Approval Number: 1808550
Test Report: MA6386/S 1&2

Water Regulations Advisory Scheme Ltd.
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP11 4EG

11th December 2020

Hidroten S.A.
Poligono Industrial Pla Vallonga, C/7,
03006 Alicante,
Spain

WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYVINYLCHLORIDE (PVC, PVC-U AND CPVC) - COMPONENTS - ONLY LEAD FREE PVC-U LISTED IN THIS SECTION. **5300**

'Hidroten Fittings'. Grey coloured, injection moulded PVC fittings. For use with water up to 23°C.

APPROVAL NUMBER: 1808550
APPROVAL HOLDER: HIDROTEN S.A.

The Scheme reserves the right to review approval.
Approval 1808550 is valid between August 2018 and August 2023

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, “Materials which have passed full tests of effect on water quality”.

The Directory may be found at: www.wras.co.uk/directory

Yours faithfully

Jason Furnival
Approvals & Enquiries Manager
Water Regulations Advisory Scheme

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that; 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

Use of the WRAS Approved Material Logo

Approval holders may use the WRAS Approved Material logo and make reference to any approval issued by WRAS Ltd. in respect of a particular material or range of materials provided the approval is, and remains valid.

Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

Modifications to existing Approvals

It is a condition of WRAS Material Approval that NO changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

Re-Approval

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.

AUTHORIZED BODY No. 224
Institute for Testing and Certification, Inc., T. Bati 299, 764 21 Zlín, Czech Republic
Authorization granted by the Decision No. 30/2006 dated 30th August 2006

PRODUCT CERTIFICATE
No. 09 0711 V/AO

In compliance with the provision of Section 5, Subsection 2 of the Government Order No. 163/2002, Collection of Laws, as amended by the Government Order No. 312/2005, Collection of Laws, which lays down technical requirements for selected building products, the Authorized Body No. 224 confirms that for the construction product

PVC-U fittings and valves with glue-joint or threaded coupling, PN 6 – PN 16, d 10 mm – d 630 mm, for pressure distribution of drinking water application

placed on the market by the company
HIDROTEN, S.A.
P.I.Pla Vallonga, C/7, Parcela 37, 03006 Alicante, Spain
having company´s registration number: ESA03164662

from the site of manufacture
HIDROTEN, S.A.
P.I.Pla Vallonga, C/7, Parcela 37, 03006 Alicante, Spain

it has reviewed the documents submitted by the applicant, carried out the initial type testing on a sample and assessed the factory production control. The Authorized Body No. 224 ascertained conformity of the product properties with essential requirements of the Government Order No. 163/2002, Collection of Laws, as amended by the Government Order No. 312/2005, Collection of Laws, which are specified by the following technical standards **ČSN EN ISO 1452-3, ČSN EN ISO 1452-4, ČSN EN ISO 1452-5**.
Further, the Authorized Body No. 224 ascertained that the factory production control complies with the submitted technical documentation and ensures that the products placed on the market fulfil the requirements laid down by the above mentioned norms and by the technical documentation pursuant to Section 4, Subsection 3 of the Government Order No. 163/2002, as amended.
An integral part of the present Certificate is the Final Report No. **793500844/2009** dated 19th October 2009 containing conclusions of the assessment, the test results obtained and basic description of the product, as necessary for its identification.
This Certificate remains valid as long as the requirements laid down in the technical documentation and/or norms in reference or the manufacturing conditions in the factory or the FPC itself are not modified significantly.
The Authorized Body No. 224 performs at least once per year a surveillance of the factory production control in the production site, takes samples of the product and by the way of testing it finds out, if the product properties comply with the requirements of the norms according to the Section 5, Subsection 4 of the mentioned Government Order. If the Authorized Body finds any shortcomings it has the right to cancel or amend the Certificate it has issued.

Issued in Zlín, on 19th October 2009

RNDr. Radomír Čevelík
Representative of the Authorized Body No. 224

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

REPORT ON SUPERVISION

of a certified product
reference No. 3435 07845/2020

Client:	**HIDROTEN, S. A.** **P.I.Pla Vallonga, C/7, Parcela 37** **03006 Alicante** **Spain**
Product:	**Adapting pieces and fittings of PVC-U joined by gluing or by means of threads, PN 6 – PN 16, d 10 mm – d 630 mm, for systems of pressure distribution of drinking water and other media**
Manufacturer:	**HIDROTEN, S. A.** **P.I.Pla Vallonga, C/7, Parcela 37** **03006 Alicance** **Spain**
Certificate number:	09 0711 V/AO
Inspection carried out by:	Martina Červenková
Date of issue:	17th March 2020

AUTORIZOVANÁ OSOBA 224 ITC 3 INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s.

Mgr. Jiří Heš
Representative of Authorized Body

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I. Method and extent of inspection

The inspection included verification of conformity of selected properties of the certified product with the requirements given in the specified standards, namely ČSN EN ISO 1452-3, ČSN EN ISO 1452-4 and ČSN EN ISO 1452-5.

The product inspected is as follows:
adapting pieces and fittings of unplasticized PVC (PVC-U) joined by gluing or by means of threads, PN 6 – PN 16, d 10 mm – d 630 mm, for systems of pressure distribution of drinking water and of other media.

Client requesting the service: HIDROTEN, S. A., P.I.Pla Vallonga, C/7, Parcela 37, 03006 Alicante, Spain.

Institut pro testování a certifikaci, a.s. (Institute for Testing and Certification), in Zlín, Czech Republic, issued a certificate No. 09 0711 V/AO. The certificate was elaborated on the basis of the Final Test Report No. 7935 00844/2009 dated 19th October 2009. The certificate was issued by Institut pro testování a certifikaci, a.s. (Institute for Testing and Certification) – Authorized Body (AO) No. 224, in Zlín, Czech Republic, on 19th October 2009.

The inspection tests were carried out to check whether the specified requirements for the product had been met. The product characteristics examined were as follows:

- appearance, performance, marking
- determination of dimensions according ČSN EN ISO 3126
- Vicat softening temperature according ČSN EN ISO 2507-1
- methods for vissualy assessing the effects of rating according ČSN EN ISO 580
- determination of the resistance to internal pressure according ČSN EN ISO 1167-1, 3.

The supervision of the operation of the factory production control system took place on 27th June 2018 at the manufacturer's facility of the company HIDROTEN, S. A., P.I.Pla Vallonga, C/7, Parcela 37, 03006 Alicante, Spain, and is documented by the document as follows:
Inspection of the factory production control (in surveillance) at the manufacturing plant of the company HIDROTEN, S. A., P.I.Pla Vallonga, C/7, Parcela 37, 03006 Alicante, Spain, dated 27th June 2018.

The above document has been recognized as sufficient for demonstration of the fact that the manufacturer has assured a proper operation of the factory production control system for the product under certification.

II. Sampling

As required by AO (Authorized Body) No. 224 samples as follows were taken:

- 6 pcs fittings – elbow of PVC-U, d 32 mm, 90°, PN 16, EN ISO 1452, color gray.

Registration number of the samples: 343507845/1.

- 1 pc assembly of PVC-U pipe with 3 pcs fittings of PVC-U, d 32 mm, PN 16, EN ISO 1452, color gray.

Registration number of the sample: 343507845/2.

III. Test result

The test by the samples 343507845/1 and 343507845/2 ware carried out by Institut pro testování a certifikaci, a. s., (Institute for Testing and Certification) in Zlín – Accredited Testing Laboratory No. 1004, between 20th January 2020 and 25th February 2020.

The test results obtained are given in Tables I and II. The result in Table III is carried out by AIMPLAS Instituto Tecnológico del Plástico, Italy.

Table I – fitting of PVC-U – elbow 90°, d 32 mm, PN 16, EN ISO 1452, color gray. Registration number of the samples: 343507845/1.

Technical characteristics	Measuring unit	Technical characteristics level	Value obtained	Determination procedures (test methods)
Appearance, performance	-	ČSN EN ISO 1452-3, čl. 5	satisfies [1)]	visually
Marking	-	ČSN EN ISO 1452-3, čl. 13	satisfies [2)]	visually
Mean inside diameter– d_{im}	mm	32,1 – 32,3	32,1	ČSN EN ISO 3126
Minimum length of the neck – L_{min}	mm	min. 22	22,5	ČSN EN ISO 3126
Methods for vissualy assessing the effects of rating [3)]	-	ČSN EN ISO 1452-3, tab. 23	satisfies [4)]	ČSN EN ISO 580

1) The outer and inner surface or the fitting is clean, smooth, without grooves, blistering, dirt, pores and other surface irregularities. The color gray.

2) In the fitting with the following data: PVC PN-16 Ø-32 6

The packaging is a label glued fittings where is the name of the manufacturer „hidroten", diameter, fittings marking the angle, the type of box, made in Spain, the number of international standard 1452.

3) Test conditions: temperature (150 ± 2) °C, time temperance 30 min., 3 pcs specimens - fittings.

4) For all 3 pcs of specimens – fitting evaluated: injection molded parts show no signs of blisters or cold joints, no damage to the surface at the site of injection doesn´t penetrate deeper than 20 % wall depth at the site. Outside the area of injection outer surface shows no surface damage.

Table II – assembly of PVC-U pipe with 3 pcs fittings of PVC-U, d 32 mm, PN 16, EN ISO 1452, color gray. Registration number of the sample: 343507845/2.

Technical characteristics	Measuring unit	Technical characteristics level	Value obtained	Determination procedures (test methods)
Determination of the resistance to internal pressure [1]	h	≥ 1	> 1 [2]	ČSN EN ISO 1167-1,4

1) Test conditions: testing pressure 4,2 x PN = 67,2 bar, 1 pc test specimen - assembly, temperature (20 ± 1) °C, test time period (duration of the test) 1 hour, nature of medium test – water, vertical position.

2) The test was terminated without any failure (no break) of 1 pc test specimen - assembly.

Table III – fittings of PVC-U – elbow 90°, d 50 mm, PN 16, EN ISO 1452, color gray. [1]

Technical characteristics	Measuring unit	Technical characteristics level	Value obtained	Determination procedures (test methods)
Vicat softening temperature [2]	°C	≥ 74	74,1	EN ISO 2507-1

1) The result was taken from the test report AT-2050/19 elaborated by AIMPLAS Instituto Tecnológicko del Plástico, Italy, on 11th November 2019.

2) Test conditions: high temperature bath, immersion liquid: silicon oil, charge 50 N, method B50, heating speed 50 °C/hod.

IV. Evaluation of results obtained

The certified product **meets** the requirements as regards the characteristics examined.

The operation of the factory production control system was supervised in the extent of a check-list – Inspection of the factory production control (in surveillance). Meeting of the requirements by the manufacturer is described in the check-list.

V. Conclusion

Based on the inspection tests, **conformity** of the selected properties of the certified product with the requirements of the specified ČSN EN ISO 1452-3, ČSN EN ISO 1452-4 and ČSN EN ISO 1452-5 standardsin the characteristics monitored **was shown**.

The result of the inspection demonstrated that no change in the essential properties of the certified product had occurred.

In carrying out the surveillance at the manufacturer's facility 17 elements of factory production control system were assessed. As a result 5,9 % of non-compliances were found. The factory production control system complies with the appropriate technical documentation and assures that the products placed on the market meet the technical specification.

Result: **satisfactory**.

VI. A list of documents used to elaborate the Report

- Zkušební protokol akreditované laboratoře (Accredited Laboratory Test Report), reference No. 343507845-01, elaborated by Institut pro testování a certifikaci a. s. (Institute for Testing and Certification) – Accredited Laboratory No. 1004, in Zlín, Czech Republic, on 25th February 2020
- Test report AT-2050/19 elaborated by AIMPLAS Instituto Tecnológicko del Plástico, Italy, on 11th November 2019
- Certificate No. 09 0711 V/AO issued by Institut pro testování a certifikaci a. s. (Institute for Testing and Certification) - AO (Authorized Body) No. 224 at Zlín, on 19th October 2009
- Final Test Report No. 7935 00844/2009 elaborated by Institut pro testování a certifikaci a. s. (Institute for Testing and Certification), Authorized Body No. 224, in Zlín, Czech Republic, on 19th October 2009
- ČSN EN ISO 1452-3 „Plastové potrubní systémy pro rozvod vody a tlakové kanalizační přípojky a stokové sítě uložené v zemi i nadzemní - Neměkčený polyvinylchlorid (PVC-U) - Část 3: Tvarovky" (ČSN EN ISO 1452-3: Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure – Unplasticized poly(vinyl chloride) (PVC-U) – Part 3: Fittings)
- ČSN EN ISO 1452-4 „Plastové potrubní systémy pro rozvod vody a tlakové kanalizační přípojky a stokové sítě uložené v zemi i nadzemní - Neměkčený polyvinylchlorid (PVC-U) - Část 4: Ventily"(ČSN EN ISO 1452-3: Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure – Unplasticized poly(vinyl chloride) (PVC-U) – Part 4: Valves)
- ČSN EN ISO 1452-5 „Plastové potrubní systémy pro rozvod vody a tlakové kanalizační přípojky a stokové sítě uložené v zemi i nadzemní - Neměkčený polyvinylchlorid (PVC-U) - Část 5: Vhodnost použití systému" (Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure – Unplasticized poly(vinyl chloride) (PVC-U) – Part 5: Fitness for purpose of the system)
- Inspection of the factory production control (in surveillance) at the manufacturing plant of the company HIDROTEN, S. A., P.I.Pla Vallonga, C/7, Parcela 37, 03006 Alicante, Spain, dated 27th June 2018.