BUILDING TRUST

PRODUCT DATA SHEET

Parex Highway CA1

Parex Highway CA1 is a pre-mixed, 1-part, cementitious, non-shrink, rapid strength bedding mortar

DESCRIPTION

Parex Highway CA1 is a premium grade, pre-mixed, one-part, cement based, non-shrink, fast-setting bedding mortar, suitable for the support of road ironwork and highway furniture. The mixed mortar, when placed, will harden in approximately 10 minutes. The compressive strength gain will reach 20 N/mm² within 60 minutes allowing early opening of roads to vehicular traffic.

The self-contained product only needs to be mixed with water on site and the rapid setting assists the re-bedding of manhole frames and the setting of new frame systems. The product is chloride free and can be safely used with cast iron and steel units.

The mortar can be placed in sections of 15 mm to 75 mm in thickness. Greater thicknesses can be built up in layers. Alternatively, thicker beds may be formed by the addition of up to 30 % of the Parex Highway CA1 weight of clean, dry pea shingle. No additional mixing water is required. After placement, no special curing is required in moderate ambient conditions.

USES

- Re-bedding of all access covers.
- Bedding of frames in new roads.
- Rapid placement of paving (i.e. pavers, slabs, blocks, granite setts, etc.).
- Fast installation of kerbs.
- Rapid support of, and fixing, street furniture.
- Emergency repairs.

FEATURES

- Easy to use - just add water and mix.
- Supplied in convenient 25 kg bags.
- Application range: 15 to 75 mm per layer.
- Non-shrink.
- Consistency: stiff workable mortar.
- High bond strength.
- Does not require a primer.
- Very rapid setting.
- Ready to receive traffic after only 60 minutes.
- Compressive strength ~55 N/mm² at 28 days.
- Rapid strength gain, even at low temperatures.
- Resistant to freeze / thaw action.
- Proven durability and performance.

CERTIFICATES AND TEST REPORTS

Parex Highway CA1 has been tested in accordance with the appropriate parts of BS EN 12390.
The product complied with the requirements of the Design Manual for Roads and Bridges Volume 7 Pavement Design and Maintenance Section 2 Pavement Design and Construction Part 4 HD 27/15 - Pavement Construction Methods (superseded by Design Manual for Roads and Bridges CD 226 - Design for new pavement construction).
Mortars for bedding ironwork, such as manhole cover frames during repairs, may be trafficked when the strength is expected to be ≥20 N/mm². For rapid construction, this strength should be achieved within 2 hours. Parex Highway CA1 will achieve the required strength of 20 N/mm² after only 45 minutes at a temperature of +20 °C.

PRODUCT INFORMATION

Composition	Cement based
Packaging	25 kg bags
Shelf life	6 months
Storage conditions	Store in unopened packaging at a temperature of +5 °C to +35 °C. Storage at higher temperatures and / or humidity may reduce the shelf life.
Density	~2250 kg/m³

TECHNICAL INFORMATION

Compressive strength	**Age**	**1 Hour**	**24 Hours**	**28 Days**
	Compressive Strength	~20 N/mm²	~35 N/mm²	~55 N/mm²
	Mechanical strength profile (+20 °C / 90 % RH).			
Reaction to fire	Non-flammable (EuroClass A1)			

APPLICATION INFORMATION

Mixing ratio	2.5 to 3.0 litres of water for 25 kg powder
Yield	Each 25 kg bag of Parex Highway CA1 will enable a manhole frame 600 x 600 mm to be raised approximately 25 mm. The volume yield of each 25 kg bag of Parex Highway CA1 is approximately 12.75 litres.
Pot Life	Approximately 10 minutes at 20°C

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

During placing:

- Application temperature range +5 to +35 °C.
- The substrate must be clean and surface dry (no standing water).
- Protect freshly laid material from strong direct sunlight, rain, frost and snow.
- Clean all mixing equipment and tools before setting commences.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE 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 (ideally saturated surface dry) taking care to remove any standing water before placing the mortar.

MIXING

To achieve the most consistent mortar mix, mechanical mixing is recommended. Thorough hand mixing is suitable, 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 in a suitable vessel using a slow speed high torque drill and paddle. Hand mixing may be carried out using a clean spot board or wheelbarrow.

25 kg of Parex Highway CA1 requires 2.5 to 3.0 litres of water to give a stiff mortar. Excess water should not be added. Once setting has commenced, further mixing should not be used to rework the mix. The mortar should be placed within approximately 10 minutes of mixing. The working time may be extended in cold ambient conditions, and may be slightly shortened in hot ambient conditions.

APPLICATION

Required mixing water is 2.5 to 3.0 litres. Do not add excessive water for mixing.
Variations in water content for particular applications may alter mortar consistency and compressive strength achieved.
Set suitable levelling shims onto the working surface ready to receive the frame or unit. Place the mixed mortar onto the prepared surface and lower the frame or unit onto the mortar and knock down onto the pre-set shims to line and level. The bed thickness applied in a single application should be between 15 mm to 75 mm. Thicker support beds can be achieved by applying further material as soon as the lower bed has hardened sufficiently not to distort under the additional work.
The placed mortar will have hardened sufficiently to carry out further work, such as haunching, within approximately 20 minutes, depending on the ambient conditions.

CURING TREATMENT

No special curing is required at temperatures between +5 and +35 °C. For placing at temperatures outside this range, contact Sika® Technical Services.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product’s suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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