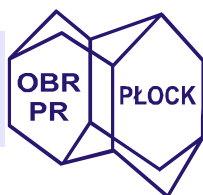


**ÓŚRODEK BADAWCZO – ROZWOJOWY PRZEMYSŁU RAFINERYJNEGO
SPÓŁKA AKCYJNA**

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**TECHNICAL CARD
FOR THE GEOSYNTETIC POLYMERIC GEOMEMBRANE BARRIER HDPE – IZOVIL GEO**

Geosyntetic polimer barrier geomembrane HDPE **IZOVIL GEO** is manufactured from HD Polietylene with addition of stabilizing materials. It comes with different thicknesses. Geomebrane characteristics: high chemical resistance, stress crack resistance, mechanical durability, high resistance for atmospherical conditions according with the appendix B enclosed in "Geosyntetics Barriers" norms.

As non-permeable barrier is used while constructing :

- tunnels and underground constructions
- tanks and liquid waste conglomerations
- non-liquid dumping grounds and warehouses
- preventions from the water leakage thru the construction walls
- water ponds and water barriers
- sealings in area of the liquid petrol distribution and warehousing (with temporary influence)
- sealings in city wastewaters refineries (commercial and urbanization wastewaters) and in manure tanks

Geomembrane **IZOVIL GEO** fulfils the requirements of the following norms:

PN- EN 13491:2006+PN-EN 13491:2006/A1:2007, PN- EN 13492:2006+ PN-EN 13492:2006/A1:2007, PN- EN 13361:2006+ PN-EN 13361:2006/A1:2007, PN- EN 13493:2007, PN- EN 13362:2007.

Declaration of Conformity was issued for this product. It is marked with CE sign . Also the Certificate of the Factory Production Control No 1488-CPD-0139/Z was issued by Instytut Techniki Budowlanej in Warsaw, dated 19.01.2009.

Characteristics	Testing method	Nominal Values (tolerance)					
		0,75	1,0	1,5	2,0	2,5	
1	Width, [m]	PN-EN 1848-2	5,0 ($\pm 0,2$)				
2	Density, [g/cm ³]	ASTM D 1505	$\geq 0,94$				
3	MFI (190°C, 5 kg), [g/10 min]	PN-EN ISO 1133	$\leq 1,0$				
4	Carbon Black Content, [%]	ASTM D 1603 (mod).	2-3				
5	Carbon Black Dispersion	ASTM D 5596	9 of 10 pictures- cat 1 or 2, no more than 1 picture cat. 3				
6	Water Permeability, [m ³ /m ² /d]	PN-EN 14150	1,5E-06 (+ 0,5E-06)				
7	Gas Permeability, [mol/m ² /s]	ASTM D 1434	30×10 ⁻⁹ (+ 3×10 ⁻⁹)				

8	Radon Permeability	Method K 124/02/95	$4,2 \cdot 10^{-12} \pm 0,1 \cdot 10^{-12}$				
	Radon Permeability (weld)		$3,3 \cdot 10^{-12} \pm 0,1 \cdot 10^{-12}$				
9	Strength at break (max stress at yield), [MPa] Along Across	PN-EN ISO 527-1 PN-EN ISO 527-3	30 (-2,0) 30 (-2,0)				
10	Elongation at break, [%] Along Across		700 (-50) 700 (-50)				
11	Puncture resistance, [N]	ASTM D 4833	300(-50)	400(-80)	600(-100)	750(-100)	800(-100)
12	Tear resistance, [N]	ASTM D 1004	100(-5)	130(-10)	200(-20)	300(-20)	350(-20)
13	Linear Thermal extension rate [1/K] Along Across	ASTM D 696	$1,600 \times 10^{-4} (+ 0,4 \times 10^{-4})$ $1,346 \times 10^{-4} (+ 0,3 \times 10^{-4})$				
14	Dimensional Stability /120°C,1h/, [%] Along and across	DIN 53377	± 2				
15	Fire resistance	PN-EN ISO 11925-2	Class E				
16	Durability and resistance for: - atmospheric conditions - oxidation - lixiviation - stress crack - chemicals determined in norms	PN-EN-12224 PN-EN-14575 PN-EN 14415 ASTM D 5397 (zał.) PN-EN 14414	Fulfil the requirements				
17	Hazardous substances		No hazardous substances				

All values are nominal values presented as an information.



1488-CPD-0139/Z



More information on the website address: www.obr.pl