TECHNICAL DATA SHEET

Conplast SD400 formerly Conplast Blockspeed

Chloride-free accelerator for semi-dry Concrete

Uses

- To provide quicker turnaround by accelerating setting and early strength gain of semi-dry concrete units

Advantages

- Accelerated setting and early strength allow earlier banding and mechanical handling of air-cured blocks
- Production areas for mobile (egg-laying) machines can be cleared more quickly, allowing further manufacture
- Earlier setting provides a more rapid increase in green strength and therefore reduced chance of breakages
- Earlier setting, increased early strength and air entrainment improve resistance to frost attack
- Increased early strength can allow cost savings to be made by reducing cement contents
- Improved mix cohesion allows economical use of a wide range of aggregates while improving surface finish
- Chloride-free composition ensures no risk of chloride induced corrosion of steel ties or chloride efflorescence from blocks.

Standards compliance

Conplast SD400 meets the uniformity test requirements of BS 5075 Part 1.

Description

Conplast SD400 is a chloride-free accelerating admixture specially formulated for optimum performance across a wide range of static and mobile (egg-laying) block paving and masonry production equipment. It is supplied as a straw coloured solution which instantly disperses in water.

Conplast SD400 accelerates the hydration of cement in the mix, producing more rapid stiffening and allowing strength gain to begin at an earlier stage. This effect is particularly noticeable at low temperatures and is most significant in the first 24 hours after casting. Controlled air entrainment maintains yield and improves surface finish while providing improved resistance to frost attack.

Technical support

Fosroc provides a technical advisory service for on-site assistance and advice on admixture selection, evaluation trials and dispensing equipment. Technical data and guidance can be provided for admixtures and other products for use with fresh and hardened concrete.

Typical dosage

The optimum dosage of Conplast SD400 to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. This allows the optimisation of admixture dosage, mix design and equipment settings and provides a complete assessment of the final product.

A dosage of 1.20 litres / 100 kg of cement is a suitable starting point for trials. Higher dosages, up to 2.5 litres / 100 kg, may be required for optimum performance at low temperatures.

Use at other dosages

Dosages other than the typical values quoted above may be used if necessary and suitable to meet particular mix requirements, provided that adequate supervision is available. Compliance with requirements must be assessed through trial mixes. Contact the Fosroc Customer Service Department for advice in these cases.

Properties

Appearance: Straw coloured liquid
Specific gravity: Typically 1.26 at 20°C Chloride content: Nil to BS 5075

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Instructions for use

Compatibility
Contact the Fosroc Customer Service Department for advice before using Conplast SD400 in a mix containing other admixtures. Normally only one admixture is used in a semidry concrete mix. Conplast SD400 is suitable for use with ordinary Portland cements. Contact the Fosroc Customer Service Department for advice on use with other cements and cement replacement materials.

Dispensing
Conplast SD400 is supplied ready for use. The correct quantity should be measured by means of a recommended dispenser and then sprayed either onto the aggregate/sand belt, into the loading hopper or into the mixer itself at the same time as any mixing water. Spraying ensures a more effective dispersion through a semi-dry concrete mix.

Contact the Fosroc Customer Service Department for advice regarding suitable equipment and its installation.

Effects of overdosing
An overdose of double the intended amount of Conplast SD400 is likely to slightly increase acceleration. Increased air entrainment may also be obtained. This may increase mix workability.

Example 1: To improve handling in low temperatures

Machine type: Mobile (egglayer)
Aggregate: Natural
Curing: At 0°C to 5°C for first 2 days
Cement: OPC
Admixture: Conplast SD400 at 1.2 litres / 100 Kg cement

Conplast SD400 mix had 10% cement reduction.

1 day results

Mix	Density Kg/m³	Compressive strength Average N/mm²
Control		Too 'green' for mechanical handling
Conplast SD400		Handleable

Curing
Normal curing procedures for semi-dry concrete should be maintained.

Typical performance examples
Many variables in concreting materials and conditions can affect the selection and use of an admixture. Trials should be made using relevant materials and conditions in order to determine the optimum mix design and admixture dosage to meet specific requirements. It is important that such a trial procedure also assess the potential benefits of making slight changes to block making equipment settings to take full advantage of the improvements in mix rheology and compaction that will be available.

Typical performance examples from evaluation studies of Conplast SD400, are included on this data sheet. The values quoted are representative of results obtained and are provided as illustrations of performance in different situations. Because of the variability of concreting materials, the results should only be taken as typical of the performance to be expected. Results quoted in individual examples should not be taken as necessarily directly comparable with other examples given here or results obtained elsewhere for Conplast SD100 or other products. Unless otherwise specified, all testing was carried out to the relevant parts of applicable British Standard

2 day results

Mix	Density Kg/m³	Compressive strength Average N/mm²
Control	1945	5.2
Conplast SD400	2020	6.6

28 day results

Mix	Density Kg/m³	Compressive strength Average N/mm²
Control	2055	16.1
Conplast SD400	2130	15.2

Limitations
Conplast SD400 may be too effective for use with block manufacturing equipment, which provides very high intensity vibration during compaction. Similarly, if aggregate stock piles are wet the

improvement in water effectiveness may produce may produce excessive workability.

Estimating - Packaging

Conplast SD400 is available in 210 litre drums and bulk supply . For larger users,storage tanks can be supplied.

Storage

Conplast SD400 has a minimum shelf life of 12 months provided the temperature is kept within the range of 2° C to 50° C . Should the temperature of the product fall outside this range then the Fosroc Customer Service Department should be contacted for advice.

Conplast SD400 is an oxidizing agent and should be stored away from the reducing agents and combustible material.

Precautions

Health and safety

Conplast SD400 is toxic and should not be swallowed or allowed to come into contact with skin and eyes.

Wear suitable protective gloves and goggles.

Splashes on the skin should be removed with water.In case of contact with eyes rinse immediately with plenty of water and seek medical advice.If swallowed seek medical attention immediately – **do not** induce vomiting.

Conplast SD400 is an oxidizing agent and must not be mixed with acids and other admixtures.Refer to 'instructions for use'.

For further information consult the Product Safety Data Sheet available for this product.

Fire

Conplast SD400 is water based and non-flammable but should be stored away from combustible materials.

Cleaning and disposal

Absorb spillages of Conplast SD400 onto sand,earth or vermiculite and transfer to suitable containers. Do not allow Conplast SD400 to enter rivers and drains .

This disposal of excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.

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