



# TEBAR®

Test Belgelendirme Araştırma ve Geliştirme Ticaret A.Ş.

Order Number:	UDİ1200018
Report Number:	CPD-ITT/R13-27
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TEBAR A.Ş.; 17.04.2013 tarih ve 28621 sayılı Resmî Gazetede yayımlanan Yapı Malzemeleri Yönetmeliği (89/106/EEC) Kapsamında TEBAR Test Belgelendirme Araştırma ve Geliştirme Ticaret A.Ş.'nin Onaylanmış Kuruluş Olarak Görevlendirilmesine Dair Tebliğ (Tebliğ No: MHG/2013-4) ile Çevre ve Şehircilik Bakanlığı tarafından yetkilendirilmiştir.

## Initial Type Testing Report

**Notified Body Number: 2164**

Şerif Ali Çiftliği Hendem Cd. Kible Sk. No:58  
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*İlgili ürün için hazırlanmış olan bu başlangıç tip deney raporu; uygunluk teyit sistemi 3 kapsamında üretici tarafından uygunluk beyanının ve Yapı Malzemeleri Yönetmeliği kapsamında CE işaretlemesinin yapılması amacıyla kullanılabilir. Deney laboratuvarı, deneye tabi tutulan numuneler ile ilgili üreticinin fabrika üretim kontrolüne uygun referans numuneleri saklamakla birlikte deneye tabi tutulacak ürünlerden numune alımında herhangi bir rol oynamamakta ve sadece kendisi tarafından saklanan referans numunelerin izlenebilirliğini sağlamaktadır. The initial type testing 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.*  
FR.075/04/03.07.2012

### Applicant (Name and Address):

**İZOCAM TİCARET ve SANAYİ A.Ş.**

Dilovası Organize Sanayi Bölgesi 1.Kısım Dicle Caddesi No:8 Dilovası-Kocaeli

**Content:** Initial type testing report according to EN 14313 and EN 13172 of factory made polyethylene foam (PEF) thermal insulation boards.

**Product Standard:** EN 14313

**Product Description:** Factory made polyethylene foam (PEF) thermal insulation boards.

### Trademark:

**İZOCAM PEFLEX**

**Intended Use:** Thermal insulation for building equipment and industrial

**Plant:** Eskişehir Organize Sanayi Bölgesi 15. Cadde Şehitler Bulvarı 26110 Eskişehir

**Number of Production Line:** 1

### Approved By

**Timur DİZ**

AoC Manager





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## 1.PROCEDURE:

The declared values of thermal conductivity, dimensions, rate of release of corrosive substances, reaction to fire of factory made polyethylene 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	İZOCAM PEFLEX				
Water absorption	4.3.4. Short-term water absorption	EN 1609	NPD				
Reaction to fire	4.2.4.Reaction to fire	EN 13501-1	E				
Release of dangerous substances	4.3.9. Release of dangerous substances	-	-				
Thermal Resistance	4.2.1. Thermal conductivity (W/m.K)	EN ISO 8497	-20°C	0°C	25°C	40°C	60°C
			0,044	0,053	0,055	0,057	0,061
		EN 12667	-20°C	0,040	-20°C	0,044	
			0°C	0,044	0°C	0,053	
			20°C	0,050	20°C	0,057	
			40°C	0,057	40°C	0,065	
	60°C	0,067	60°C	0,080			
	4.2.2.1. Thickness	EN 823	6	10			
		EN 13467	10-30				
	4.2.2.1.Length (mm)	EN 13467/ EN 822	2000/10000				
4.2.2.1.İnside Diameter (mm)	EN 13467/-	22-117					
4.2.2.2. Squares (mm)	EN 13467/ EN 824	5,0 mm/ $\epsilon_l, \epsilon_b: 10\text{mm.m}^{-1}; \epsilon_d: 2\text{ mm}$					
Compressive strength	4.3.3. Compressive strength	EN 826	NPD				
Rate of release of corrosive substances	4.3.6. Trace quantities of water-soluble chloride (mg/kg) and the pH-value	EN 13468	Chloride: 36 pH: 8,5				

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." Initial type tests performed by the TEBAR Co. Inc. (Notified Body)

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Number 2164); according to Annex ZA2 of EN 14313 regarding the following properties as requested by the manufacturer:

- Thermal Conductivity and Thermal Resistance EN 12667/EN ISO 8497 ve EN 823, EN 822, EN 824/EN 13467
- Rate of release of corrosive substances EN 13468
- Reaction to fire EN ISO 11925-2

This ITT report does not cover any assessment on following characteristics: water absorption and compressive strength.

## 2.TEST RESULTS:

The initial type 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/ EN ISO 8497 regarding to clause 4.2.1 of EN 14313.Length, width and thickness of the product determined according to EN 822/EN 13467 regarding to clause 4.2.2.1 of EN 14313. Squareness of the product determined according to EN 824/EN 13467 regarding to clause 4.2.2.2 of EN 14313.

#### Group 1: Factory made polyethylene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Temperature (°C)	Declared Value (W/m.K)	Measured Value (W/m.K)	Evaluation	Report No
IZOCAM PEFLEX	03.05.2012	6	-20	0,040	0,0398	Complied	CPD-T/R13-220
	03.05.2012	6	0	0,044	0,0435	Complied	CPD-T/R13-217
	03.05.2012	6	20	0,050	0,0495	Complied	CPD-T/R13-218
	09.05.2012	6	40	0,057	0,0569	Complied	CPD-T/R13-221
	03.05.2012	6	60	0,064	0,0636	Complied	CPD-T/R13-219
	27.05.2012	10	-20	0,044	0,0436	Complied	CPD-T/R13-226
	21.05.2012	10	0	0,053	0,0529	Complied	CPD-T/R13-222
	27.05.2012	10	20	0,057	0,0562	Complied	CPD-T/R13-224
	27.05.2012	10	40	0,065	0,0643	Complied	CPD-T/R13-225
	21.05.2012	10	60	0,080	0,0792	Complied	CPD-T/R13-223

*[Handwritten signature]*

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## Grup 2: Factory made polyethylene foam thermal insulation boards (TUBE)

Product	Production Date (dd.mm.yyyy)	Inside Diameter (mm)	Nominal Thickness (mm)	Temperature (°C)	Declared Value (W/m.K)	Measured Value (W/m.K)	Evaluation	Report No
IZOCAM PEFLEX	27.05.2012	-	10	-20	0,044	0,0436	Complied	CPD-T/ R13-226
	21.05.2012	-	10	0	0,053	0,0529	Complied	CPD-T/ R13-222
	04.06.2012	42	30	25	0,055	0,0548	Complied	CPD-T/ R13-241
	02.05.2012	42	30	40	0,057	0,0570	Complied	CPD-T/ R13-242
	06.05.2012	42	30	60	0,061	0,0606	Complied	CPD-T/ R13-243

## Grup 1: Factory made polyethylene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Tolerance (mm)	Thickness (mm)	Evaluation	Report No
IZOCAM PEFLEX	03.05.2012	6	$d_D \leq 6 \pm 1;$ $6 < d_D \leq 10 \pm 1,5$	6,0	Complied	CPD-T/R13-201
	09.05.2012	6		7,0	Complied	CPD-T/R13-202
	21.05.2012	10		11,0	Complied	CPD-T/R13-203
	27.05.2012	10		10,0	Complied	CPD-T/R13-204

## Grup 2: Factory made polyethylene foam thermal insulation boards (TUBE)

Product	Production Date (dd.mm.yyyy)	Inside Diameter (mm)	Nominal Thickness (mm)	Tolerance (mm)	Thickness (mm)	Evaluation	Report No
IZOCAM PEFLEX	02.05.2012	22	10	$5 < d_D \leq 10 \pm 1,5;$ $10 < d_D \leq 15 \pm 2,0;$ $15 < d_D \leq 30 \pm 2,5$	10,0	Complied	CPD-T/R13-237
	14.05.2012	22	30		28,0	Complied	CPD-T/R13-238
	10.06.2012	114	15		17,0	Complied	CPD-T/R13-239
	04.06.2012	114	10		9,0	Complied	CPD-T/R13-240

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## Group 1: Factory made polyethylene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Tolerance	Length Declared Value (mm)	Length (mm)	Evaluation	Report No
IZOCAM PEFLEX	03.05.2012	6	±%1,5	10000	10035	Complied	CPD-T/R13-197
	09.05.2012	6			9992	Complied	CPD-T/R13-198
	21.05.2012	10			9984	Complied	CPD-T/R13-199
	27.05.2012	10			10035	Complied	CPD-T/R13-200

## Group 2: Factory made polyethylene foam thermal insulation boards (TUBE)

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Inside Diameter (mm)	Tolerance	Length Declared Value (mm)	Length (mm)	Evaluation	Report No
IZOCAM PEFLEX	02.05.2012	10	22	- %1,5;+%2,5	2000	1993	Complied	CPD-T/R13-237
	14.05.2012	30	22			1978	Complied	CPD-T/R13-238
	10.06.2012	15	114			2000	Complied	CPD-T/R13-239
	04.06.2012	10	114			1973	Complied	CPD-T/R13-240

## Group 1: Factory made polyethylene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Tolerance	Width Declared Value (mm)	Width (mm)	Evaluation	Report No
IZOCAM PEFLEX	03.05.2012	6	±%1,0	1000	1009	Complied	CPD-T/R13-197
	09.05.2012	6		1000	1010	Complied	CPD-T/R13-198
	21.05.2012	10		1000	1010	Complied	CPD-T/R13-199
	27.05.2012	10		1000	1008	Complied	CPD-T/R13-200

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## Group 1: Factory made polyethylene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Tolerance	Width- Length Squareness (mm/m)	Thickness Squareness (mm)	Evaluation	Report No
IZOCAM PEFLEX	03.05.2012	6	$\epsilon_i$ , $\epsilon_b$ :10mm/m $\epsilon_d$ :2mm	8	0	Complied	CPD-T/R13-205
	09.05.2012	6		6	0	Complied	CPD-T/R13-206
	21.05.2012	10		9	0	Complied	CPD-T/R13-207
	27.05.2012	10		8	0	Complied	CPD-T/R13-208

## Group 2: Factory made polyethylene foam thermal insulation boards (TUBE)

Product	Production Date (dd.mm.yyy y)	Nominal Thickness (mm)	Inside Diameter (mm)	Tolerance	Squareness (mm)	Evaluation	Report No
IZOCAM PEFLEX	02.05.2012	10	22	$D_{ID} \leq 60\text{mm}$ 5,0mm; $60 < D_{ID} \leq 120\text{mm}$ 10mm	0	Complied	CPD-T/R13-237
	14.05.2012	30	22		0	Complied	CPD-T/R13-238
	10.06.2012	15	114		0	Complied	CPD-T/R13-239
	04.06.2012	10	114		0	Complied	CPD-T/R13-240

## Group 2: Factory made polyethylene foam thermal insulation boards (TUBE)

Product	Production Date (dd.mm.yyyy)	Nominal Thickness (mm)	Inside Diameter (mm)	Tolerance	Inside Diameter (mm)	Evaluation	Report No
IZOCAM PEFLEX	02.05.2012	10	22	$D_{ID} \leq 35\text{mm}$ +1...+4; $D_{ID} > 100\text{mm}$ +3...+8	22,0	Complied	CPD-T/R13-237
	14.05.2012	30	22		25,0	Complied	CPD-T/R13-238
	10.06.2012	15	114		117,0	Complied	CPD-T/R13-239
	04.06.2012	10	114		117,0	Complied	CPD-T/R13-240

## 2.2. RATE OF RELEASE OF CORROSIVE SUBSTANCES

The products collected into product groups according to clause 4 of EN 13172, regarding to the manufacturer's declaration on single thickness. Rate of release of corrosive substances of the product determined according to EN 13468 regarding to clause 4.3.6 of EN 14313.

## Group 1: Factory made polyethylene foam thermal insulation boards

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Product	Production Date (dd.mm.yyyy)	Inside Diameter (mm)	Thickness (mm)	Chloride Declared Value (mg/kg)	Chloride (mg/kg)	Evaluation	Report No
IZOCAM PEFLEX	21.05.2012	-	10	36,0	31,6	Complied	CPD-T/R13-255
	27.05.2012	-	10		34,6	Complied	CPD-T/R13-314
	02.05.2012	22	10		28,5	Complied	CPD-T/R13-316
	04.06.2012	42	30		35,9	Complied	CPD-T/R13-322

### Group 1: Factory made polyethylene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Inside Diameter (mm)	Thickness (mm)	pH Declared Value	pH	Evaluation	Report No
IZOCAM PEFLEX	21.05.2012	-	10	8,5	7,9	Complied	CPD-T/R13-256
	27.05.2012	-	10		7,9	Complied	CPD-T/R13-315
	02.05.2012	22	10		7,9	Complied	CPD-T/R13-317
	04.06.2012	42	30		8,0	Complied	CPD-T/R13-323

### 2.3. REACTION TO FIRE

Factory made extruded polyethylene foam which are produced by "İzocam Ticaret ve Sanayi A.Ş." in Eskişehir, 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 worst 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 14313 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 polyethylene foam thermal insulation boards

Product	Production Date (dd.mm.yyyy)	Thickness (mm)	Reaction to fire		Evaluation	Report No
			Declared Value	Measured		
IZOCAM PEFLEX	02.06.2012	10	E	E	Complied	CPD-T/R13-213
	04.06.2012	10				CPD-T/R13-214
	21.05.2012	10				CPD-T/R13-215
	27.05.2012	10				CPD-T/R13-216

### Group 2: Factory made polyethylene foam thermal insulation boards (TUBE)

Product	Production	Inside	Thickness	Reaction to fire	Evaluation	Report No
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	Date (dd.mm. yyyy)	Diameter (mm)	(mm)	Declared Value	Measured		
IZOCAM PEFLEX	02.05.2012	22	10	E	E	Complied	CPD-T/R13-247
	14.05.2012	22	30				CPD-T/R13-248
	06.05.2012	22	10				CPD-T/R13-249
	04.06.2012	22	30				CPD-T/R13-250

### 3.EVALUATION:

The tested polyethylene foam thermal insulation board samples comply with the declared thermal conductivity, dimensions, rate of release of corrosive substances, reaction to fire of the manufacturer "İzocam Ticaret ve Sanayi A.Ş."

Initial type 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 initial type test report for issuing Declaration of Conformity according to EN 14313 (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, dimensions, rate of release of corrosive substances, reaction to fire as long as factory production control is correctly carried out according to EN 14313:Thermal insulation products for building equipment and industrial installations - Factory made polyethylene foam (PEF) products - Specification; for factory made polyethylene foam products which are produced with a trademark of "IZOCAM PEFLEX" with apparent density of 50 kg/m<sup>3</sup> in the plant in "Eskişehir Organize Sanayi Bölgesi 15.Cadde Şehitler Bulvarı 26110 Eskişehir -TURKEY"**

Date: 28/06/2013, İstanbul



Approved by

Timur DİZ

AoC Manager