Technical Specifications

Benefil Hardfoam RG50

Manufacturer	Aquaresins Technologies B.V.
Adress	Nijverheidsweg 17A, 6651 KS, Druten, The Netherlands
Contact	Tel: +31 (0) 487 - 593 778 info@aquaresinstechnologies.com www.aquaresinstechnologies.com

Unique producttype	Benefil Hardfoam Benefil 5000 / RG50, in-situ formed void filling foam
Intended uses	Void & Cavity filling
Harmonised Standards	NEN-EN-ISO 844:2001 ASTM E-84-76A Nace code: F43 NEN-EN-ISO 9001:2015 NEN-EN-ISO 14001:2015
Notified bodies	TNO Science and Industry TÜV Nederland Quality Masters
Revision date	09-02-2022

Components

	Component A - Resin	Component B - Hardener
Trade name	Benefil Resin	Benefil Hardener
Voluminous mass @ 20 ˚C	1160 kg/m3	1020 kg/m3
Viscosity @ 20 ˚C	±55 mPa•s	±50 mPa•s
PH value	7,0 - 7,5	1,8 - 2,3

Product specifications

	Requirement
Apparent Voluminous mass	≥ 50 kg/m3
Durability	The polymer remains stable in dry conditions for at least 150 years after production, subject to proper storage and handling.
Shrinkage	At soil temperatures around 8°C <1,8%
Compressive strength	ISO 844 Method .202 kN/mm² 20600 kg/m²
Temperature resistance	Melting point: 120°C Flammability: Non flammable <25 by ASTM E-84-76A The polymer is non flammable, does not ignite nor burn.
Behaviour during heating	When heating to 70°C the cell structure of the dry foam may not visually change.
Chemical resistance	Resistant against organic solubles, mineral oils and hydrocarbons
Cell structure	73% Open cell structure

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Health & Safety

	Toxicological Information
Carcinogenicity	The hardfoam is non carcinogenic / non mutagenic
Eyes	None irritating when dry
Skin	None irritating when dry
Inhalation	None irritating when dry

	Ecological Information
Environmental effects	None (Biodegradable)
Eco Toxicity	None
Bio concentration	None

	Hazards Information
H	None
P	271 : Use only outdoors or in a well-ventilated area

	Accidental Release Measures
Personal Precautions	Keep away from non involved people
Environmental Precautions	No particular precautions needed The hardfoam is water-based and biodegradable
Methods for Cleaning	Brush up / dig up etc.

	Handling & Storage
Handling	Operators must be trained to work with foams. Operators must avoid breathing fine particles of product (dust).
Storage	Keep storage container/area ventilated. Protect from direct sunlight. Store in ventilated area.

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Physical & Chemical Properties

Appearance	White solid foam
Odour	Odourless when dry
pH	2,4-3,8 when applied 6,1-7,5 when matured
Melting Point	120°C
Flash Ignition	235°C
Self ignition	620°C
Flammability	Non flammable (<25 by ASTM E-84-76A)
Explosive properties	None
Oxidizing properties	None
Vapour Pressure	non applicable / non volatile acid
Vapour Density	non applicable / non volatile acid
Density	10-70 kg/m3
Solubility in water	Non soluble
Dynamic Viscocity	Solid

Transport information

Identification Number	39211900
Transport Name	UF or aminoplast foam or Benefil Hardfoam
ADR/RID	Not applicable
IMO-IMDG code	Not applicable
ICAO/IATA	Not applicable

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Test rapport TC-BRF-05-11873/mso

	Conditions
Specimen dimentions	approx. 100 x 100 x 50 mm
Number of specimen	5
Test speed	5mm/min
Conditions	(23±2)°C and (50±5)% R.H.
Apparent Voluminous mass	≥ 50 kg/m3
Testing characteristics	The compressive stress is the ratio of the compressive force at 10% relative deformation to the initial cross-sectional area of the test specimen
	Prior to testing the density of each specimen was calculated from the actual dimensions and the weight of specimens.The results are given in table 1.

Declared compressive strength properties

Sample Code	Length	Width	Thickness	Voluminous Mass [kg/m²]	Density [kPa]	Density [kN/m²]	Density [N/mm²]	Density [kg/m²]
	Dimensions [mm]							
03.0548-1-50	91,9	94,2	41,5	52,3	214	214	0,214	21.828
03.0548-2-50	94,1	90,6	41,0	46,9	203	203	0,203	20.706
03.0548-3-50	91,7	90,0	46,3	46,4	210	210	0,210	21.420
03.0548-4-50	90,8	93,0	47,0	44,0	190	190	0,190	19.380
03.0548-5-50	91,1	91,2	45,8	45,1	194	194	0,0194	19.788
				Average	**202**	**202**	**0,202**	**20.600**

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The performance of the product identified above, is in conformity with the set of declared performances.
This declaration of performance is issued under the sole responsibility of the manufacturer above.

This Tech Spec Sheet in PDF format is available on request via:

- *Aquaresins Technologies B.V.*
- *Resins Industry B.V.*
- *Benefil Nederland B.V.*

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