

# LADR GmbH

Medizinisches Versorgungszentrum Dr. Kramer und Kollegen

## Abt. Wasser-Abwasser-Umwelthygiene

21502 Geesthacht

Lauenburger Str. 65-67

Telefon: (04152) 803-0

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\* akkreditiert durch:



DAP-PL-3022.00

GROUTTECH

Voltweg 2

NL-8071 CZ Nunspeet

Nederland

Geesthacht, 20. May 2010

### Test Certificate

according the KTW recommendations  
(Federal Health Gazette 20, 1977ff)

(This test was implemented in accordance with the requirements of the KTW-recommendation of October 2005.)  
Note: The actual state of the KTW recommendations given by the German Federal Environmental Agency (UBA) was published in October 2008.

Applicant: GROUTTECH  
Voltweg 2  
NL-8071 CZ Nunspeet  
Nederland

Product: PURE-Injectionresin  
GROUTTECH 1403

Test type: Product testing

According to the test report dated May 20, 2010 the test boards Lab.-No. 31698/00/01 **GROUTTECH 1403** fulfill the requirements of the KTW recommendations for the following

| Application area(s)       | Temperature range(s) |            |           |
|---------------------------|----------------------|------------|-----------|
|                           | cold water           | warm water | hot water |
| A Pipes                   | --                   | --         | --        |
| B Containers              | --                   | --         | --        |
| C Equipment gear          | --                   | --         | --        |
| D1 Large-surface sealants | fulfilled            | --         | --        |
| D2 Small-surface sealants | --                   | --         | --        |

if the material is suitable for these in technical terms.

Head of laboratory:

(Dr. S. Dageförde)

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Geesthacht, 20. May 2010

## Test report

(This test was implemented in accordance with the requirements of the KTW recommendation from 1977 dated October 2005.)  
Note: The actual state of the KTW recommendations given by the German Federal Environmental Agency (UBA) was published in October 2008.

|                 |                     |                                   |                                       |
|-----------------|---------------------|-----------------------------------|---------------------------------------|
| Laboratory-No.: | 31698/00/01         | KTW-classification:               | D1 "Large-surface sealants "          |
| Manufacturer:   | GROUTTECH           | Proportion of surface and volume: | 1:25 cm <sup>2</sup> /cm <sup>3</sup> |
| Type of sample: | PURE-Injectionresin | Test sample surface:              | 51.2 cm <sup>2</sup>                  |
| Sample name:    | GROUTTECH 1403      | Test water volume:                | 1280 mL                               |

### Test results:

| Parameter   | after 3 days | after 6 days | after 9 days   | KTW-requirements after 9 days              |
|---|--------------|--------------|----------------|--|
| pH  | 8.09         | 8.66         | <b>8.50</b>    | <b>6.5–9.5</b><br>DIN 38404 C5             |
| absorption coefficient<br>„colour“<br>(436nm)1/m                              | 0.1          | 0.2          | <b>0.2</b>     | <b>n.c.i.</b><br>(≤0.5)<br>DIN EN ISO 7887 |
| Turbidity<br>TE/F   | <0.1         | <0.1         | <b>&lt;0.1</b> | <b>n.c.i.</b><br>(≤1.5)<br>DIN EN ISO 7027 |
| Tendency of foam formation  | n.c.i.       | n.c.i.       | <b>n.c.i.</b>  | <b>n.c.i.</b>                              |
| Threshold odour number (20°C)   | 1            | 1            | <b>1</b>       | ≤2   |
| TOC<br>(mg C/m <sup>2</sup> *day)   | 83.3         | 41.2         | <b>38.8</b>    | ≤60<br>DIN EN 1484                         |
| Oxidation reaction with chlorine<br>(mg Cl <sub>2</sub> /m <sup>2</sup> *day) | 7.0          | 5.6          | <b>2.6</b>     | ≤75<br>DIN EN ISO 7393-2                   |

n.c.i. = not considerably influenced

### Assessment:

The test samples of **GROUTTECH 1403** provided fulfill the requirements according to the KTW recommendations of the Federal Health Department for the application range D1 "Large-surface sealants" (surface/volume = 1:25 cm<sup>2</sup>/cm<sup>3</sup>).

Head of laboratory:

(Dr. S. Dageförde)