

Conbextra EP

Epoxy resin free flow grout

Uses

A range of free flow grouts for use in situations where heavy dynamic or mobile loads are encountered. The gap between a base plate and substrate will need to be filled and the structural load be uniformly distributed in such applications as reciprocating machinery, testing equipment, heavy crane and transporter rails, high speed turbines and centrifuges and drop forges.

Also for use in conditions where chemical spillage may be encountered. Typical situations could be met in steelworks, refineries, electroplating works and chemical plants.

Conbextra EP120 is especially suitable where long working time and/or low exotherm properties are required e.g. for large pours, large gaps or high ambient temperatures.

Advantages

- High compressive, tensile and flexural strengths
- Resistant to repetitive dynamic loads
- Fast, convenient installation with early strength gain
- Withstands a wide range of chemicals
- Non-shrink and hence ensures complete surface contact and bond
- Low creep characteristics under sustained loading



Grouting of motor baseplate with Conbextra EP products

Description

Conbextra EP is a range of epoxy resin based products designed for free-flow grouting of gaps from approximately 0.25 mm to 120 mm. Four grades of product are available.

Conbextra EP10 for grouting gaps ranging from 0.25 mm to 10 mm. It is an all liquid system consisting of a base and hardener.

Conbextra EP40 for grouting gaps ranging from 10 mm to 40 mm.

Conbextra EP65 for grouting gaps ranging from 35 mm to 65 mm.

Conbextra EP120 is a low exotherm material which is particularly suitable where long working time is needed; for large gaps (up to 120 mm) or for grouting at high ambient temperatures (up to 55°C).

Technical support

Parchem offers a comprehensive range of high performance, high quality construction products. In addition, Parchem offers a technical support package to specifiers and contractors as well as technical advice from staff experienced in the construction industry.

Properties

The following results are typical for the hardened grout at 20°C.

Test method for	Typical result			
	EP10	EP40	EP65	EP120
Density (kg/m ³):	1060	1950	2050	1950
Compressive strength (MPa)				
BS 6319 part 2 1983				
1 day:	57	79	77	5
3 days:	66	86	89	90
7 days:	83	91	90	100
Typical site results @ 23°C				
Compressive Strength (MPa)				
	EP40	EP65		
3 Hours	30	20		
4 Hours	45	35		
5 Hours	55	50		
Tensile strength (MPa)				
BS 6319 part 7 1985				
7 days:	29	19	15	18
Flexural strength (MPa)				
BS 6319 part 3 1990				
7 days:	91	40	29	34
Secant modulus (GPa)				
BS 6319 part 6 1984:		13.3	13.3	12.7

Chemical resistance

All Conbextra EP products are resistant to oil, grease, fats, most chemicals, mild acids and alkalis, fresh and sea water. Consult Parchem Technical Services when exposure to solvents or concentrated chemicals is anticipated.

Pot life

Ambient temperature affects the time for which bulk material will remain fluid.

Typical values in minutes are:

	10°C	20°C	30°C	40°C
EP10	40	20	10	-
EP40	60	30	15	-
EP65	60	30	15	-
EP120	-	120	90	50

Exotherm

All epoxy systems will develop a temperature rise on mixing. Its extent will be a function of the volume to surface ratio, the ambient temperature, as well as the mass and thermal conductivity of the surrounding materials. Contact Parchem for specific data on each product.

Specification clauses

Supplier specification

All epoxy resin grouting where shown on the drawings, must be carried out using the suitable grade of Conbextra EP product manufactured by Parchem and used in accordance with the manufacturer's data sheet.

Performance specification

All epoxy resin grouting where shown on the drawings must be carried out with a factory packed product. The hardened grout must have a compressive strength which exceeds 80 MPa at 7 days, a tensile strength which exceeds 15 MPa at 7 days and a flexural strength which exceeds 28 MPa at 7 days.

The storage handling and placement of the grout must be in strict accordance with the manufacturer's instructions.

Instructions for use

Preparation

Foundation surface

All contact surfaces must be free from oil, grease, free standing water or any loosely adherent material. Concrete surfaces should be cut back to a sound base. All dust must be removed and bolt holes or fixing pockets blown clean of any dirt or debris.

Steel surfaces

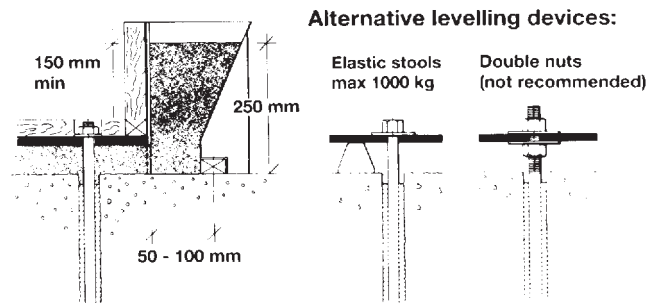
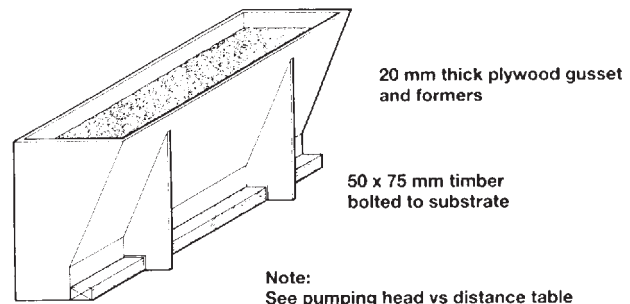
All steel surfaces should be shot blasted free of rust, paint and flaky mill scale.

Formwork

The formwork should be constructed to be leakproof as Conbextra EP products are free flowing grouts. Loss of grout once the material is placed, but not hardened, will result in incomplete filling of the gap.

For free flow grout conditions it is essential to provide a hydrostatic head of grout. To achieve this a feeding hopper system should be used.

Typical on-plate shutter system





Mixing

Pour all the contents of the hardener pack into the base container. Mix using a slow speed power mixer until homogeneous.

In the case of EP120, pour all the resultant liquid into a container with a capacity of 20 - 25 litres then add all the filler.

For all products, mix using a slow speed power mixer for two minutes or until a uniform colour is achieved in the grout.

Placing

The mixed grout should be poured steadily from one side only to eliminate the entrapment of air.

Continuous grout flow is essential.

Sufficient grout must be available prior to starting.

The time taken to pour a batch should be regulated to the time taken to prepare the next batch.

Flow characteristics

The maximum distance of flow is governed by the gap thickness, the head of grout applied and the ambient temperature. The following table gives typical data for flow design.

	°C	Gap thickness (mm)	Hydrostatic head (mm)	Maximum flow (mm)
EP10:	Flow determined by gap thickness and pressure applied.			
EP40:	5	12	100	450
	20	12	100	900
EP65:	5	35	100	900
	20	35	100	2000
EP120:	Similar to Conbextra EP65			

Cleaning

All tools and equipment should be cleaned immediately after use with Solvent 10. Spillages should be absorbed with sand or sawdust and disposed in accordance with local regulations.

Limitations

Temperature

During application

For all products except EP120, grouting may be carried out without special precautions at ambient temperatures from 5° to 25°C.

For EP120, grouting should not be carried out at temperatures below 20°C.

In service

The cured grouts, which are completely resistant to frost and sub-zero temperatures, are suitable for use up to 45°C. EP120 is most suited for temperatures in the range 20° to 55°C.

Estimating

Supply

EP10:	300 ml and 1.5 litre	2 component packs
--------------	----------------------	-------------------

EP40:	3 and 15 litre	2 component packs
--------------	----------------	-------------------

EP65:	3.5 and 14 litre	2 component packs
--------------	------------------	-------------------

EP120:	14 litre	3 component packs
---------------	----------	-------------------

(3 component packs contain base resin, hardener and fillers.)

Storage

All Conbextra EP products have a shelf life of 12 months if kept in dry conditions at 20°C.

Precautions

Health and safety

Conbextra EP10, EP40, EP65, EP120 and Solvent 10 are classed hazardous under WorkSafe Australia guidelines.

Conbextra EP: Contains resins which may cause sensitisation by skin contact. Avoid contact with skin and eyes and inhalation of vapour. Wear suitable protective clothing, gloves and eye/face protection. Barrier creams provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin removing cream, followed by soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - **do not** induce vomiting.

If poisoning occurs, contact a Doctor or Poisons Information Centre - phone 13 11 26



Fire

Solvent 10 is flammable. In the event of fire extinguish with CO₂ or foam. Solvent 10 is flammable. Keep away from sources of ignition - no smoking. Wear suitable protective clothing, gloves and eye/face protection. Use only in well ventilated areas.

Flash point - Solvent 10: 27°C.

A product Material Safety Data Sheet is available from your local Parchem sales office. Read MSDS and product data sheet carefully before first use. In emergency, contact any Poisons Information Centre.

Manufactured and sold under license from Fosroc International Limited, England. Fosroc, the Fosroc logo and Conbextra are trade marks of Fosroc International Limited, used under license.



Parchem Construction Products Pty Ltd

A.B.N. 80 069 961 968
7 Lucca Road
WYONG, N.S.W. 2259
Tel (02) 4350 5000
Fax (02) 4351 2024

Sales Offices:

St Peters, Sydney	(02) 8596 2555
Canberra	(02) 6239 3772
Archerfield, Brisbane	(07) 3255 5666
Townsville	(07) 4725 4394
Adelaide	(08) 8293 2222
Perth	(08) 9356 2533
Melbourne	(03) 9326 3100

Email: technical@parchem.com.au
Internet: www.parchem.com.au

7 days a week
Technical Support Hotline : 1800 812 864

Important note

Parchem Construction Products Pty Ltd products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst the company endeavours to ensure that any advice, recommendation, specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation or information given by it.