OŚRODEK BADAWCZO–ROZWOJOWY PRZEMYSŁU RAFINERYJNEGO
SPÓŁKA AKCYJNA
09-411 Płock, ul. Chemików 5, POLSKA
www.obr.pl

CE
1488
07

DECLARATION OF CONFORMITY No. 675a

1. Building product manufacturer and production plant:

Ośrodek Badawczo-Rozwojowy Przemysłu Rafineryjnego Spółka Akcyjna
09-411 Płock ul. Chemików 5
09-407 Płock ul. Otolińska 25

2. Name and description of the building product, including the type:

Geomembrane GEOCHRON made from PEHD , smooth or one side or both sides textured. Thickness 1,0 ; 1,5 ; 2,0 ; 2,5 mm and width of 5000mm.

3. Statistic qualification
Polish Classification of manufactured goods no 25.21.30-17.00

4. Applicaton and its range
This products is desired to be used in communication engineering :

- Insulation layers forming which prevent from the rain flow form the roads
- Retention and vaporizing tanks seals
- Drains building with conditions that the enough amount of soil covering the geomembrane will be provided and the protection from moving the geomembrane up in result of the superseding forces working with the water bellow the geomembrane.
- Waterproof insulations for the constructions parts touching the ground like stand-by walls , communication tunnels , abutments.

Geomembranes have to be applied according to the technical documentation of given object, including building norms and technical properties of the goods manufactured.

5. **Technical specification**
Technical Approval IBDiM AT/2008-04-0675 with date 03.09.2004 together with the change AT nr 1/2007 dated 30.11.2007

6. Declared technical characteristics of building article type:
According to the technical specification / in appendix/

7. Notified unit participating in the conformity evaluation of the building product.
Instytut Techniki Budowlanej. Notified unit No. 1488.

Certificate of the Factory Production Control No. ITB – 0008/Z dated 08.10.2007.

With the full responsibility I declare that the building products in fully coherent with the technical specification in point 5.

Item	Properties	Demands				Test methods
		1.0 mm	**1.5 mm**	**2.0 mm**	**2.5 mm**	
1	*2*	*3*	*4*	*5*	*6*	*7*
1	Semblance	Black colour film with equal and straight edges , smooth or single / double tectured surface without bubbles and mechanical damages.				ZUAT – 15/IV.01/2003
2	Thickness [2], mm	1,0± 10%	1,5± 10%	2,0± 10%	2,5± 10%	PN-ISO 4593:1999
3	Strip width, mm	5000 + 4%				PN-ISO PN-90/B-04615
4	Surface weight, g/m2	950 ± 10%	1420± 10%	1895± 10%	2370± 10%	PN-EN 1849-2:2004
5	Density, g/cm^3	≥ 0,94				PN-92/C-89035
6	Tensile stress at plasticity range, MPa: — along, — across	 ≥15 ≥15				PN-81/C-89034 PN-EN ISO 527-2:1998 sample type 1BA v = 100 ± 10 mm/min
7	Relative elongation at plasticity range, %: — along — across	 ≥10 ≥10				
8	Maximal tightness at extension, MPa: — along, — across	 ≥25 ≥25				
9	Relative elongation at break, %: — along, — across	 ≥600 ≥600				
10	Water permeability (72 h; 0,4 MPa)	watertight				ZUAT – 15/IV.01/2003
11	Flexibilty while bowing on 5 mm dia cylinder it temp. -20°C.	No splits or cracks.				
12	Linear dimensions stabilization for smallsized samples (80°C, 6h), % - along - across	 ≤0,5 ≤0,5				

13	Waterabsorbent, %	≤0,5				
14	Atmospherical obsolescence – accelerated by xenon method (110 MJ/m^2)					
	- semblance	No splits , cracks, bubbles ; can appear slight colour change.				
	- Maximal tensile elongation stress change (along), %	≤15				ZUAT –15/IV.01/2003
	- Relative elongation at break change (along),%	≤15				
15	. Test baths pH 9,0 and pH 4,5 influence					
	- semblance	-	No splits , cracks, bubbles ; can appear slight colour change.			
	- absorptivity, %	-	≤5,0			
	- linear parameters value change : - along - across	 - -	 ≤2,0 ≤2,0			
	- Maximal tensile elongation stress change (along), %	-	≤15			
	- Relative elongation at break change (along),%	-	≤15			
16	Etyline and diesel oil effect					
	- semblance	-	No splits , cracks, bubbles ; can appear slight colour change.			PN-EN ISO 175:2002[2)]
	- weight change, %	-	≤10,0			
	- linear parameters value change : - along - across	 - -	 ≤5,0 ≤5,0			
	- Maximal tensile elongation stress change (along), %	-	≤15			
	- Relative elongation at break change (along),%	-	≤15			
17	Maximal strength while puncture, N	≥3000	≥4800	≥5000	≥7000	PN-EN ISO 12236:1998
18	Chemical resistance					
	1) for pernament aggresive environment influence defined by: a/ weight change after 8 weeks of aggresive environment influence % - 5% hydrochloric acid solution - 1% sodium hydroxide solution - 0,1% sodium chlorate solution - 2% detergent solution - 0,5% phenol solution - manure b/ Semblance change after 8 weeks of aggresive environment influence.	- - -	Weight gain ≤3 Weight loss ≤1 No changes or becoming mat with slight colour change.			PN-EN ISO 175:2002

	2) for periodic aggresive environment influence defined by: a/ weight change after 8 weeks of aggresive environment influence and after drying the samples to constant weight %. - 5% hydrochloric acid solution -1% sodium hydroxide - 0,1% sodium chlorate solution - 2% detergent solution - 0,5% phenol solution - manure b/ Semblance change after 8 weeks of aggresive environment influence and after drying the samples to constant weight %	- -	Weight gain ≤5 Weight loss ≤3 No changes or becoming mat with slight colour change.	

1/ In case of texturex geomembranes – concerns the outcome thickness (without carried PE fibres)

2/ during the tests the supposed medium infecting on samples are : Etyline E95 (time of application – 3 days) and diesel oil according to PN-EN 590:2002 (time of application – 28 days.

Geomembrane is also avaible in thickenss 0,70 and 0,75 mm.

Documents:

Technical Approval ITB nr AT-15-3472/2005

Technical Approval IBDiM nr AT/2004-04-0675

Plant Production Control Certyficate No ITB-0008/Z

Hygenic Atest PZH HK/B/0098/01/2005

Declaration of conformity 675a

Declaration of conformity 3472c