



**TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.**  
**Technical and Test Institute for Construction Prague, SOE**

Akreditovaná zkušební laboratoř, Autorizovaná osoba, Notifikovaná osoba, Oznamovaný subjekt, Subjekt pro technické posuzování, Certifikační orgán, Inspekční orgán · Accredited Testing Laboratory, Authorized Body, Notified Body, Technical Assessment Body, Certification Body, Inspection Body · Prosecká 811/76a, 190 00 Praha 9 - Prosek, Czech Republic

**Branch 0300 – Plzeň**

# CERTIFICATE

**No. 030 – 058842**

**Basic characteristics of production group**

**CRYSTAL (coarse-grained)**

**trade name Crystal (grain size 2,5 mm and bigger), Classic Ice**

measured values were performed on representative of production group Crystal Sahara

No.	Property	Test method	Unit	Requirements value	Measured value	Average measured value for group CRYSTAL (coarse-grained)
1	Apparent density	EN 14617-1	kg/m <sup>3</sup>	min. 2 350	2 450	2 430
2	Water absorption	EN 14617-1	%	max. 0,07	0,03	0,02
3	Flexural Strength	EN 14617-2	MPa	min. 30	40	46
4	Abrasion	EN 14157 (B)	mm <sup>3</sup>	max. 7 600	6 298	6 298
5	Thermal expansion coefficient (30 to 60°C)	EN 14617-11	10 <sup>-6</sup> /°C	max. 35	17,5	17,5 – 21,2
	Thermal expansion coefficient (20 to 130°C)	EN 14617-11	10 <sup>-6</sup> /°C	max. 41	22,7	22,7 – 26,8

**Another characteristics**

No.	Property	Test method	Unit	Result
1	Reaction to fire	EN 13501-1	class	B / s <sub>2</sub> / d <sub>0</sub>
2	Frost resistance	EN 14617-5	min. 80	90 - 110
3	Thermal shock resistance	EN 14617-6	-	mechanical characteristics without any change
4	Chemical resistance	EN 14617-10	class	C4
5	Stain resistance	EN ISO 10545-14	class	5
6	Determination of dimensional stability	EN 14617-12	class	A
7	Content of Natural radioactive nuclids and Index mass activity	Declaration under section 101 of paragraph 3 of Act No. 263/2016 of the Collection	-	The value of reference level 1 mSv / year set out in section 102 of paragraph 2 of Decree No 422/2016 of the collection is not exceeded as the natural radionuclide content does not exceed value I = 1
8	Health harmless product	product meets conditions for indoor usage and no volatile organic compounds (VOC) were found; product meets Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing and Commission Regulation (EC) No. 10/2011 in latter wording		

The certificate is issued on the basis of the results of the tests in laboratory Technistone and TZÚS s.p. branch Plzeň.

Number of pages of certificate: 1

Certificate validity:

until 31<sup>st</sup> August 2024

The certificate can be cancelled upon finding non-adherence to the certified parameters of product qualities.

Plzeň 1<sup>st</sup> August 2019



**Ing. Alexander Trinner**  
Branch Director

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