

POWERCEMENT

Product Codes

DH120 Packaging listed overleaf

Description

Powercement is a pre-mixed Portland cement mix containing expansive cements and special additives. When used to produce concrete or mortar mixes Powercement will harden rapidly to achieve compressive strengths in excess of 20N/mm² in 1 hour and in excess of 30N/mm² in 6 hours. The early age strength gain will allow following works to proceed in shorter times than would be possible using accelerated Portland cement concretes. Powercement mixes are produced on site using standard concrete mixers and are placed and compacted as normal concretes. The product is chloride free and can be safely used to produce steel reinforced sections.

Uses include:

Repairs to the following structures:-

- Vehicular roadways
- Bridges
- Airfields
- Support of units and sections in the shortest time possible.

Typical Properties @ 20°C

Compressive Strength--Concrete

Water to Powercement ratio: 0.42
Aggregate to Powercement ratio (35% sand): 4 to 1
Concrete slump: 75mm
Note: Powercement contents below 350kg/m³ are not recommended.

3 Hours	4 hours	6 Hours
25N/mm ²	28 N/mm ²	34N/mm ²

1 Day	7 Days	28 Days
51N/mm ²	57 N/mm ²	62 N/mm ²

Specification Outline

Rapid setting and strength gain concretes and mortars shall be designed with Powercement as manufactured by Tecroc Products Ltd. The product must be stored, handled and placed strictly in accordance with the manufacturer's instructions.

Quality Assurance

Tecroc Products Ltd is a firm of Assessed Capability. The Company's quality system conforms to BS EN ISO 9002:1994 and is assessed by SGS Yarsley International Certification Services Ltd.

Standards

Powercement concretes and mortars have been tested in accordance with appropriate parts of BS 1881.

Typical Properties @ 20°C

Compressive Strength--Mortar

Water to Powercement ratio: 0.35
Sand to Powercement ratio: 2 to 1
Note: Sand to Powercement ratios greater than 3 to 1 are not recommended.

3 Hours	4 hours	6 Hours
28 N/mm ²	32 N/mm ²	37 N/mm ²

1 Day	7 Days	28 Days
53 N/mm ²	59 N/mm ²	63 N/mm ²



GROUTS



Structural Segregated Mortars



Concrete Repair Products



Construction Adhesives



Resin Bit Cementitious Anchors



Highway Products



Coatings



Waterproofing



Ground Engineering

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Instructions For Use

Preparation

Laitance and all loose material including dust, oil and grease should be removed in order to produce a sound substrate. The work area should be pre-wetted taking care to remove any standing water before placing the Powercement concrete.

Mixing

To achieve the most consistent mix, mechanical mixing is recommended. Hand mixing is permissible but care should be taken to ensure that the mix is fully wetted out without the use of excess water. Mechanical mixing may be carried out using standard concrete mixers.

Placing

Once the Powercement concrete has been mixed, rapid placing is necessary before the setting of the concrete has started. For typical mixes the working time before setting is 20 to 30 minutes at a temperature of 20°C. Higher temperatures result in shorter working times. Powercement concrete may be placed at temperatures between 5°C and 35°C. For placing temperatures outside this range contact the Technical Service Department.

Curing

Placed concrete should be cured in accordance with good concrete practice including water spray, spray applied curing membrane (Polycure) and close fitting plastic sheeting.

Precautions

Health and Safety

Powercement is alkaline when mixed with water and should not come into contact with skin or eyes. Avoid inhalation of dust during mixing and wear safety glasses, dust mask and gloves. If skin contact occurs wash thoroughly with clean water. Should eye contact occur rinse immediately with plenty of clean water and seek medical advice.

Full health and safety details are given in Product Safety Data Sheet.

Fire

Powercement is non-flammable

Yield

The volume of concrete produced from each 25kg bag of Powercement will depend on the mix design used. Normal QS methods should be used for estimating purposes.

Storage And Shelf Life

Powercement will have a shelf life of 6 months when kept in dry conditions at a temperature of 5°C to 45°C. Storage at higher temperatures and high humidity may reduce the shelf life.

Packaging And Ordering

Powercement is supplied in 25kg valvesack bags.
25kg valvesack bags Product Code DH120

For further information and sales please contact your local Tecroc Products Office as listed below.

Tecroc Products Ltd products are guaranteed against defective materials and manufacture. Products are sold subject to the Tecroc Products Ltd Terms and Conditions of Sale, copies of which are forwarded on invoice and are available on request. Tecroc Products Ltd endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.

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PRODUCTS