



86 Nikola Petkov Blv., Sofia 1618, Bulgaria
Phone: +359 2 856 10 82; Fax: +359 2 955 96 38
e-mail: nisi.bg, web:nisi.bg

TESTING CENTER FOR CONSTRUCTION (TCC) at Building Research Institute (NISI) Ltd..
ACCREDITED ACCORDING TO BDS EN ISO/IEC 17025:2018

Certificate reg. No 88 ЛН/24.03.2020
issued by EA BSA and valid until 01.10.2022

Laboratory: "Concrete, reinforcement, construction materials and products"

TEST REPORT

No 281-1-204/27.04.2021

Name of product: PVC profiles for windows and doors - six-chamber system Mono Block 70, profiles for frame M-uPVC 713 and for sash M-uPVC 729

Manufacturer: Ersas Pal Kompozit Profil Sanayi A.Ş

Factory: Ergene 1 OSB Vakıflar O.S.B Mahallesi Sanayi Caddesi No:19-1 Ergene / TEKİRDAĞ,
Headquarter: Topçular Mahallesi İncirlik Sokak No:11-15 Ersas Plaza Eyüpsultan / İSTANBUL

Applicant: Ersas Pal Kompozit Profil Sanayi A.Ş

Factory: Ergene 1 OSB Vakıflar O.S.B Mahallesi Sanayi Caddesi No:19-1 Ergene / TEKİRDAĞ,
Headquarter: Topçular Mahallesi İncirlik Sokak No:11-15 Ersas Plaza Eyüpsultan / İSTANBUL
Application form from 21.04.2021

Test methods:

BDS EN 477:2018 Plastics - Poly(vinyl chloride) (PVC) based profiles - Determination of the resistance to impact of profiles by falling mass

BDS EN 478:2018 Plastics - Poly(vinyl chloride) (PVC) based profiles - Determination of the appearance after exposure at 150 °C

BDS EN 479:2018 Plastics - Poly(vinyl chloride) (PVC) based profiles - Determination of heat reversion

BDS EN 514:2018 Plastics - Poly(vinyl chloride) (PVC) based profiles - Determination of the strength of welded corners and T-joints

BDS EN 12608-1:2016+A1:2020 Unplasticized poly(vinyl chloride) (PVC-U) profiles for the fabrication of windows and doors - Classification, requirements and test methods - Part 1: Non-coated PVC-U profiles with light coloured surfaces

Date of receiving the sample at TCC: Incoming No 281/21.04.2021

Number of the test samples: 20 pieces with a length of 300 mm and 3 welded joints of profiles for frame and sash. The sample is taken and submitted by the Applicant.

Time of the test: from 21.04.2021 to 27.04.2021

Manager of TCC:

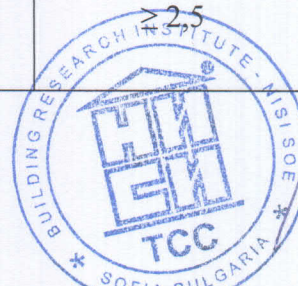
/Res. Ass. Dipl. Eng. Tsvetana Gyurova/

The results relate only to the samples tested. Extracts from the report can not be reproduced without written consent of the Testing Center for Construction (ICS-NISI Ltd.)



TESTING DATA:

No	Characteristic	Dimension	Test method	No and identification of test specimen	Test result	Requirement according to BDS EN 12608-1: 2016+A1:2020	Test conditions
1	2	3	4	5	6	7	8
1.	Appearance - colour of the profile - The surfaces of the profiles	-	BDS EN 12608-1: 2016+A1: 2020	204: M-uPVC 713 M-uPVC 729 M-uPVC 713 M-uPVC 729	no defects no defects no defects no defects	The colour of the profile shall be the same and uniform on all visible surfaces, when viewed in accordance with 6.1. The surfaces of the profiles shall be smooth and free from pitting, impurities, cavities and other surface defects when viewed in accordance with 6.1. The edges of the profiles shall be clean and burr-free.	(18-22)°C (55-57)% RH
2.	Dimensions and tolerances - external depth - external width - wall thickness of sight surface - wall thickness of non-sight surface	mm	BDS EN 12608-1: 2016+A1: 2020	204: M-uPVC 713 M-uPVC 729 M-uPVC 713 M-uPVC 729 M-uPVC 713 M-uPVC 729 M-uPVC 713 M-uPVC 729	70,8 70,6 66,8 60,1 3,0 2,9 2,5 2,5	70,8 ± 0,3 70,8 ± 0,3 67,0 ± 0,5 60,0 ± 0,5 for class A: ≥ 2,8 ≥ 2,8 for class A: ≥ 2,5 ≥ 2,5	(18-22)°C (55-57)% RH



1	2	3	4	5	6	7	8
	- linear weight	kg/m	BDS EN 12608-1: 2016+A1: 2020	M-uPVC 713	1,664	$\geq 1,658$ (0,95 x 1,745 ¹⁾)	(18-22)°C (55-57)% RH
	- deviation from straightness	mm/m		M-uPVC 729	1,612	$\geq 1,600$ (0,95 x 1,684 ¹⁾)	
				M-uPVC 713	0,1	≤ 1	
				M-uPVC 729	0,1	≤ 1	
3.	Heat reversion	%	BDS EN 479:2018	204:			(18-22)°C (55-57)% RH
				M-uPVC 713	1,18	≤ 2	
				M-uPVC 729	1,11	≤ 2	
4.	Difference of the values of the heat reversion between sight surfaces	%	BDS EN 479:2018	204:			(18-22)°C (55-57)% RH
				M-uPVC 713	0,26	$\leq 0,4$	
				M-uPVC 729	0,23	$\leq 0,4$	
5.	Appearance after exposure at 150°C	-	BDS EN 478:2018	204:		The profiles shall show no defects	(18-22)°C (55-57)% RH
				M-uPVC 713	no defects		
				M-uPVC 729	no defects		
6.	Resistance to impact by falling mass	%	BDS EN 477:2018	204:		for class I:	(18-22)°C (55-57)% RH
				M-uPVC 713	0	≤ 10	
				M-uPVC 729	0	≤ 10	
7.	Breaking force of welded corners profiles for frame:	kN	BDS EN 514:2018	204:			(18-22)°C (55-57)% RH
	- unit values			M-uPVC 713-1	4,758	$\geq 3,943$ ¹⁾	
				M-uPVC 713-2	5,180	$\geq 3,943$ ¹⁾	
				M-uPVC 713-3	4,797	$\geq 3,943$ ¹⁾	
	- arithmetic mean value			M-uPVC 713	4,912	$\geq 4,600$ ¹⁾	



1	2	3	4	5	6	7	8
8.	Breaking force of welded corners profiles for sash:	kN	BDS EN 514:2018	204:			(18-22)°C (55-57)% RH
	- unit values			M-uPVC 729-1 M-uPVC 729-2 M-uPVC 729-3	6,013 7,073 6,965	$\geq 4,800^{1)}$ $\geq 4,800^{1)}$ $\geq 4,800^{1)}$	
	- arithmetic mean value			M-uPVC 729	6,684	$\geq 5,600^{1)}$	
Additions, deviations and exceptions to the method used: None							
1) The values and their tolerances are declared by the Manufacturer.							

Tests are carried out by:

/Res.Ass.Dipl.Eng.E.Penev/

/Tech.Y.Yordanov/

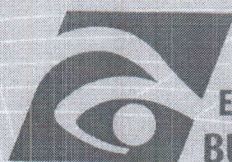
Head of Test Laboratory:

/Res.Ass.Dipl.Eng. E.Penev/

Manager of TCC:

/Res.Ass.Dipl.Eng. Tsvetana Gyurova/





EXECUTIVE AGENCY
BULGARIAN ACCREDITATION SERVICE

BAS reg. № 88 ЛИ

From: 24.03.2020

Valid until: 01.10.2022

CERTIFICATE OF ACCREDITATION

BUILDING RESEARCH INSTITUTE Ltd. (NISI EOOD)
TESTING CENTER FOR CONSTRUCTION

Address of the management: 1618 Sofia, 86 Nikola Petkov Blvd

Address of the CAB: 1618 Sofia, 86 Nikola Petkov Blvd

UIC: 121 558 493

Scope of accreditation:

To perform testing of: Concrete; Concrete and reinforced concrete products, Aerated concrete products, Gully tops and manhole tops, Plastic pipes and thermoplastics pipes; Natural stones/products; Ceramic /clay products; Cements; Gypsum and gypsum-based construction products; Building lime; Admixtures and additions for concrete and mortars; Aggregates for concrete, mortar, roads and railways; Reinforcing and construction steel and welded joints; Steel ropes; Metal, ropes and other articles; Power line fittings; Temporary works equipment and technological equipment for construction; Wood construction products; Bitumen and hot bitumen mixtures; Bitumen sheets for waterproofing; Sheets for waterproofing – plastics and rubber; Cold applied waterproofing mixtures; Geotextiles and related products; Thermal insulating products and composite systems; PVC profiles for windows and doors; Millwork /wooden, metal, plastic/, doors for industrial and commercial buildings and for garages; Sound absorption materials /structures; Noise; Carbonate and silicate materials; Waters for building purposes; Cladding products; Polymer concrete, base coats and self-levelling floor screeds, grouts and resins; Sealants; Floor coverings; Adhesives for floors and wall coverings; Paints, primers, varnishes, protective, decorative and anti-corrosion coatings, road marking products; Mortars and dry mixes; Pigments and extenders; Structures and Soil and foundation. **To perform sampling of:** Fresh concrete and concrete in structures.

ACCREDITED ACCORDING TO БДС EN ISO/IEC 17025:2018

Order № A 178/24.03.2020 is an integral part of Certificate of Accreditation,
26 pages totally

Date of initial accreditation: 01.10.2014

Date of re-accreditation: 01.10.2018

Executive Director

Eng. Irena Borislavova

EA BAS

BG 2020070

1797 Sofia, "Dr. GM Dimitrov" № 52 A, 7th floor
Tel.: ++359 2 9766401, Fax: ++359 2 9766415
e-mail: office@nab-bas.bg
<http://www.nab-bas.bg>



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Phone: +359 2 856 10 82; Fax: +359 2 955 96 38
e-mail: nisi.bg, web:nisi.bg

TESTING CENTER FOR CONSTRUCTION (TCC) at Building Research Institute (NISI) Ltd.
Laboratory: "Concrete, reinforcement, construction materials and products"

TEST REPORT

No 281-1-204D/28.04.2021

Addition to test report No 281-1-204/27.04.2021

Name of product: PVC profiles for windows and doors - six-chamber system Mono Block 70, profiles for frame M-uPVC 713 and for sash M-uPVC 729

Manufacturer: Ersas Pal Kompozit Profil Sanayi A.Ş

Factory: Ergene 1 OSB Vakıflar O.S.B Mahallesi Sanayi Caddesi No:19-1 Ergene / TEKİRDAĞ,
Headquarter: Topçular Mahallesi İncirlik Sokak No:11-15 Ersas Plaza Eyüpsultan / İSTANBUL

Applicant: Ersas Pal Kompozit Profil Sanayi A.Ş

Factory: Ergene 1 OSB Vakıflar O.S.B Mahallesi Sanayi Caddesi No:19-1 Ergene / TEKİRDAĞ,
Headquarter: Topçular Mahallesi İncirlik Sokak No:11-15 Ersas Plaza Eyüpsultan / İSTANBUL
Application form from 21.04.2021

Test methods:

BDS EN ISO 178:2019 Plastics - Determination of flexural properties (ISO 178:2019)

BDS EN ISO 179-2:2020 Plastics - Determination of Charpy impact properties - Part 2: Instrumented impact test (ISO 179-2:2020)

BDS EN ISO 306:2014 Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST) (ISO 306:2013)

BDS EN ISO 868:2006 Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868:2003)

BDS EN ISO 8256:2006 Plastics - Determination of tensile-impact strength (ISO 8256:2004)

Date of receiving the sample at TCC: Incoming No 281/21.04.2021

Number of the test samples: 20 pieces with a length of 300 mm and 3 welded joints of profiles for frame and sash. The sample is taken and submitted by the Applicant.

Time of the test: from 21.04.2021 to 28.04.2021

Manager of TCC:

/Res. Ass. Dipl. Eng. Tsvetana Gyurova/

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1	2	3	4	5	6	7	8
1.	Vicat softening temperature	°C	BDS EN ISO 306:2014	204: M-uPVC 713 M-uPVC 729	83 85	≥ 75 ≥ 75	(18-22)°C (55-57)% RH
2.	Shore hardness, scale D	conditional units	BDS EN ISO 868: 2006	204: M-uPVC 713 M-uPVC 729	72,8 73,3	no requirement no requirement	(18-22)°C (55-57)% RH
3.	Tensile impact strength	kJ/m ²	BDS EN ISO 8256: 2006	204: M-uPVC 713 M-uPVC 729	728 732	≥ 600 ≥ 600	(18-22)°C (55-57)% RH
4.	Charpy impact strength	kJ/m ²	BDS EN ISO 179-2:2020	204: M-uPVC 713 M-uPVC 729	15,86 16,73	≥ 10 ≥ 10	(18-22)°C (55-57)% RH
5.	Flexural modulus of elasticity	N/mm ²	BDS EN ISO 178:2019	204: M-uPVC 713 M-uPVC 729	2561 2514	≥ 2200 ≥ 2200	(18-22)°C (55-57)% RH
Additions, deviations and exceptions to the method used: None							

Tests are carried out by:

/Res.Ass.Dipl.Eng.E.Penev/

/Tech.Y.Yordanov/

Head of Test Laboratory:

/Res.Ass.Dipl.Eng. E.Penev/

Manager of TCC:

/Res.Ass.Dipl.Eng. Tsvetana Gyurova/





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Tel.: ++359 2 9766401, Fax: ++359 2 9766415
e-mail: office@nab-bas.bg
<http://www.nab-bas.bg>