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Grouting compound

for Lineas WIM sensor installation

Type 1000A1

Grouting Compound Type 1000A1 is a pourable, 3-component epoxy resin composition specially developed for grouting of Lineas WIM sensors in road pavements based on bituminous materials, asphalt or concrete.

- Rapid, shrink-free curing
- Ready-to-use packs for on-site applications
- Very good workability and excellent flow properties
- Good adhesion on concrete, metals, asphalt and stones
- Excellent mechanical properties (tensile strength)
- Good chemical resistance
- Rapid strength gain

Description

Grouting compound Type 1000A1 was specially developed to rapidly and securely grout Lineas WIM sensors into the road at normal or warm weather conditions. It is a 3-component epoxy resin composition with good workability and rapid curing time. Type 1000A1 is supplied as a complete bucket containing a plastic canister of epoxy resin and a can of epoxy hardener.

Application

The use of the grouting compound is possible at low and high temperatures. depending on the environemntal conditions and the used equipment:

- Installation allowed without heating equipment if pavement and air temperature 20 °C<50 °C (68 °F<122 °F)
- Installation allowed with heating equipment if pavement temperature 10 °C<20 °C (50 °F<68 °F)
- Installation with heating equipment at low temperature allowed if 1) the average air temperature 24h before installation was >2 °C (36 °F) and 2) the pavement temperature prior to installation is >3 °C (38 °F) as well as the current air temperature.

Please refer also to the Installation Instructions for Lineas sensors (Doc No. 002-466). All instructions from this manual apply.

Technical data

Packaging		10 kg bucket with a plastic canister of resin and a can of hardener inside
Weight (complete), comp. A+B+C	kg	10.0
Resin (plastic canister), comp. A	kg	1.9
Hardener (can), comp. B	kg	0.6
Filler (in bucket), comp. C	kg	7.5
Pavement temp. for installation	°C	3 ... 50
Workability (depending on temp.)	min	5 ... 10
Curing time		
Pavement temperature 3 ... 20 °C *	h	<2.0
Pavement temperature 21 ... 50 °C	h	<1.5
Color		beige
Shelf life (when correctly stored)	months	12
Consumption		1 bucket for 1 Lineas sensor

* Heating equipment must be used

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Preparation
- All loose material and debris must be removed by compressed-air or vacuum cleaner before grouting
- The slot must be dry, clean and free from dust, oil or grease
- If the sensor installation has to be performed at pavement temperatures <20 °C, the pavement slot and the grout components must be warmed up carefully. We suggest using heating equipment also at temperatures >20 °C, especially on windy or humid weather conditions. Heating equipment promotes curing and protects from humidity
- Cover the pavement surface adjacent to the slot with a reinforced adhesive tape where spilling has to be avoided

Mixing
1. Take the resin and the hardener out of the bucket and pour the quartz sand into another bucket
2. Pour the resin (plastic canister, component A) into the empty original bucket. To get all resin out of the canister a little hardener can be filled in to rinse it
3. Pour the hardener (can, component B) into the bucket
4. Stir the resin with the hardener very well with a heavy-duty mixer which acts bottom-up to avoid air bubble entrapping. To avoid spilling, start slowly at the bottom and increase mixer speed gradually
5. While stirring, pour the quartz sand into the mixture gradually to avoid clotting
6. Mix thoroughly with an up- and downward movement over the whole bucket area until the grout is homogenous. This typically takes 2 … 3 minutes

Placing
The well mixed grout must be cast at once and without interruption. To ensure good adhesion to the slot cuts, spread the grout onto the cut edges using a trowel or spatula, so that the side surfaces are 'painted' all the way up to the top edges. Ensure evacuation of entrapped air from voids. Work quickly (limited pot life!).

Consumption
A bucket of 10 kg is sufficient for 1 Lineas sensor Type 9195… (of length 1,50 ... 2,00 m). We recommend keeping a surplus of 25 … 50 % of grouting compound on hand as a precaution.

Cleaning of tools
Tools must be cleaned immediately after use with solvents as acetone, toluene or cleaning paste (if not available, denatured alcohol is a less efficient compromise).

Storage
The shelf life is at least 1 year unopened in original packaging. Store in a dry place without direct sunlight at temperatures between 10 ... 30 °C. High temperatures and high humidity will lead to a reduced shelf life.

Safety precautions
Keep resin and hardener away from eyes, mouth and skin. Do not inhale vapors. The uncured mixture can cause irritation of the skin. The best protection is to wear rubber or plastics gloves, filter mask and safety goggles. In case of contamination wipe away resin or hardener immediately from the skin using paper towels and then wash with soap and water or hand cleansing cream. Under no circumstances remove resin or hardener from the skin with solvents.

Empty resin and hardener cans must be disposed as dangerous goods. Under no circumstances should they be used to store food or drinks, not even if they have been cleaned.

The information given in this publication is based on the present state of our knowledge but any conclusions and recommendations are made without liability on our part.

For more detailed safety information please refer to the safety data sheets Doc No. 000-772, 000-773 and 003-027.

Included accessories	**Type/Mat. No.**
• 1 set including 10 kg bucket with resin and hardener inside	1000A1

Optional accessories
- None

Ordering key

• Grouting Compound 'Standard' for the installation of Lineas WIM sensors	**Type 1000A1**

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