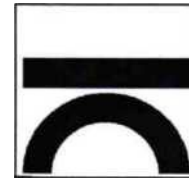


**ROAD AND BRIDGE RESEARCH INSTITUTE**

03-302 Warsaw, ul. Instytutowa 1

phone (front desk): 22 390 01 07, fax: 22 814 50 28



**Warsaw, 16 September 2021**

**NATIONAL TECHNICAL ASSESSMENT**

**No. IBDiM-KOT-2021/0749 issue 1**

Pursuant to Article 9(2) of the Construction Products Act of 16 April 2004 (consolidated text: Polish Journal of Laws of 2021, item 1213, as amended), having conducted the procedure provided for in the Regulation of the Minister of Infrastructure and Construction of 17 November 2016 on national technical assessments (Polish Journal of Laws of 2016, item 1968), at the request of the manufacturer named:

**PHSC Chemicals Sp. z o.o.**

seated at:

**ul. Droga Dębińska 29, 61-492 Poznań**

**the Road and Bridge Research Institute**

positively assesses the performance of the following construction product:

**Hydrophobizers based on silicate and silane-siloxane, used for concrete surface protection**

having the following commercial name: **Hydrogard W, Hydrogard S**

intended for use in transport infrastructure engineering, in the scope specified in this National Technical Assessment issued by the Road and Bridge Research Institute.



**DIRECTOR**

of the Road and Bridge Research Institute

Date of issue of this National Technical Assessment: 16 September 2021

Date of expiry of this National Technical Assessment: 16 September 2026

## 1 TECHNICAL DESCRIPTION OF THE CONSTRUCTION PRODUCT

### 1.1 Technical name and commercial name

Pursuant to § 9(1)(3) of the Regulation of the Minister of Infrastructure and Construction of 17 November 2016 on National Technical Assessments (Polish Journal of Laws of 2016, item 1968), the Road and Bridge Research Institute has established the following technical name: **Hydrophobizers based on silicate and silane-siloxane, used for concrete surface protection**

and the following commercial name: **Hydrogard W, Hydrogard S**

for the construction product hereinafter called Hydrogard W and Hydrogard S.

### 1.2 Name and address of the manufacturer, and name and address of the authorised representative, if established

The application was filed by the manufacturer, whose name and registered office are stated on page 1/11 of this National Technical Assessment issued by the Road and Bridge Research Institute.

### 1.3 Place of production

The product is produced at:

**PHSC Chemicals Sp. z o.o.** with its registered office at: **ul. Droga Dębińska 29, 61-492 Poznań**

### 1.4 Type designation and technical description of the product

#### 1.4.1 Type designation

Based on the information from the manufacturer, the Road and Bridge Research Institute has designated the following types of the construction product:

1. **Hydrogard W;**
2. **Hydrogard S.**

#### 1.4.2 Technical description of the construction product and the materials and components used

This National Technical Assessment concerns the following products:

- Hydrogard W – single-component, colourless, water-based hydrophobizer in the form of a concentrate being a solution of potassium methyl silicate, designed for water dilution at 1:11 to 1:15.
- Hydrogard S – single-component, solvent-based, colourless hydrophobizer based on silane and siloxane dispersion.

By penetrating into the concrete surface, Hydrogard W and Hydrogard S protect it against the harmful effects of water, chloride ions and environmental pollution.

The requirements for identification properties are listed in Table 1.

No.	Properties	Unit	Requirements	Test methods
1	2	3	4	5
1	Density: - Hydrogard W - Hydrogard S	g/cm <sup>3</sup>	1.397 ±5% 0.799 ±5%	PN-EN ISO 2811-1:2016-04 PN-EN ISO 12185:2002
2	Viscosity (φ4 mm ISO viscosity funnel, temp.: +23°C): - Hydrogard W Kinematic viscosity, temp.: ±20°C: - Hydrogard S	s  mm <sup>2</sup> /s	<b>Table 1</b>  27.0 ±10%  1.99 ±10%	  PN-EN ISO 2431:2019-07  PN-EN ISO 3104:2004
3	Non-volatile substance content: - Hydrogard W - Hydrogard S	% (m/m)	55.8 ±5% 14.0 ±5%	PN-EN ISO 3251:2019-07
4	Infra-red spectrum: - Hydrogard W - Hydrogard S	-	Identification test. Appendix Drawings Z-1 and Z-2	PN-EN ISO 1767:2008

## 2 INTENDED USE OF THE PRODUCT

### 2.1 Intended use of the product

Hydrogard W and Hydrogard S are used in transport infrastructure engineering, in the scope specified in point 2.2, for hydrophobizing impregnation of structural members made of concrete, reinforced concrete and pre-stressed concrete.

### 2.2 Scope of application

Pursuant to § 9(2)(1) of the Regulation of the Minister of Infrastructure and Construction of 17 November 2016 on National Technical Assessments (Polish Journal of Laws of 2016, item 1968), the Road and Bridge Research Institute has assessed positively the construction product with the following technical name: **Hydrophobizers based on silicate and silane-siloxane, used for concrete surface protection**, and the following commercial name: **Hydrogard W, Hydrogard S**, designed for use in transport infrastructure engineering, in the scope of:

#### 2.2.1 road structures without limitations,

within the meaning of, and under the terms defined in, the Regulation of the Minister of Transport and Maritime Economy of 30 May 2000 on technical conditions to be met by road structures and their location (Polish Journal of Laws No. 63, item 735, as amended);

#### 2.2.2 railway structures without limitations,

within the meaning of, and under the terms defined in, the Regulation of the Minister of Transport and Maritime Economy of 10 September 1998 on technical conditions to be met by railway structures and their location (Polish Journal of Laws No. 151, item 987, as amended);

#### 2.2.5 urban underground railway structures without limitations,

within the meaning of, and under the terms defined in, the Regulation of the Minister of Infrastructure of 17 June 2011 on technical conditions to be met by subway structures and their location (Polish Journal of Laws of 2011, No. 144, item 859, as amended).