

# TEST REPORT



Industrie Service

Add value.  
Inspire trust.

## TÜV SÜD Industrie Service GmbH

Department of Chemical Analysis  
Ridlerstraße 65  
80339 Munich, Germany

Report No.: **20-U1714-01**  
Client: **URSA Ibérica Aislantes S.A.**  
**Mr. Pedro Uriz**  
**Ctra Vila-Rodona Km 6,7**  
**43810 – El Pla de Santa Maria - Spain**

Specification of sample: glass wool product

Name of product: **PRK 32 ROULÉ/ PRK 32 PP/ TERRA PLUS 32 T0003**  
**TERRA MUR PLUS P1203**

Date of receipt: 17.08.2020

Testing period: 19.08.2020 - 25.09.2020

Test Standards: - French VOC-regulation: 2011-321 from 23.03.2011 with the final details published in "Arrêté étiquetage 2011 from 19.04.2011"  
- French CMR-regulation DEVP0908633A and DEVP0910046A in the valid version of 14.01.2015

Internal laboratory no.: 20200832517 – 20200832518; 20200935925 - 20200935929

**Results:** All tested substances comply with the emission **class A+** after 28 days.

Unless otherwise stated, assessments are made without  
Consideration of the measurement uncertainty.

Date: 2020-09-25

Our reference:  
IS-USL-MUC/HS

Document:  
20-U1714-01.docx

This Document consists of  
4 Pages and 1 attachment.  
Page 1 of 4

Excerpts from this document  
may only be reproduced and  
used for advertising purposes  
with the express written approval  
of TÜV SÜD Industrie Service  
GmbH.

The test results refer exclusively  
to the units under test.

(Dipl.-Ing. Eva Takacs)  
Deputy head of department

(Dipl.-Ing. (FH) Holger Struwe)  
Project leader building products



Industrie Service

## 1 Emission of volatile organic compounds

### 1.1 Methods

The tests in the emission test chamber were performed according to the standards:

- DIN EN ISO 16000-9: 2008-04
- DIN EN 16516:2018-01

### 1.2 Specification of the emission test chamber

| Parameter                       | Description   |
|---------------------------------|---|
| volume                          | 212 litres  |
| material                        | glass   |
| equipment                       | ventilator, humidity and temperature sensor                           |
| air supply                      | cleaned air (activated charcoal)                                      |
| temperature                     | 23 °C ± 1 °C  |
| relative humidity               | 50 % ± 2 %  |
| air flow                        | 0,1 m/s - 0,3 m/s   |
| air exchange rate               | 0,5 h <sup>-1</sup> ± 5 %   |
| loading factor                  | 1 m <sup>2</sup> product surface / m <sup>3</sup> volume test chamber |
| specific area air exchange rate | 0,5 m <sup>3</sup> /m <sup>2</sup> h                                  |

### 1.3 Analyses-method

| Tube / cartridge | Parameter  | Analyses - method          |
|------------------|--|----------------------------|
| DNPH-cartridge   | Aldehydes  | DIN EN ISO 16000-6:2012-11 |
| TENAX TA-tube    | Volatile organic compounds (VOC)                 | DIN EN ISO 16000-3:2013-01 |
| Silica gel-tube  | Dibutyl phthalate<br>Di-(2-ethylhexyl) phthalate | SAA-L-1511:2012-11 (GC-MS) |

### 1.4 Sample preparation

The sample was cut to the following size: 11 cm x 23,4 cm x 23,4 cm

Emission surface: all sides

### 1.5 Test results

#### 1.5.1 Formaldehyde after 5 days

| Pos. | Formaldehyde<br>[µg/m <sup>3</sup> ] |
|------|--------------------------------------|
| 1    | 13                                   |



Industrie Service

### 1.5.2 VOC after 28 days

| Parameter                         | CAS No.  | Retention time [min] | Conc. [ $\mu\text{g}/\text{m}^3$ ] | Toluene equivalent [ $\mu\text{g}/\text{m}^3$ ] | Specific SER [ $\mu\text{g}/(\text{m}^2\cdot\text{h})$ ] | R-value     |
|-----------------------------------|----------|----------------------|------------------------------------|---|--|-------------|
| <b>VOC with German LCI</b>        |          |                      |                                    |   |  |             |
| Not detectable                    | -        | -                    | < 5                                | < 5   | < 5  | < 0,001     |
| <b>VOC without German LCI</b>     |          |                      |                                    |   |  |             |
| Sum non-identified VOC            | -        | -                    | < 5                                | < 5   | < 5  | -           |
| <b>Sum VOC without German LCI</b> | -        | -                    | < 5                                | < 5   | < 5  | -           |
| <b>VVOC substances</b>            |          |                      |                                    |   |  |             |
| Not detectable                    |          |                      |                                    |   |  |             |
| <b>TVOC</b>                       | -        | -                    | < 2                                | < 2   | < 1  | -           |
| <b>SVOC substances</b>            |          |                      |                                    |   |  |             |
| Not detectable                    |          |                      |                                    |   |  |             |
| <b>TSVOC</b>                      | -        | -                    | < 2                                | < 2   | < 1  | -           |
| <b>CMR substances</b>             |          |                      |                                    |   |  |             |
| Benzene                           | 71-43-2  | -                    | < 1                                | < 1   | < 1  | -           |
| Trichlorethylene                  | 79-01-6  | -                    | < 1                                | < 1   | < 1  | -           |
| Dibutyl phthalate                 | 84-74-2  | -                    | < 1                                | < 1   | < 1  | -           |
| Di-(2-ethylhexyl) phthalate       | 117-81-7 | -                    | < 1                                | < 1   | < 1  | -           |
| <b>Sum CMR</b>                    | -        | -                    | < 1                                | < 1   | < 1  | -           |
| <b>Aldehydes</b>                  |          |                      |                                    |   |  |             |
| Formaldehyde                      | 50-00-0  | -                    | <b>7</b>                           | -   | -  | <b>0,07</b> |
| Acetaldehyde                      | 75-07-0  | -                    | < 2                                | -   | -  | < 0,001     |
| Propanal                          | 123-38-6 | -                    | < 8                                | -   | -  | < 0,001     |
| Butanal                           | 123-72-8 | -                    | < 2                                | -   | -  | < 0,001     |
| Glutaraldehyde                    | 111-30-8 | -                    | < 3                                | -   | -  | < 0,001     |
| 2-Butenal                         | 123-73-9 | -                    | < 3                                | -   | -  | < 0,001     |
| Propenal                          | 107-02-8 | -                    | < 3                                | -   | -  | < 0,001     |
| <b>R-value</b>                    |          |                      |                                    |   |  | <b>0,07</b> |
| <b>TVOC</b>                       |          |                      | <b>&lt; 5</b>                      | <b>&lt; 5</b>                                   | <b>&lt; 5</b>  | -           |



Industrie Service

## 2 Evaluation of the test results

| Parameter                   | Emission class A <sup>+</sup><br>after 28 days<br>[µg/m <sup>3</sup> ] | Concentration<br>after 28 days<br>[µg/m <sup>3</sup> ] |
|-----------------------------|--|--|
| Formaldehyde                | < 10   | 7  |
| Acetaldehyde                | < 200  | < 2  |
| Toluene                     | < 300  | < 2  |
| Tetrachloroethylene         | < 250  | < 2  |
| Xylene                      | < 200  | < 2  |
| 1,2,4-Trimethylbenzene      | < 1000   | < 2  |
| 1,4-Dichlorbenzene          | < 60   | < 2  |
| Ethylbenzene                | < 750  | < 2  |
| 2-Butoxyethanol             | < 1000   | < 5  |
| Styrene                     | < 250  | < 2  |
| Benzene                     | < 1  | < 1  |
| Trichlorethylene            | < 1  | < 1  |
| Dibutyl phthalate           | < 1  | < 1  |
| Di-(2-ethylhexyl) phthalate | < 1  | < 1  |
| <b>TVOC</b>                 | <b>&lt; 1000</b>   | <b>&lt; 5</b>  |

All tested substances comply with the emission class **A+** after 28 days.