The Conbextra BB grout delivers a compliant and trusted solution that works every time. No problems were encountered during or after the initial application, so the client was confident for the product to be used further to fill gaps in the pre-cast sections, as well as the under the bridge bearing plates. The grout's high-strength, non-shrink and low permeability characteristics will ensure long-term durability and reduce maintenance needs on the viaduct, making it perfectly suited for high speed railway infrastructure.



Conbextra BB installed below Viaduct bearing plate



Scope of project



Conbextra BB in-situ application

# CASE STUDIES



**Thackeray Building, London**

The Thackeray Building is a 5-storey block of residential flats in Herbrand Street dating back to the early 1900's, constructed of concrete and brick. Over the years the concrete elements have suffered from water ingress which has resulted in spalling and also corrosion of steel 'H' sections above the windows. Fosroc were able to supply a total solution package.



**ICAIR, Sheffield**

During construction the concrete to form the tanks had been poured to the wrong measurements and in order to correct the situation a product was required that could withstand the pressure and load from the stored water and gain a compressive strength similar to the parent concrete. Repairs were successfully carried out using Renderoc LA60.



**A404M, Cannon Lane**

Works included reconstruction of the joint edges and repairing defective concrete in the bridge deck with a clear objective to get the works completed quickly and reduce the closure of the very busy major route. Patchroc 250 thick section repair mortar which exceeds the requirements of BS EN 1504, and Highways England was successfully installed minimising disruption and allowing a rapid return to service.



**Central Station, Glasgow**

When platform repairs were required at Central Station, Glasgow Fosroc's Paveroc pavement reinstatement mortar was selected due to its rapid strength gain which means it can accept pedestrian traffic at 12 hours. In addition to providing a rapid return to service of the platforms Paveroc's high strength, abrasion and weather resistance ensures that it will provide a durable repair.



**Victoria Hospital, Blackpool**

The Maternity Wing at Blackpool Victoria Hospital was constructed in the 1960's and over the years had been subjected to many environmental stresses, particularly due to its marine location. Fosroc provided a specification to repair the degraded concrete and bring a new lease of life to the structure using the Renderoc Repair System.



**Oldbury Viaduct, M5 Midlands**

Fosroc delivered a sustainable motorway repair solution using Renderoc LA60 meeting Highways England's quality standards. Fosroc successfully introduced innovations in product design, and in bulk supply, maintaining regular supply to site through a fully integrated supply chain and production process. This approach helped reduce costs, save time and enabled concrete repairs to be carried out effectively in a challenging environment.

Fosroc offers a full range of construction chemical solutions, helping to protect structures throughout the world. Please refer to our brochures, which include:



[www.fosroc.com](http://www.fosroc.com)

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