

1 General

This cleaning advice is specifically intended for EURO PANELS OVERSEAS NV tunnel lining sheets. A number of basic principles are given and must be adhered to. For variations or additional advice one can always contact EURO PANELS OVERSEAS NV. Cleaning must always take place in accordance with the conditions of the supplier of the cleaning system and under his supervision and guarantee conditions.

2 Lining material

The following tunnel lining sheets are covered by this cleaning advice.

• GLASAL-T	5 mm and 7.5 mm for straight application
• GLASAL-TS	5 mm glued on ETER-BOARD HD for straight application
• GLASAL-TR	5 mm and 7.5 mm for curved application
• GLASAL	5 mm and 7.5 mm

Further in this document all these panels are named GLASAL-T.

For product data and the details of the processing of the various panels reference is made to the product information sheets available from EURO PANELS OVERSEAS NV.

3 The soiling process

The atmosphere in tunnels contains dust, soot, oils, greasy substances, aerosols, etc. that can deposit on the tunnel lining. Both the speed and the degree of the contamination in tunnels are depending on the lining material itself and on the concentration of the polluting substances. The sensitivity of the lining material to contamination is depending on its surface, chemical stability, porosity, ability to become electro statically charged, etc. The concentration and nature of the polluting substances in the atmosphere is on its turn depending on the traffic density and the type of vehicles passing. Also external motives as nearness of polluting industry and intense use of road salt are influencing the contamination. Special attention has to be given to a good protection against infiltrating water (by sealing of the backside of the panels) and to a sufficient evacuation of this water.

4 Periodic cleaning

To set up a cleaning sequence the tunnel operator has to pay attention to the soiling process in the exploited tunnel as described under point 3.

5 Cleaning

Due to the nature of the contamination, cleaning with mechanical equipment is required.

Rotating brushes of a suitable nature (hairs not too long or too hard) combined with the recommended cleaning agent, prove to be the most effective method.

The cleaning takes place in three phases :

1. Spraying or jetting of the cleaning product under low pressure
2. Brushing of the Glasal NT sheets
3. Thorough rinsing with water

The contact time between the spraying or jetting of the cleanser and the brushing to the final rinsing of the GLASAL-T sheets with water, is best limited to not longer than 5 minutes.

6 Cleaner

Euro Panels Overseas NV recommends the use of "J-Clean 812". A cleaning agent that combines both effectiveness and guaranteed damage free cleaning of the Glasal NT sheet's surface.

"J-clean 812" is available at Quaron Cleaning Systems, PO Box 1056, NL-3640 BB Mijdrecht, The Netherlands, +31 (0)297-274390, www.quaron-cs.com

"J-Clean 812" has been tested by EURO PANELS OVERSEAS NV in conditions simulating the environment of road tunnels and also railway tunnels.

7 Relation between guarantee and cleaning

When it is decided that a locally available cleaning product will be used for the periodic cleaning of the GLASAL-T sheets, no guarantee on the GLASAL-T will be given without prior written approval of EURO PANELS OVERSEAS NV.

EURO PANELS OVERSEAS NV therefore must receive samples of the proposed locally available cleaner for use in tunnels.

In this case EURO PANELS OVERSEAS NV will check if the proposed locally available cleaner is compatible with the GLASAL-T sheets within the scope of possible lesion of the sheet.

The cleaning effect of the product however will not be guaranteed by EURO PANELS OVERSEAS NV

Cleaning products may not contain chlorides, fluorides, phosphates or sulfates. The pH value has to lie in the range 7 to 10.

8 More information

This product information sheet replaces any previous editions. EURO PANELS OVERSEAS NV reserves the right to amend this information sheet without prior notice. Readers should always satisfy themselves that they are referring to the most recent version of this document. No part of this text can be changed without permission of EURO PANELS OVERSEAS NV.

More technical information can be found in the EURO PANELS

- product information sheets,
- application guidelines,
- general instructions for use,
- tender specifications,
- Material Safety Data Sheet,
- warranty declarations,

and on the EURO PANELS website.

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