INSTITUTE FOR TESTING AND CERTIFICATION, INC.
třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic

EVALUATION REPORT

Ref. No.: 723301662/2019

Customer:	**BAYEM GRUP İÇ VE DIŞ TİC. LTD. ŞTİ** **Meclis Mah. Atatürk Cad. Şener Sok. No: 78-A** **Sancaktepe, 34785 Istanbul** **TURKEY**
Product:	**Baymax Safety Glasses** **Type: S 1551 Quattro**
Elaborated by:	**Dipl. Ing. Daniela Olšanová**
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Issued on:	**2019-02-19**

NOTIFIED BODY 1023 INSTITUTE FOR TESTING & CERTIFICATION

Mgr. Jiří Heš
Representative of Notified Body No. 1023

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Introduction

This Evaluation Report was issued on the basis of Application No. 723301662 for the assessment of conformity of personal protective equipment (PPE) with the basic requirements of Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.

This assessment should prove the fulfilment of EU legislation requirements for the purpose of the access of the assessed products to the EU market.

Company **BAYEM GRUP İÇ VE DIŞ TİC. LTD. ŞTİ** as **OBL** manufacturer made an application for the purpose of EU Type – Examination of Baymax Safety Glasses, type: S 1551 Quattro according to Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC. This type of Baymax Safety Glasses, type: S 1551 QUATTRO has been tested and certified under different trade mark for the company **SEMBOL KURUYUCU GÖZLÜK TİC.LTD.ŞTİ (OEM)** within the scope of the purchasing order No. 723301273/01/2016; certificate No. 16 0221 T/NB.

1. Identification of assessed personal protective equipment

A detailed description of the design and structure, including the drawing documentation and specifications of material used, is given in the file of technical documentation of the product Baymax Safety Glasses, type: S 1551 QUATTRO.

The submitted documentation covers the following models and alternatives of the product:

Sample No. 723301662/01
Baymax Safety Glasses, type: S 1551 QUATTRO

Material specification:

Sample number	Name of the product	Materials
723301662/01	Baymax Safety Glasses, type: S 1551 QUATTRO	Ocular: polycarbonate (PC) Dark ocular: PC Frame / Handle: Polyvinylchloride (PVC)

Protection function:

Eye and face protection for **basic use + protection against droplets of liquids (3).**

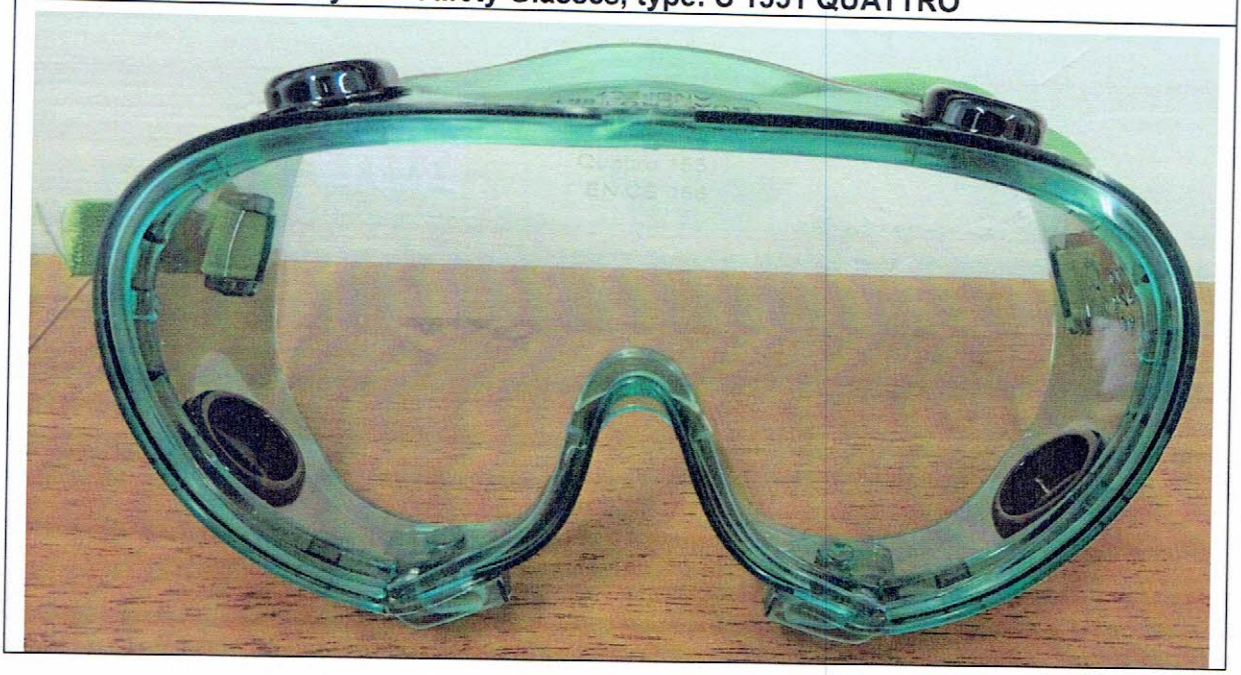
Type of filter (VISOR): **transparent ocular** UV filter (**scale number 2 – 1,2, optical class 1**), **dark ocular** – welding filter **(scale number 6)**

Classification:

Baymax Safety Glasses, type: S 1551 QUATTRO is classified as PPE **Category II** by the manufacturer.

Design:

Baymax Safety Glasses, type: S 1551 QUATTRO



2. Technical documentation

Technical documentation was submitted in the English language to assess the conformity of the Baymax Safety Glasses, type: S 1551 QUATTRO in January 2019. The file of technical documentation contains the items in according to Annex III of the Regulation (EU) 2016/425 of the European Parliament and of the Council.

3. Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

3.1 Basic requirements for the product and its specification in technical specifications

Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC setting out technical requirements for personal protective equipment.

Tables No. 1 through 3 state the analysis of applicability of basic requirements according to Annex II of Regulation (EU) 2016/425 in the right column, supplemented in case of applicable requirements by articles of harmonised standards stated in their harmonisation annex ZA or other technical specifications used for proving the conformity with respective partial requirement. "A" letter in the third column of the tables means that these requirements has been used for the given PPE, the "N/A" abbreviation (not applicable) means the requirement does not apply to the given PPE because it is irrelevant for the given intended use and/or the material used.

Column 4 of Tables No. 1 – 3 states the articles of harmonised standards which are linked, by means of cross links in the harmonisation annex ZA, to the respective basic requirement

of Regulation (EU) 2016/425. Meeting these articles of the harmonised standard proves the conformity of the product with the given basic requirement stated in the right column.

The fifth column of Tables No. 1 – 3 states the articles of non-harmonised technical specifications by which the manufacturer proves the conformity with the respective basic requirement which is not included in harmonisation. These can be articles of non-harmonised national or international standards as well as articles of harmonised standards which are not connected with the given requirement by a link in the harmonisation annex ZA. In extraordinary cases, the respective basic requirement can be set quite specifically by the Regulation so the conformity can be assessed directly with this article of the Regulation without any necessity to specify the required by means of a harmonised standard or other technical specification.

In case of applicable requirements, the last column of Tables No. 1– 3 states the assessment of the given requirement, whether PPE passes or does not pass. "P" letter means PPE passes the given requirement, "N/P" means it does not pass it.

Table 1: Overview of basic requirements and technical specifications used in the PPE design. General requirements applicable to all PPE

Requirement number in Annex II	Requirement description	Application A – N/A	Article of the harmonised standard specifying the requirement (according to Annex ZA)	Other technical specification or the manner of proving the compliance with the requirement	Assessment P – N/P
1.1	Design principles	A	EN 166 art. 6.1, 6.2, 6.3 EN 170, Annex B		P
1.1.1	Ergonomics	A	EN 166 art. 6.3, 7.1.1 EN 170, Annex B		P
1.1.2	Levels and classes of protection	A	EN 166 art. 7.1, 7.2		P
1.1.2.1	Optimum level of protection	A	EN 166 art. 7.1, 7.2 EN 170, art. 5		P
1.1.2.2	Classes of protection appropriate to different levels of risks	A	EN 166 art. 7.1, 7.2 EN 170, art. 5, Annex B		P
1.2	Innocuousness of PPE	A		See requirement 1.2.1, 1.2.1.1, 1.2.1.2 and 1.2.1.3 below	P
1.2.1	Absence of risks and other inherent nuisance factors	A		See requirement 1.2.1.1, 1.2.1.2 and 1.2.1.3 below	P
1.2.1.1	Suitable constituent materials	A	EN 166 art. 6.2		P
1.2.1.2	Satisfactory surface condition of all PPE parts in contact with the user	A	EN 166 art. 6.1		P
1.2.1.3	Maximum permissible user impediment	A	EN 166 art. 6.3, 7.1.1		P
1.3	Comfort and effectiveness	A	EN 166 art. 6.3, 7.1.1		P
1.3.1	Adaptation of PPE to user morphology	A	EN 166 art. 6.3, 7.1.1		P
1.3.2	Lightness and design strength	A	EN 166 art. 7.1.4, 7.2.2		P

Requirement number in Annex II	Requirement description	Application A – N/A	Article of the harmonised standard specifying the requirement (according to Annex ZA)	Other technical specification or the manner of proving the compliance with the requirement	Assessment P – N/P
1.3.3	Compatibility of different classes or types of PPE designed for simultaneous use	A		Direct assessment according to the art. 1.3.3, Annex II of PPE Regulation	P
1.3.4	Protective clothing containing removable protectors	N/A			
1.4	Manufacturer's instructions and information	A	EN 166 art. 10		P

Table 2: Overview of basic requirements and technical specifications used in the PPE designing. Additional requirements common to several classes or types of PPE

Requirement number in Annex II	Requirement description	Application A – N/A	Article of the harmonised standard specifying the requirement (according to Annex ZA)	Other technical specification or the manner of proving the compliance with the requirement	Assessment P – N/P
2.1	PPE incorporating adjustment systems	A	EN 166 art. 6.3		P
2.2	PPE enclosing the parts of the body to be protected	N/A			
2.3	PPE for the face, eyes and respiratory system	A	EN 166 all articles + 7.2.2 (except of art. 7.2) EN 170, art. 5.2		P
2.4	PPE subject to ageing	A	EN 166 art. 7.1.5		P
2.5	PPE which may be caught up during use	N/A			
2.6	PPE for use in potentially explosive atmospheres	N/A			
2.7	PPE intended for rapid intervention or to be put on or removed rapidly	N/A			
2.8	PPE for intervention in very dangerous situations	N/A			
2.9	PPE incorporating components which can be adjusted or removed by the user	A	EN 166 art. 6.3		P
2.10	PPE for connection to complementary equipment external to the PPE	N/A			
2.11	PPE incorporating a fluid circulation system	N/A			

Requirement number in Annex II	Requirement description	Application A – N/A	Article of the harmonised standard specifying the requirement (according to Annex ZA)	Other technical specification or the manner of proving the compliance with the requirement	Assessment P – N/P
2.12	PPE bearing one or more identification markings or indicators directly or indirectly relating to health and safety	A	EN 166 art. 9 EN 170, art. 4		P
2.13	PPE capable of signalling the user's presence visually	N/A			
2.14	'Multi-risk' PPE	A	EN 166 all articles + 7.2.2 (except of art. 7.2)	EN 170	P

Table 3: Overview of basic requirements and technical specifications used in the PPE designing. Additional requirements specific to particular risks

Requirement number in Annex II	Requirement description	Application A – N/A	Article of the harmonised standard specifying the requirement (according to Annex ZA)	Other technical specification or the manner of proving the compliance with the requirement	Assessment P – N/P
3.1	Protection against mechanical impact	A	EN 166 art. 7.1.4, 7.2.2		P
3.1.1	Impact caused by falling or ejected objects and collision of parts of the body with an obstacle	A	EN 166 art. 7.1.4, 7.2.2		P
3.1.2	Falls	N/A			
3.1.2.1	Prevention of falls due to slipping	N/A			
3.1.2.2	Prevention of falls from a height	N/A			
3.1.3	Mechanical vibration	N/A			
3.2	Protection against static compression of part of the body	N/A			
3.3	Protection against mechanical injuries	N/A			
3.4	Protection in liquids	A			P
3.4.1	Prevention of drowning	N/A			
3.4.2	Buoyancy aids	N/A			
3.5	Protection against the harmful effects of noise	N/A			
3.6	Protection against heat and/or fire	N/A			
3.6.1	PPE constituent materials and other components	N/A			
3.6.2	Complete PPE ready for use	N/A			
3.7	Protection against cold	N/A			

Requirement number in Annex II	Requirement description	Application A – N/A	Article of the harmonised standard specifying the requirement (according to Annex ZA)	Other technical specification or the manner of proving the compliance with the requirement	Assessment P – N/P
3.7.1	PPE constituent materials and other components	N/A			
3.7.2	Complete PPE ready for use	N/A			
3.8	Protection against electric shock	N/A			
3.8.1	Insulating equipment	N/A			
3.8.2	Conductive equipment	N/A			
3.9	Radiation protection	A	EN 166 art. 7.2.1 EN 170, art. 5, Annex B EN 169		P
3.9.1	Non-ionising radiation	A	EN 166 art. 7.2.1 EN 170, art. 5, Annex B		P
3.9.2	Ionising radiation	N/A			
3.9.2.1	Protection against external radioactive contamination	N/A			
3.9.2.2	Protection against external irradiation	N/A			
3.10	Protection against substances and mixtures which are hazardous to health and against harmful biological agents	N/A			
3.10.1	Respiratory protection	N/A			
3.10.2	Protection against cutaneous and ocular contact	N/A			
3.11	Diving equipment	N/A			

When designing the product, the manufacturer applied the following standard harmonised to Regulation (EU) 2016/425:

EN 166:2001 Personal eye protection – Specifications

EN 170:2002 Personal eye-protection – Ultraviolet filters - Transmittance requirements and recommended use

EN 169:2002 Personal eye-protection - Filters for welding and related techniques - Transmittance requirements and recommended use

3.2 Indicators specifying basic requirements and test methods

Indicators specifying applicable basic requirements (marked with "A" in the third column of Tables No. 1 through 3):

- **Design and manufacturing requirements**

- General construction
- Materials

- **Basic requirements**
- Field of vision
- Optical requirements
  - Spherical refractive power
  - Astigmatic refractive power
  - Prismatic refractive power
  - Transmittance in UV and VIS range
  - Variations in transmittance
  - Diffusion of light
- Quality of material and surface
- Minimal robustness
- Resistance to ageing
  - Stability at an elevated temperature
  - Resistance to ultraviolet radiations
- Resistance to ignition
- **Special requirement**
- Protection against droplets of liquids
- Lateral protection
- **Marking**
- **Information supplied by the manufacturer**

3.3 Test methods

Table No. 4: Overview of test methods used for evaluating the materials and product

Properties	**Test method**
Design and manufacturing requirements	
- *General construction*	visual assessment
- *Materials*	visual assessment
Basic requirements	
- *Field of vision*	art. 18 EN 168
Optical requirements	
- *Spherical refractive power*	art. 3 EN 167 */testing was carried out only on the transparent oculars because the dark ocular does not lay of light/*
- *Astigmatic refractive power*	
- *Prismatic refractive power*	
- *Transmittance*	art. 6 EN 167
- *Variation in transmittance*	art. 7 EN 167
- *Diffusion of light*	art. 4 EN 167 */testing was carried out only on the transparent oculars because the dark ocular does not lay of light/*
Quality of material and surface	art. 5 EN 167
Minimum robustness	art. 3.1 EN 168
Resistance to ageing	
- *Stability at an elevated temperature*	art. 5 EN 168
- *Resistance to ultraviolet radiations*	art. 6 EN 168
Resistance to ignition	art. 7 EN 168

Table No. 4: Continuation from page 8. Overview of test methods used for evaluating the materials and product

Properties	Test method
Special requirement	
- *Lateral protection*	art. 19 EN 168
- *Protection against droplets of liquids*	art. 12 EN 168
Marking	visual assessment
Information supplied by the manufacturer	visual assessment

3.4 Place and scope of sampling

Samples of the assessed product were delivered by the Customer on 2019-01-25 in compliance with the instruction of the designated worker of the NB at the quantity 1 piece of Baymax Safety Glasses, type: S 1551 QUATTRO.

With regard to the fact that this is the EU type examination by a notified body, the Customer asking for assessing the conformity is responsible for selecting a sample (or prototype). The test examination does not include inspection activity focused on the conformity of properties of all products introduced to the market with the assessed (proto)type.

3.5 Place of performing the tests and assessment

Tests were performed in the following accredited testing laboratories: Institute for testing and certification, a.s., Zlín, Czech Republic and Meopta – optika, s.r.o., Přerov, Czech republic.

The documentation was examined and visual inspection and product type assessment were performed in Institute for testing and certification, a.s., Czech Republic.

3.6 Results of tests and assessment

Results of the personal protective equipment evaluation are summarised in Table No. 5. Test methods stated in respective part of Table No. 4 were used.

Table 5: Results of the evaluation of the Baymax Safety Glasses, type: S 1551 QUATTRO

Significant property	Measuring unit	Requirement	Determination / Document No.
Design and manufacture / innocuousness, general construction, comfort, ergonomics /	–	art. 6 EN 166	**pass / D1, D2, D3**
General construction	-	art. 6.1 EN 166	**pass / D1, D2**
Materials	-	art. 6.2 EN 166	**pass / D1, D3**

Table 5: Continuation from page 9. Results of the evaluation of the Baymax Safety Glasses, type: S 1551 QUATTRO

Significant property	Measuring unit	Requirement	Determination / Document No.
Field of vision	-	art. 7.1.1 EN 166 Eye-protector shall exhibit: - minimum field of vision defined by the two ellipses in Figure 1 - placing of the ellipses shall be in compliance with requirements of standard	**pass / D1** Eye protector exhibit: - larger then minimal field of vision defined by the two ellipses in figure 1 - placing of the ellipses comply with requirements of standard
Optical requirements			
- Spherical refractive power	m^{-1}	art. 7.1.2.1.2 EN 166 Table 3 **Optical class 1:** max. ±0,06	**pass / D1** 0
- Astigmatic refractive power	m^{-1}	art. 7.1.2.1.2 EN 166 Table 3 **Optical class 1:** 0,06	**pass / D1** 0
- Prismatic refractive power	cm/m	art. 7.1.2.1.2. EN 166 **Optical class 1:** Horizontal (base in): 0,25 Vertical: 0,25	**pass / D1** Horizontal (base in): 0 Vertical: 0
- Transmittance (VIS) transparent ocular	%	art. 5 EN 170, table 1 ≥74,4	**pass / D1** 89,5
- Transmittance (VIS) dark ocular	%	art. 5.2 EN 169, table 1 **scale number 6** 0,44 – 1,2	**pass / D1** 0,8
- Transmittance (UV) transparent ocular	%	art. 5 EN 170, table 1 **scale number 2 – 1,2** 313 nm ≤ 0,003 365 nm ≤ 50	**pass / D1** 0 0
- Transmittance (UV) dark ocular	%	art. 5.2 EN 169, table 1 **scale number 6** 313 nm ≤ 0,0003 365 nm ≤ 0,10	**pass / D1** 0 0
- Transmittance (IR) dark ocular	%	art. 5.2 EN 169, table 1 **scale number 6** ≤ 1,7	**pass / D1** 0,8
- Variation in transmittance transparent ocular	%	art. 7.1.2.2.3.1 EN 166 Table 4 max. ±5	**pass / D1** 0
- Diffusion of light transparent ocular	$cd.m^{-2}.lx^{-1}$	art. 7.1.2.3 EN 166 max. 0,5	**pass / D1** max. 0,02
Quality of material and surface		art. 7.1.3 EN 166 visor shall be free from any significant defects likely to impair vision in use	**pass / D1** visor are without any significant defects likely to impair vision in use

Table 5: Continuation from page 10. Results of the evaluation of the Baymax Safety Glasses, type: S 1551 QUATTRO

Significant property	Measuring unit	Requirement	Determination / Document No.
Minimum robustness	-	art. 7.1.4.1EN 166 The following defect shall not occur: a) fracture b) ocular deformation	**pass / D1** without fracture and ocular deformation
Resistance to ageing		-	
Stability at an elevated temperature (55 °C)	-	art. 7.1.5.1 EN 166 visor shall show no apparent deformation	**pass / D1** without apparent deformation
Resistance to ultraviolet radiations		art. 7.1.5.2 EN 166	**pass / D1**
- Relative change of the luminous transmittance in visible spectrum	%	±5	0,2
- Diffusion of light	$cd.m^{-2}.lx^{-1}$	max. 0,5	0
Resistance to ignition	-	art. 7.1.7 EN 166 no part of visor ignites or continues to glow after removal of the steel rod	**pass / D1** without ignition and continuing to glow after removal of the steel rod
Protection against droplets of liquids	-	art. 7.2.4a EN 166	**pass / D4** no pink or crimson colouration appears in the ocular regions defined by the two circles when assessing goggles for protection against droplets
Lateral protection	-	art. 7.2.8 EN 166 is satisfactory if the eye-protector prevents the tip of the rod from touching the impact regions on the head-form	**pass / D1** lateral protection prevents the tip of the rod from touching the impact regions on the head-form
Marking	-	art. 9 EN 166	**pass / D2**
Information for users		art. 10 EN 166	**pass / D2**

The bases for the evaluations stated in Table No. 5 are the test results specified in the following documents:

D1: Final Report Ref. No. 723301273/01/2016 issued by Institute for testing and certification, a. s. Zlín, Czech Republic, on 2016-04-29

D2: Record of assessment No. 723301662 issued by Institute for testing and certification, a. s. Zlín on 2019-02-07

D3: Declaration about innocuousness issued by BAYEM GRUP İÇ VE DIŞ TİC. LTD. ŞTİ company on 2019-02-04

D4: Test Report No. 0115-PZA-16 issued by DIN CERTCO, Berlin, Germany on 2016-04-07

3.7 Assessment of product conformity with technical specifications and basic requirements

The assessed product – Baymax Safety Glasses, type: S 1551 QUATTRO – complies with the requirements set by the following technical standard with regard to its design and submitted documentation:

EN 166:2001 Personal eye protection – Specifications
EN 170:2002 Personal eye-protection - Ultraviolet filters - Transmittance requirements and recommended use
EN 169:2002 Personal eye-protection - Filters for welding and related techniques - Transmittance requirements and recommended use

Results of the evaluation of the personal protective equipment stated in Table No. 5 hereof prove the conformity of all indicators specifying general basic requirements of Regulation (EU) 2016/425, additional basic requirements common for more types of PPE and additional basic requirements for special risks applicable to the evaluated type of product.

4. Conclusion

Notified Body 1023 performed EU Type-Examination of the personal protective equipment

Baymax Safety Glasses
Type: S 1551 QUATTRO

Technical specifications used by the manufacturer are in compliance with basic requirements of Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.

The sample of the personal protective equipment was produced in compliance with the technical documentation of the manufacturer and can be fully safely used for its intended purpose.

The sample of the personal protective equipment meets all the provisions of the Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.

Notified Body NB 1023 decided to issue the EU Type-Examination Certificate.

5. List of documents used for the preparation for the Evaluation Report

- Application for the EU Type-Examination BAYEM GRUP İÇ VE DIŞ TİC. LTD. ŞTİ Şti. company company dated on 2018-11-20
- Technical documentation issued by the BAYEM GRUP İÇ VE DIŞ TİC. LTD. ŞTİ company dated on 2019-02-04
- Check list issued by BAYEM GRUP İÇ VE DIŞ TİC. LTD. ŞTİ company on 2019-02-04
- Declaration with utilization of the test results issued by SEMBOL KURUYUCU GÖZLÜK TİC.LTD.ŞTİ company on 2018-11-20
- Final Report Ref. No. 723301273/01/2016 issued by Institute for testing and certification, a. s. Zlín, Czech Republic, on 2016-04-29

- Record of assessment No. 723301662 issued by Institute for testing and certification, a. s. Zlín on 2019-02-04
- Test Report No. 0115-PZA-16 issued by DIN CERTCO, Berlin, Germany on 2016-04-07
- Declaration about innocuousness issued by BAYEM GRUP İÇ VE DIŞ TİC. LTD. ŞTİ company on 2019-02-04
- Declaration about sameness issued by BAYEM GRUP İÇ VE DIŞ TİC. LTD. ŞTİ company on 2018-11-20