



Építésügyi Minőségellenőrző Innovációs Kht.

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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

A-8/2001

UE: A-2031/2006

ÉME
TECHNICAL APPROVAL

| | |
|---|---|
| Description of the product: | Hard PVC "KA" type pipe fittings |
| Designed application area of the product: | Use in PVC sewage pipe systems DN 32-110 mm for transport of wastewater by gravity |
| Applicant: as the holder of the ÉME Technical Approval | BTH Műanyagfeldolgozó Kft (H-3636 Vadna, Kassai út 35-37, Hungary) |
| Manufacturer of the product: | BTH Műanyagfeldolgozó Kft (H-3636 Vadna, Kassai út 35-37, Hungary) |
| ÉMI Kht technical system notation of product: | 5.3.1 |
| Valid until: | 31st March 2011 |
| Budapest, 31st January 2006 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 8 pages and 1 numbered sealed attachment.

Validity of ÉME Technical Approval can be checked at the website of ÉMI Kht: www.emi.hu KBiA-II-4-2-2006.01.01

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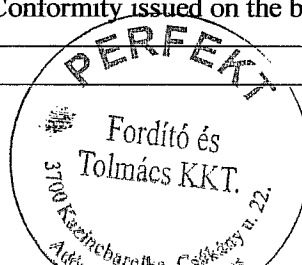
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I. LEGAL REGULATIONS AND GENERAL CONDITIONS

1. This ÉME Technical Approval is issued by ÉMI 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 05th April 2001 and valid up to 30th March 2006**, as well as the **Follow-up Inspection Record** marked **A-2031/2006** 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.
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.

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II. SPECIFIC CONDITIONS RELATED TO THE ÉME TECHNICAL APPROVAL

1. DATA

1.1 Place of manufacturing

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

1.2 Description of the product and its intended usage

The product: hard PVC “KA” type sewage pipe fittings with DN 32-110 mm diameter on the basis of the Product Catalogue of BTH Műanyagfeldolgozó Kft (**Appendix 1**). The product - with the exception of the sizes described in the product catalogue of the company - is manufactured according to the MSZ EN 1329-1:2000 “Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure. Unplasticized poly(vinyl chloride) (PVC-U). Part 1: Specifications for pipes, fittings and the system” standard. Requirements of the sealing rings used for assembly are described 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.

Raw material of the product: Compound specified in recipe by the manufacturer, which PVC resin content is at least 85%.

Designed application area of product: For sewage pipes used in gravitational sewage disposal systems with DN 32-110 mm diameters.

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2. PRODUCT CHARACTERISTICS AND TEST PROCEDURE

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

| No. | Characteristic | Requirements | Test parameters | Test method |
|-----|-------------------------------|---|--|---|
| 1. | Raw material | PVC content is at least 85% (m/m) | | According to declared recipe |
| 2. | Design | MSZ EN 1329-1:2000 5.1 | | Visual inspection |
| 3. | Color | MSZ EN 1329-1:2000 5.2, gray | | Visual inspection |
| 4. | Dimensions | According to BTH product catalogue see attachment 1 | Temperature: (23± 2) °C | MSZ EN 476:2001 7.1 |
| 5. | Impact resistance (drop test) | MSZ EN 1329-1:2000 7.1.3 No damage is allowed | With fitting cooled to 0 °C Drop Height 1000mm impact point is the mouth of socket | MSZ EN 12061:2000 |
| 6. | Vicat- softening temperature | MSZ EN 1329-1:2000 8.2 ≥ 79 °C | According to MSZ EN 727:1997 | MSZ EN 727:1997 |
| 7. | Heat effects | MSZ EN 1329-1:2000 8.2 | Temperature 150 °C Dipping time: 30 minutes | MSZ EN 763:1995 Method B: Air |
| 8. | Water tightness | MSZ EN 1329-1:2000 9. No leakage is allowed | Temperature :23±5°C Overpressure: 0.5 bar Duration: 15 minutes | MSZ EN 1053: 1998 |
| 9. | Air tightness | MSZ EN 1329-1:2000 9. No leakage is allowed | Temperature :23±5°C Overpressure: 0.1 bar Duration: 15 minutes | MSZ EN 1054: 1998 |
| 10 | Complex tightness | MSZ EN 1329-1:2000 9. No leakage is allowed No leakage is allowed No leakage is allowed No leakage is allowed | Temperature 23±5 °C Duration: 15 minutes Pipe deformation (10±1)% <u>Socket deformation (5±0.5)%</u> <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> | MSZ EN 1277:1998 4 th Method Condition B: Diameter distortion MSZ EN 1277:1998 4 th Method Condition C Angular deviation |
| 11 | Designation | * | | Visual inspection |

*Identification data marked on the external surface of the socket with stamp are: the initials of the name of the manufacturer (BT), year, month of manufacturing (e.g.: 2005-12), designation of the type and nominal dimensions of the fitting (e.g.: KAB 45° DN 110).

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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 (Factory Production Control and certification)

Frequency of the manufacturer's lot acceptance test:

In case of the characteristics 1 to 8 described in Table 2 at least once by lot, and beside this, the characteristics have to be checked with the frequency determined in the Quality Control System and results have to be documented.

Table 2: Required values of the product lot manufacturer's acceptance tests

| No. | Characteristic | Requirements | Test parameters | Test method |
|-----|-------------------------------|---|--|----------------------------------|
| 1. | Raw material | PVC content at least 85% (m/m) | | According to declared recipe |
| 2. | Design | MSZ EN 1329-1:2000 5.1 | | Visual inspection |
| 3. | Color | MSZ EN 1329-1:2000 5.2, gray | | Visual inspection |
| 4. | Dimensions | According to BTH product catalogue see 1. section | Temperature: $(23 \pm 2) ^\circ\text{C}$ | MSZ EN 476:2001 7.1 |
| 5. | Impact resistance (drop test) | MSZ EN 1329-1:2000 7.1.3 No damage is allowed | With fitting cooled to $0 ^\circ\text{C}$ Drop Height 1000mm impact point is the mouth of the socket | MSZ EN 12061:2000 |
| 6. | Heat effects | MSZ EN 1329-1:2000 8.2 | Temperature $150 ^\circ\text{C}$ Dipping time: 30 minutes | MSZ EN 763:1995 Method B: Air |
| 7. | Water tightness | MSZ EN 1329-1:2000 9. No leakage is allowed | Temperature: $23 \pm 5 ^\circ\text{C}$ Overpressure: 0.5 bar Duration: 15 minutes | MSZ EN 1053: 1998 |
| 8. | Designation | In table 1. | | Visual inspection |

Manufacturer is obliged to record the results of the lot acceptance tests and to keep these documents 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

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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.

4.1.2 Designing

The hard PVC sewage pipes and fittings can be designed only for gravitational sewage disposal 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.

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4.1.3 Installation

In order to prevent the damaging effects of internal material stress caused by thermal expansion and angular deviation, the end of the pipe should not be fully inserted into the fitting, but it has to be pulled back to 5-10 mm depending on the diameter of the pipe. The geometry of the rubber sealing has to be checked before insertion and it has to be lubricated with a lubricant (such as lubricating soap).

A water tightness pressure test has to be carried out before the covering of the installed pipe system.

4.1.4 Usage

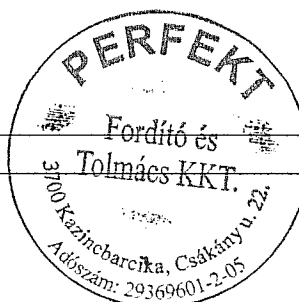
The hard PVC sewage pipes and fittings can be designed only for gravitational sewage disposal of household sewage up to 60°C permanently, ground-water and wastewater, which are not damaging the materials of the hard PVC sewage pipes, connectors and/or their vulcanized rubber sealing.

4.2 Recommendations for product transportation and storage

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.

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 September 2007 and secondly till 30th September 2009.

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.

6. APPENDIXES

Appendix 1: Product catalogue of “KA” type PVC pipe fittings

Date: Budapest, 31st January 2006

Signature of Attila Szántay

Scientific co-worker
professional expert

Signature of Rita Lochmayer
instead of

dr. Béla Kovács
Head of the Supporting
Structure and Civil Engineering
Department and the creator of the
present ÉME Technical Approval

