



# TEBAR®

Test Belgelendirme Araştırma ve Geliştirme Ticaret A.Ş.

Order Number:	UDİ1300013
Report Number:	CPR-PTD/R14-3
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TEBAR A.Ş.; 24.01.2014 tarih ve 28892 sayılı Resmi Gazetede yayımlanan Yapı Malzemeleri Yönetmeliği (305/2011/AB) Kapsamında TEBAR Test Belgelendirme Araştırma ve Geliştirme Ticaret A.Ş.'nin Onaylanmış Kuruluş Olarak Görevlendirilmesine Dair Tebliğ (Tebliğ No: MHG/2014-05) ile Çevre ve Şehircilik Bakanlığı tarafından yetkilendirilmiştir.

## Product Type Determination Report

## Product Type Determination Report

### Notified Body Number: 2164

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#### Applicant (Name and Address):

#### İZOCAM TİCARET ve SANAYİ A.Ş.

Altayçeşme Mahallesi Öz Sokak No:19 Kat 3-5-6  
P.K. 34843 Maltepe/İSTANBUL

**Content:** Product type determination report according to EN 13164 and EN 13172 of factory made extruded polystyrene foam thermal insulation boards.

**Product Standard:** EN 13164

**Product Description:** Factory made extruded polystyrene foam thermal insulation boards

#### Trademark:

FOAMBOARD 1500, FOAMBOARD 2000,  
FOAMBOARD 2500, FOAMBOARD 3000,  
FOAMBOARD 3500, FOAMBOARD MANTO,  
FOAMBOARD 1500 PÜRÜZLÜ, FOAMBOARD  
2000 PÜRÜZLÜ,  
FOAMBOARD 2500 PÜRÜZLÜ, FOAMBOARD  
3000 PÜRÜZLÜ,  
FOAMBOARD 3500 PÜRÜZLÜ

**Intended Use:** Thermal insulation for Buildings

**Plant:** Çerkeşli Köyü Yolu Üzeri, Kocabayır Tepe  
Mevkii, Kiplasma Caddesi, 41455 Dilovası Kocaeli

**Number of Production Line:** 1

**Approved By**

**Timur DİZ**  
AoC Manager



*The product type determination report assigned to the related product is appropriate to a declaration of conformity by the manufacturer within the context of a system 3 attestation of conformity and CE marking under the Construction Products Directive. The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is aimed to be relevant to the samples tested and that will provide for their traceability.*

*Bu rapor izin alınmadan kısmi olarak ya da içeriği değiştirilerek çoğaltılamaz. Bu raporun sadece orijinal kopyası geçerlidir. TEBAR A.Ş. Orijinali dışındaki kopyalardan sorumlu tutulamaz.*

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## 1.PROCEDURE:

The declared values of thermal conductivity, compressive strength, water absorption and reaction to fire classes of factory made extruded polystyrene foam established by the manufacturer "İzocam Ticaret ve Sanayi A.Ş." and documented to the TEBAR Co. Inc.

Characteristics defined by CPD	Related clauses of harmonized product Standard	Test Method	FOAMBOARD 1500, FOAMBOARD 1500 PÜRÜZLÜ	FOAMBOARD 2000	FOAMBOARD 2000 PÜRÜZLÜ	FOAMBOARD 2500	FOAMBOARD 2500 PÜRÜZLÜ	FOAMBOARD 3000	FOAMBOARD 3000 PÜRÜZLÜ	FOAMBOARD 3500	FOAMBOARD 3500 PÜRÜZLÜ	FOAMBOARD MANTO
Water absorption	4.3.7.1. Long term water absorption by total immersion	EN 12087	WL(T)0,7									
Reaction to fire	4.2.4. Reaction to fire	EN 13501-1	E									
Release of dangerous substances	4.3.10. Release of dangerous substances	-	-									
Thermal Resistance	4.2.1. Thermal conductivity (W/m.K)	EN 12667	0,035						0,036		0,035	
	4.2.3. Thickness	EN 823	25-50 mm (T2)	20-100 mm (T2)	40-90 mm (T2)	20-100 mm (T2)	40-90 mm (T2)	20-100 mm (T2)	40-90 mm (T2)	40-120 mm (T2)	20-150 mm (T2)	30-120 (T3)
Compressive strength	4.2.4. Compressive stress at 10 % deformation	EN 826	CS (10) 150	CS (10) 200	CS (10) 250	CS (10) 300	CS (10) 350	CS (10) 200				

Bu rapor izin alınmadan kısmi olarak ya da içeriği değiştirilerek çoğaltılamaz. Bu raporun sadece orijinal kopyası geçerlidir. TEBAR A.Ş. Orijinali dışındaki kopyalardan sorumlu tutulamaz.

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The required test samples which are to be used for attestation of conformity purposes were taken by the "İzocam Ticaret ve Sanayi A.Ş." according to TEBAR Co. Inc's instructions and EN 13172 sent by the manufacturer "İzocam Ticaret ve Sanayi A.Ş." product type determination tests performed by the TEBAR Co. Inc. (Notified Body Number 2164); according to Annex ZA2 of EN 13162 regarding the following properties as requested by the manufacturer:

- Thermal Conductivity and Thermal Resistance EN 12667 and EN 823,
- Compressive strength EN 826,
- Long term water absorption by total immersion EN 12087,
- Reaction to fire EN ISO 11925-2

This product type determination (PTD) report does not cover any assessment on following characteristics: long term water absorption by diffusion, dimensional stability under specified conditions.

## 2.TEST RESULTS:

The product type determination test results performed by TEBAR Co. Inc. and declared values for related property defined by manufacturer "İzocam Ticaret ve Sanayi A.Ş." are given below in tables.

### 2.1.THERMAL CONDUCTIVITY:

The products collected into product groups according to clause 4 of EN 13172, regarding to the manufacturer's declaration on single thickness. Thermal conductivity of the product determined according to EN 12667 regarding to clause 4.2.1 of EN 13164.

The thickness of the product is measured according to EN 823 regarding to clause 4.2.3 of EN 13164 and the tolerance class determined as "T2" ( $\pm 1,5\text{mm}$ ), "T3" ( $\pm 1,0\text{mm}$ ).

**Group 1:** Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness		Declared Value $\lambda_D$ (W/m.K)	Measured Value		Evaluation	Report No:
		(mm)	Class		$\lambda_l$ (W/m.K)	$\lambda_a$ (W/m.K)		
FOAMBOARD 1500 PÜRÜZLÜ	30.03.2013	25	T2(0)	0,035	0,0340	0,0340	Complied	CPR-T/R14-150 CPR-T/R14-151 CPR-T/R14-187
	25.03.2013	50	T2(0)		0,0339	0,0343	Complied	CPR-T/R14-144 CPR-T/R14-145 CPR-T/R14-184
FOAMBOARD 1500	27.03.2013	25	T2(0)		0,0328	0,0339	Complied	CPR-T/R14-146 CPR-T/R14-147 CPR-T/R14-185
	28.03.2013	50	T2(0)		0,0337	0,0340	Complied	CPR-T/R14-148 CPR-T/R14-149 CPR-T/R14-186



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## Group 2: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm. yyyy)	Nominal Thickness		Declared Value	Measured Value		Evaluation	Report No:
		(mm)	Class	$\lambda_D$ (W/m.K)	$\lambda_I$ (W/m.K)	$\lambda_a$ (W/m.K)		
FOAMBOARD 2000 PÜRÜZLÜ	25.03.2013	90	T2(0)	0,035	0,0287	0,0343	Complied	CPR-T/R14-152 CPR-T/R14-153 CPR-T/R14-188
FOAMBOARD 2000	27.03.2013	20	T2(0)		0,0336	0,0342	Complied	CPR-T/R14-154 CPR-T/R14-155 CPR-T/R14-189
FOAMBOARD MANTO	28.03.2013	30	T3(0)		0,0341	0,0349	Complied	CPR-T/R14-156 CPR-T/R14-157 CPR-T/R14-190
	30.03.2013	120	T3(0)		0,0305	0,0355	Complied	CPR-T/R14-158 CPR-T/R14-159 CPR-T/R14-191

## Group 2: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness		Evaluation	Report No:
		(mm)	Class		
FOAMBOARD 2000 PÜRÜZLÜ	25.03.2013	90	T2(0)	Complied	CPR-T/R14-188
FOAMBOARD 2000	27.03.2013	20	T2(0)	Complied	CPR-T/R14-189
FOAMBOARD 2000 PÜRÜZLÜ	28.03.2013	40	T2(0)	Complied	CPR-T/R14-295
FOAMBOARD 2000	30.03.2013	100	T2(0)	Complied	CPR-T/R14-296

## Group 2: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness		Evaluation	Report No:
		(mm)	Class		
FOAMBOARD MANTO	28.03.2013	30	T3(0)	Complied	CPR-T/R14-190
	30.03.2013	120	T3(0)	Complied	CPR-T/R14-191
	25.03.2013	30	T3(0)	Complied	CPR-T/R14-293
	27.03.2013	120	T3(0)	Complied	CPR-T/R14-294

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*Bu rapor izin alınmadan kısmi olarak ya da içeriği değiştirilerek çoğaltılamaz. Bu raporun sadece orijinal kopyası geçerlidir.  
TEBAR A.Ş. Orijinali dışındaki kopyalardan sorumlu tutulamaz.*

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### Group 3: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm. yyyy)	Nominal Thickness		Declared Value	Measured Value		Evaluation	Report No:
		(mm)	Class	$\lambda_D$ (W/m.K)	$\lambda_l$ (W/m.K)	$\lambda_a$ (W/m.K)		
FOAMBOARD 2500	30.03.2013	20	T2(0)	0,035	0,0336	0,0342	Complied	CPR-T/R14-166 CPR-T/R14-167 CPR-T/R14-195
	28.03.2013	100	T2(0)		0,0277	0,0337	Complied	CPR-T/R14-164 CPR-T/R14-165 CPR-T/R14-194
FOAMBOARD 2500 PÜRÜZLÜ	25.03.2013	40	T2 (+1)		0,0285	0,0341	Complied	CPR-T/R14-160 CPR-T/R14-161 CPR-T/R14-192
	27.03.2013	90	T2(0)		0,0341	0,0348	Complied	CPR-T/R14-162 CPR-T/R14-163 CPR-T/R14-193

### Group 4: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm. yyyy)	Nominal Thickness		Declared Value	Measured Value		Evaluation	Report No:
		(mm)	Class	$\lambda_D$ (W/m.K)	$\lambda_l$ (W/m.K)	$\lambda_a$ (W/m.K)		
FOAMBOARD 3000	25.03.2013	20	T2(0)	0,035	0,0336	0,0342	Complied	CPR-T/R14-168 CPR-T/R14-169 CPR-T/R14-196
	30.03.2013	90	T2(0)		0,0283	0,0340	Complied	CPR-T/R14-174 CPR-T/R14-175 CPR-T/R14-199
FOAMBOARD 3000 PÜRÜZLÜ	27.03.2013	90	T3(0)		0,0285	0,0340	Complied	CPR-T/R14-170 CPR-T/R14-171 CPR-T/R14-197
	28.03.2013	40	T3(0)		0,0337	0,0340	Complied	CPR-T/R14-172 CPR-T/R14-173 CPR-T/R14-198

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## Group 5: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness		Declared Value $\lambda_D$ (W/m.K)	Measured Value		Evaluation	Report No:
		(mm)	Class		$\lambda_l$ (W/m.K)	$\lambda_a$ (W/m.K)		
FOAMBOARD 3500	25.03.2013	100	T2(0)	0,036	0,0299	0,0352	Complied	CPR-T/R14-176 CPR-T/R14-177 CPR-T/R14-200
	28.03.2013	150	T2 (-1)		0,0308	0,0360	Complied	CPR-T/R14-180 CPR-T/R14-181 CPR-T/R14-202
FOAMBOARD 3500 PÜRÜZLÜ	30.03.2013	120	T3(0)		0,0306	0,0355	Complied	CPR-T/R14-182 CPR-T/R14-183 CPR-T/R14-203
	27.03.2013	120	T3(0)		0,0308	0,0358	Complied	CPR-T/R14-178 CPR-T/R14-179 CPR-T/R14-201

## 2.2.COMPRESSIVESTRENGTH

The products collected into product groups according to clause 4 of EN 13172, regarding to the manufacturer's declaration on single thickness. Compressive strength of the product determined according to EN 826 regarding to clause 4.3.4 of EN 13164.

## Group 1: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Declared Value (kPa)	Measured Value (kPa)	Evaluation	Report No:
FOAMBOARD 1500	25.03.2013	25	150	270	Complied	CPR-T/R14-204
	27.03.2013	50		359	Complied	CPR-T/R14-205
FOAMBOARD 1500 PÜRÜZLÜ	28.03.2013	25		215	Complied	CPR-T/R14-206
	30.03.2013	50		389	Complied	CPR-T/R14-207



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## Group 2: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Declared Value (kPa)	Measured Value (kPa)	Evaluation	Report No:
FOAMBOARD 2000 PÜRÜZLÜ	25.03.2013	40	200	323	Complied	CPR-T/R14-208
FOAMBOARD 2000	27.03.2013	20		339	Complied	CPR-T/R14-209
FOAMBOARD MANTO	28.03.2013	30		295	Complied	CPR-T/R14-210
	30.03.2013	120		514	Complied	CPR-T/R14-211

## Group 3: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Declared Value (kPa)	Measured Value (kPa)	Evaluation	Report No:
FOAMBOARD 2500	25.03.2013	20	250	344	Complied	CPR-T/R14-212
	27.03.2013	100		407	Complied	CPR-T/R14-213
FOAMBOARD 2500 PÜRÜZLÜ	28.03.2013	40		359	Complied	CPR-T/R14-214
	30.03.2013	90		448	Complied	CPR-T/R14-215

## Group 4: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Declared Value (kPa)	Measured Value (kPa)	Evaluation	Report No:
FOAMBOARD 3000	25.03.2013	20	350	356	Complied	CPR-T/R14-216
FOAMBOARD 3000 PÜRÜZLÜ	27.03.2013	40		385	Complied	CPR-T/R14-217
FOAMBOARD 3500	28.03.2013	20		355	Complied	CPR-T/R14-218
FOAMBOARD 3500 PÜRÜZLÜ	30.03.2013	120		502	Complied	CPR-T/R14-219

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## 2.3. WATER ABSORPTION

The products collected into product groups according to clause 4 of EN 13172, regarding to the manufacturer's declaration on single thickness. Water absorption of the product determined according to EN 12087 regarding to clause 4.3.7.1 of EN 13164.

### Group 1: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Declared Value (%)	Measured Value (%)	Evaluation	Report No:
FOAMBOARD 1500 PÜRÜZLÜ	25.03.2013	50	≤0,7 (WL(T)0,7)	0,6	Complied	CPR-T/R14-220
	27.03.2013	50		0,6	Complied	CPR-T/R14-221
FOAMBOARD 1500	28.03.2013	50		0,2	Complied	CPR-T/R14-222
	30.03.2013	50		0,1	Complied	CPR-T/R14-223

### Group 2: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Declared Value (%)	Measured Value (%)	Evaluation	Report No:
FOAMBOARD 2000 PÜRÜZLÜ	27.03.2013	90	≤0,7 (WL(T)0,7)	0,6	Complied	CPR-T/R14-225
FOAMBOARD 2000	25.03.2013	100		0,2	Complied	CPR-T/R14-224
FOAMBOARD MANTO	28.03.2013	100		0,7	Complied	CPR-T/R14-226
	30.03.2013	120		0,6	Complied	CPR-T/R14-227

### Group 3: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Declared Value (%)	Measured Value (%)	Evaluation	Report No:
FOAMBOARD 2500	28.03.2013	100	≤0,7 (WL(T)0,7)	0,2	Complied	CPR-T/R14-230
	30.03.2013	100		0,2	Complied	CPR-T/R14-231
FOAMBOARD 2500 PÜRÜZLÜ	25.03.2013	90		0,6	Complied	CPR-T/R14-228
	27.03.2013	90		0,6	Complied	CPR-T/R14-229

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#### Group 4: Factory made extruded polystyrene foam thermal insulation boards

Ürün	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Declared Value (%)	Measured Value (%)	Evaluation	Report No:
FOAMBOARD 3000	28.03.2013	100	≤0,7 (WL(T)0,7)	0,2	Complied	CPR-T/R14-234
FOAMBOARD 3000 PÜRÜZLÜ	30.03.2013	90		0,6	Complied	CPR-T/R14-235
FOAMBOARD 3500	25.03.2013	150		0,6	Complied	CPR-T/R14-232
FOAMBOARD 3500 PÜRÜZLÜ	27.03.2013	120		0,2	Complied	CPR-T/R14-233

#### 2.4. REACTION TO FIRE

Factory made extruded polystyrene foam which are produced by “İzocam Ticaret ve Sanayi A.Ş.” in Kocaeli, have been objected to risk analysis to evaluate the effect of product thickness parameter on the reaction to fire classifications. The product thickness and apparent density which reflects the worse case scenario determined from the risk analysis. The riskiest product with 3 different production dates subjected to reaction to fire tests.

The products collected into product groups regarding to clause 4.2.4 of EN 13164 according to EN 13501-1. Regarding to the manufacturer's declaration on reaction to fire classification as “E”, the product tested according to EN ISO 11925-2.

#### Group 1: Factory made extruded polystyrene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Reaction to fire		Evaluation	Report No:
			Declared Value	Measured		
FOAMBOARD 1500	25.03.2013	25	E	E	Complied	CPR-T/R14-295
	27.03.2013	25				
	30.03.2013	25				

#### 3.EVALUATION:

*Bu rapor izin alınmadan kısmi olarak ya da içeriği değiştirilerek çoğaltılamaz. Bu raporun sadece orijinal kopyası geçerlidir. TEBAR A.Ş. Orijinali dışındaki kopyalardan sorumlu tutulamaz.*

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The tested extruded polystyrene foam thermal insulation board samples comply with the declared thermal conductivity, thickness classes, compressive stress, water absorption and reaction to fire of the manufacturer "İzocam Ticaret ve Sanayi A.Ş."

Product type determination tests are valid until the conditions not changed. Any modifications on manufacturing process and raw materials or any changes on component suppliers which may have affect on one or more properties of the product, initial type testing should be repeated for relevant characteristics.

The manufacturer can use this product type determination report for issuing Performance Declaration according to EN 13164 (Annex ZA Clause ZA2.2.2.) only if factory production control is correctly carried out.

**The manufacturer "İzocam Ticaret ve Sanayi A.Ş." entitled to use CE Conformity Mark regarding to EC Declaration of Conformity with the declared values of thermal conductivity, thickness classes, compressive stress, water absorption and reaction to fire as long as factory production control is correctly carried out according to EN 13164; for factory made extruded polystyrene foam (XPS) products which are produced with a trademark of ""FOAMBOARD 1500, FOAMBOARD 2000, FOAMBOARD 2500, FOAMBOARD 3000,FOAMBOARD 3500, FOAMBOARD MANTO, FOAMBOARD 1500 PÜRÜZLÜ, FOAMBOARD 2000 PÜRÜZLÜ, FOAMBOARD 2500 PÜRÜZLÜ, FOAMBOARD 3000 PÜRÜZLÜ, FOAMBOARD 3500 PÜRÜZLÜ"" in the plant in "Çerkeşli Köyü Yolu Üzeri, Kocabayır Tepe Mevkii, Kiplasma Caddesi, 41455 Dilovası Kocaeli"**

Date: 27/01/2014, İstanbul



Approved by  
Timur DİZ  
AoC Manager