



**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

**A-36/2007**

**ÉME  
TECHNICAL APPROVAL**

**Description of the product:** Polypropylene discharge pipe system fittings

**Designed application area of the product:** Use in polypropylene discharge pipe systems DN 32-110 mm for transport of wastewater by gravity

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

**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:** 20<sup>th</sup> February 2012

**Budapest, 20<sup>th</sup> February 2007**

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. KBiA-II-4-2006.05.11

In witness of translation:

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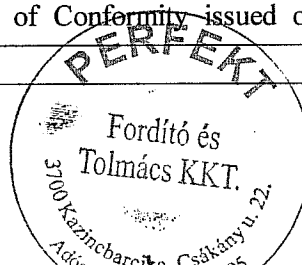
## I. LEGAL REGULATIONS AND GENERAL CONDITIONS

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 Fitness for Purpose Test Record marked identically with the ÉME Technical Approval and which was 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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In witness of translation:

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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:** pipes and fittings with DN 32-110 mm diameter for the usage in application area “B” within buildings according to the MSZ EN 1451-1:2000 “Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Polypropylene (PP) - Part 1: Specifications for pipes, fittings and the system” standard. Pipe fittings manufactured according to the standard: repair coupler, elbow, bend, branch, T-Piece, cleaning piece, stop, ventilation piece, reducer.

Requirements for raw materials of sealing resin rings used for assembling are contained in MSZ EN 681-1:2000 Standard “Flexible sealing. Material requirements of pipe connection sealing used in water supply and drainage. Part 1.: Resin”. Geometry of the sealing rings must comply with complex tightness requirements of Article 9 of Standard MSZ EN 1451. for application area “B”.

**Raw material of the product:** Tipplen K 691 type homopolymer manufactured by TVK.

**Designed application area of product:** use in polypropylene sewage pipe systems DN 32-110 mm inside building construction for application area “B” for transport of wastewater by gravity

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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 1451-1 5.		Visual inspection
2.	Color	MSZ EN 1451-1 5.		Visual inspection
3.	Dimensions	MSZ EN 1451-1 6.	Temperature: $(23 \pm 2) ^\circ\text{C}$	Measured with accuracy of. 0,1mm caliper
4.	Impact resistance	MSZ EN 1451-1 7. Extent of cracking, scaling and blistering cannot be allowed	The drop height at $0 ^\circ\text{C}$ fitting temperature: at $d_n \leq 125\text{mm}$ is 1000mm at $d_n \geq 160\text{mm}$ is 500mm	MSZ EN 12061:2000
5.	Behavior at heat treatment	MSZ EN 1451-1 8. Cracking are allowed for 20% wall thickness	Temperature : $150 \pm 2) ^\circ\text{C}$ Heating time: 30 minutes	MSZ EN ISO 580:2005
6.	Meth flow rate (MFR) fitting raw material	MSZ EN 1451-1 8. During the processing the max deviation is 0.2g/10min	Temperature $230 ^\circ\text{C}$ Duration: 10 minutes Weight: 2.16kg	MSZ EN ISO 1133:2005
7.	Water tightness (between pipe and fitting)	MSZ EN 1451-1 9. No leakage is allowed	Temperature $(23 \pm 5) ^\circ\text{C}$ Overpressure: 0.5 bar Duration: 15 minutes	MSZ EN 1053: 1998
8.	Air tightness (between pipe and fitting)	MSZ EN 1451-1 9. No leakage is allowed	Temperature $(23 \pm 5) ^\circ\text{C}$ Overpressure: 0.1 bar Duration: 1 minute	MSZ EN 1054: 1998
9.	Complex tightness (between pipe and fitting)	MSZ EN 1451-1 9.  <u>No leakage is allowed</u> <u>No leakage is allowed</u>      <u>No leakage is allowed</u> <u>No leakage is allowed</u>	Temperature $(23 \pm 5) ^\circ\text{C}$ Duration: 15 minutes Pipe deformation $\geq 10\%$ Socket deformation $> 5\%$ <u>Water pressure1.: 0.05 bar</u> <u>Water pressure2.: 0.5 bar</u> <u>Air pressure: -0.3 bar</u>  Temperature $(23 \pm 5) ^\circ\text{C}$ Duration: 15 minutes Angular deviation: $2^\circ$ <u>Water pressure1.: 0.05 bar</u> <u>Water pressure2.: 0.5 bar</u>	MSZ EN 1277:2004 4 <sup>th</sup> Method Condition B: diameter distortion  MSZ EN 1277:2004 4 <sup>th</sup> Method Condition C Angular deviation
10	Designation	MSZ EN 1451-1 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 and supplier (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.



## 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 80°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

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 80°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.

## 4.1 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.

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## 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 30<sup>th</sup> September 2008 and secondly till 30<sup>th</sup> September 2010.

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, 20<sup>th</sup> February 2007

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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