



Építészeti Minőségellenőrző Innovációs Kht.

ÉPÍTÉSÜGYI MINŐSÉGELLENŐRZŐ
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SOCIÉTÉ D'UTILITÉ PUBLIQUE POUR LE CONTRÔLE DE LA QUALITÉ ET L'INNOVATION DU BÂTIMENT
NON-PROFIT COMPANY FOR QUALITY CONTROL AND INNOVATION IN BUILDING
GEMEINNÜTZIGE GESELLSCHAFT FÜR QUALITÄTSKONTROLLE UND INNOVATION IM BAUWESEN

ÉME: A-882/1998

UE: A-2413/2008

ÉME
TECHNICAL APPROVAL

Description of the product: Hard PVC "KG" type sewage pipe fittings

Designed application area of the product: Use in sewage pipe systems DN/OD 110-400 mm for transport of wastewater by gravity

Applicant: BTH Fitting Kft
as the holder of the (H-3636 Vadna, Kassai út 35-37, Hungary) ÉME Technical Approval

Manufacturer of the product: BTH Fitting Kft
(H-3636 Vadna, Kassai út 35-37, Hungary)

ÉMI Kht technical system notation of product: 1.13.2.

Valid until: 30th November 2013

Budapest, 10th November 2008

Signature:

Sándor Horváth
Deputy Director General
Director of Quality Affairs and Marketing

SEAL: NON-PROFIT COMPANY FOR QUALITY CONTROL AND INNOVATION IN BUILDING

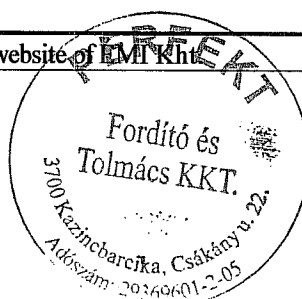
This ÉME TECHNICAL APPROVAL contains 7 pages and 0 numbered sealed attachment.

Validity of ÉME Technical Approval can be checked at the website of ÉMI Kht

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I. LEGAL REGULATIONS AND GENERAL CONDITIONS

1. This ÉME Technical Approval is issued by EMI Kht. (Non-Profit Company for Quality Control and Innovation in Building) on the basis of
 - the joint BM-GKM-KvVM Ministerial Decree No.3/2003. (I. 25.) on the detailed rules of the technical requirements, conformity certification, marketing and use of construction products,
 - the designation by the Minister of IKIM in IKIM Communiqué 16/1998. (IKK.8.)
 - and of the assessment of the test results detailed in the ÉME Technical Approval marked identically with the present approval and **dated 22nd August 2003 and valid up to 30th November 2008**, as well as the **Follow-up Inspection Record** marked **A-2413/2008** and handed over to the Applicant.
2. The holder of this ÉME is the – person or legal entity –, who requested by directly or by its representative and for whom the ÉME was issued by the ÉMI Kht. The holder of the present ÉME is responsible for that the product complies with the requirements of the ÉME and liable to provide the user with all the relevant information required for its intended usage.
3. The ÉMI Kht – as a notified certifying body – is entitled to inspect that the regulations of ÉME are observed and the product is in compliance with the technical specifications. The follow-up inspection can be carried out in a laboratory, at the production site, at the premises of applicant or at the reference installation site of the product, which cost has to be borne by the Applicant.
4. Only the holder of the ÉME is entitled to use the present document as a technical specification for the issuance of the Certificate of Conformity. The holder of the ÉME is not entitled to transfer it to a third party. The present ÉME can be applied only for those products, which are produced at the referenced production site.
5. If a localized and harmonized European Standard will be issued in relation to the present product during the validity period of the present ÉME, then according to the joint BM-GKM-KvVM Ministerial Decree No.3/2003. (I. 25.) ÉMI Kht. has to withdraw the issued ÉME within one (1) year reckoned from the issuance of the standard with the exception of the case if the product is significantly differs from the one referenced in the standard.
6. ÉMI Kht. is entitled to withdraw the ÉME issued for the product, if the follow-up inspection cannot be carried out, or its results are unfavorable, or it turns out that the product could not be used for its intended purpose. The holder of the ÉME is liable to report any changes made in the product specifications and/or the manufacturing conditions. Thereupon ÉMI Kht has to decide that the ÉME remained valid or ÉME has to be withdrawn with the initiation of a new requesting process. If the decision making process requires further test, then ÉMI Kht is entitled to suspend the validity of the ÉME for that time.
7. ÉMI Kht. issues the ÉME in Hungarian, but if the applicant requests it can be issued in English, German or French, or could be translated into other languages. The legal validity of the document is based on the Hungarian version of the ÉME.
8. ÉME can be copied only in full extent, or can be published on other kind of media. For the publication of an abridged version of the ÉME it is required to obtain the written consent of ÉMI Kht. Text and drawings of the advertisements cannot be inconsistent with the contents of the ÉME Technical Approval and provide reasons for misunderstandings.
9. ÉME as a technical specification cannot replace any other kind of permits, licenses (of the sanitary authorities, building authority) and certifications (Certificate of Fire Safety Conformity, Certificate of Conformity) required for the marketing, utilization, installation, usage of the product.

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10. The manufacturer or the distributor is not entitled to use the CE marking on the product or the packaging of the product by the Certificate of Conformity issued on the basis of the ÉME.

II. SPECIFIC CONDITIONS RELATED TO THE ÉME TECHNICAL APPROVAL

1. DATA

1.1 Place of manufacturing

BTH Fitting Kft

(H-3636 Vadna, Kassai út 35-37, Hungary)

1.2 Description of the product and its intended usage

The product: hard PVC-U “KG” type sewage pipe fittings with DN 110-400 diameter according to the MSZ EN 1401-1:1999 Plastics piping systems for non-pressure underground drainage and sewerage. Unplasticized poly(vinyl chloride)(PVC-U). Part 1: Specifications pipes, fittings and the system standard.

Letter symbols for identification of fittings:

KGU-repair coupler, KGMM-double coupler, KGB-bend, KGEA-branch, KGR-reducer, KGRE-cleaning piece, KGM- STOP, KGEAT-triple socket branch, KGET-double and triple socket cleaning piece, KGAH-complete cleaning piece G type, KGFP- shaft connectors.

During manufacturing fittings are marked on their surface with readable stamps according to the Article 12 of the MSZ EN 1401-1 standard. With the applied marking the fittings are identifiable by year and month of manufacturing.

Requirements for raw materials of sealing resin rings used for assembling are contained in the MSZ EN 681-1:2000 “Elastomeric seals. Materials requirements for pipe joint seals used in water and drainage applications. Part 1: Vulcanized rubber” standard. Geometry of the sealing rings must comply with complex tightness requirements.

Raw material of the product: Compound specified in recipe by the manufacturer, which PVC resin content is at least 85%. The sample pipe manufactured from raw material must pass internal pressure test (1000 hours, 60 oC , $\sigma = 6.3$ MPa)

Designed application area of product: For underground PVC sewage pipe systems used in gravitational sewage disposal systems with DN 110-400 mm diameters.

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2. PRODUCT CHARACTERISTICS AND TEST PROCEDURE

Table 1.: Requirement for conformance, fitness verification and type test

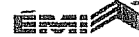
	Characteristic	Requirements	Test parameters	Test method
1.	Design	MSZ EN 1401-1:1999 5.		Visual inspection
2.	Color	MSZ EN 1401-1:1999 5.		Visual inspection
3.	Dimensions	MSZ EN 1401-1:1999 6.	Temperature: (23± 2) °C	Measured with accuracy of. 0,1mm caliper
4.	Impact resistance	MSZ EN 1401-1:1999 7. No cracks are allowed	The drop height at 0 °C fitting temperature: at $d_n \leq 125$ mm is 1000mm at $d_n \geq 125$ mm is 500mm impact point is the mouth of the socket	MSZ EN 12061:1998
5.	Vicat- softening temperature	MSZ EN 1401-1:1999 8. ≥ 79 °C	According to MSZ EN 727:1997	MSZ EN 727:1997
6.	Behavior at heat treatment	MSZ EN 1401-1:1999 8. Extent of cracking, scaling and blistering cannot be larger than prescribed in table 13 of MSZ EN 1401-1:1999	Temperature (150± 2) °C Heating time in case of: $e \leq 3$ mm 15 minutes $3 < e \leq 10$ mm 30 minutes $10 < e \leq 20$ mm 60 minutes	MSZ EN ISO 580:2005 The method is : Air
7.	Water tightness (between pipe and fitting)	MSZ EN 1401-1:1999 8. No leakage is allowed	Temperature (23±5) °C Overpressure: 0.5 bar Duration: 1 minute	MSZ EB 1053: 1998
8.	Complex tightness (between pipe and fitting)	MSZ EN 1401-1:1999 9. <u>No leakage is allowed</u> <u>No leakage is allowed</u> <u>Pressure drop max.10%</u> <u>No leakage is allowed</u> <u>No leakage is allowed</u> <u>Pressure drop max.10%</u>	Temperature (23±5) °C Duration: 15 minutes Pipe deformation $\geq 10\%$ Socket deformation $\geq 5\%$ <u>Water pressure1.: 0.05 bar</u> <u>Water pressure2.: 0.5 bar</u> <u>Air pressure: -0.3 bar</u> Temperature (23±5) °C Duration: 15 minutes Angular deviation: 2° <u>Water pressure1.: 0.05 bar</u> <u>Water pressure2.: 0.5 bar</u> <u>Air pressure: -0.3 bar</u>	MSZ EN 1277:2004 4 th Method Condition B: diameter distortion MSZ EN 1277:2004 4 th Method Condition C Angular deviation
9.	Designation	MSZ EN 1401-1:1999 12.		Visual Inspection

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3. CONFORMITY ASSESSMENT

3.1 Type of the certificate of conformity

According to the Appendix 4 of the joint BM-GKM-KvVM Ministerial Decree No.3/2003. (I. 25.):

ii) Supplier's declaration of conformity, second option (3)

3.2 Liabilities of the manufacturer (lot acceptance test and certification)

The frequency of the manufacturer's lot acceptance test is defined in the Table 6 of the MSZ ENV 1401-2 standard.

Characteristics described in Table 1 have to be checked with the frequency determined in Table 6 of the MSZ ENV 1401-2 standard and results have to be documented.

Test results have to be kept for 10 years.

On the basis of the lot acceptance test and the ÉME Technical Approval the Manufacturer issues a Supplier's declaration of conformity for every sold lot, according to second clause of Appendix 5 of the joint BM-GKM-KvVM Ministerial Decree No.3/2003. (I. 25.)

3.3 Liabilities of the notified certification body

The first type examination of the product is carried out by the ÉMI Kht. This examination related to the product characteristics described in Table 1.

4. ELIGIBILITY REQUIREMENTS, RECOMMENDATIONS

4.1 Eligibility requirements

4.1.1 Production

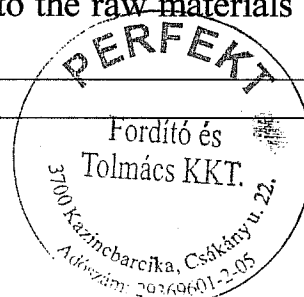
Production can only be done according to the validated process control datasheets and by the usage of the prescribed raw material.

The manufacturer is obliged to record, log the Supplier's declaration of conformity of the raw materials, results and calculation of lot acceptance tests (including the ones related to the raw materials used for production) and kept them for 10 years.

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4.1.2 Designing

The hard PVC sewage pipes and fittings can be designed only for gravitational sewage disposal systems of communal wastewater up to 60°C permanently, ground-water and wastewater, which are not damaging the materials of the hard PVC sewage pipes, connectors and/or their rubber sealing rings.

4.1.3 Installation and assembly

Installation has to be carried out according to the MSZ EN 1610:2001 “Construction and testing of drains and sewers” and the MSZ ENV 1401-3:2001 “Plastics piping systems for non-pressure underground drainage and sewerage. Unplasticized poly(vinyl chloride) (PVC-U). Part 3: Guidance for installation” standards.

Sewage pipe fittings produced by BTH Fitting Kft can be assembled according to the requirements of MSZ EN 1401-1:1999 “Plastics piping systems for non-pressure underground drainage and sewerage. Unplasticized poly(vinyl chloride)(PVC-U). Part 1: Specifications pipes, fittings and the system” standard.

Only those rubber seals can be used for the fittings, which are defined in the MSZ EN 681-1:2000 “Elastomeric seals. Materials requirements for pipe joint seals used in water and drainage applications. Part 1: Vulcanized rubber” standard.

4.1.4 Usage

The hard PVC sewage pipes and fittings can be designed only for gravitational sewage disposal of household sewage up to 60°C permanently, ground-water and wastewater, which are not damaging the materials of the hard PVC sewage pipes, connectors and/or their vulcanized rubber sealing.

4.2 Recommendations for product loading and transportation

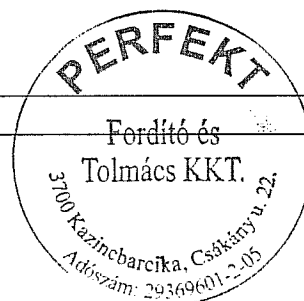
During storage, the products have to be protected from the damaging UV radiation of sunlight.

Products can be stored only for 90 days without protection from sunlight.

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For the transportation of the product, manufacturer has to enclose clear, understandable instructions, which preserves the usability of the product for its intended purpose during transportation.

5. FOLLOW-UP INSPECTION

Two follow-up inspections have to be carried out during the 5-year validity period of the ÉME Technical Approval.

Request for the follow-up inspection has to be submitted to the ÉMI Kht firstly till 30th January 2010 and secondly till 30th January 2012.

If the follow-up inspection is neglected, then the ÉME Technical Approval became invalid and it will be deleted from the database of valid ÉME Technical Approvals by ÉMI Kht.

Date: Budapest, 10th November 2008

Signature of Attila Szántay

Scientific co-worker
professional expert

Signature of Mrs Rita Lochmayer Gaál

Head of the Supporting
Structure and Civil Engineering
Department and the creator of the
present ÉME Technical Approval

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