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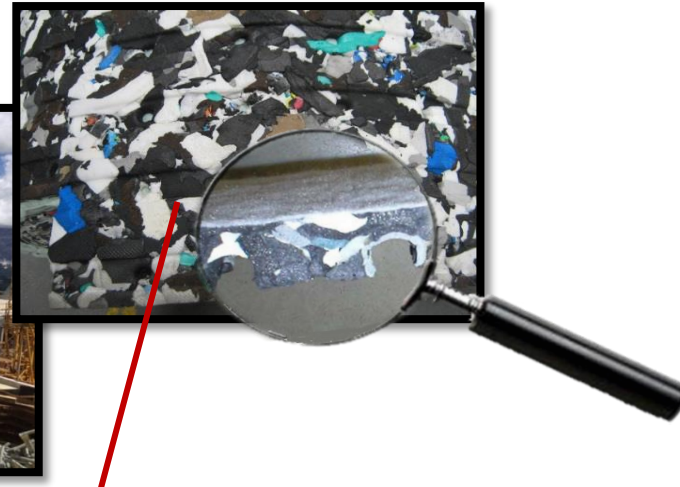
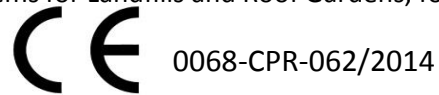
REFO PROTECT 12 160

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Geocomposite consisting of a drainage mat polyethylene closed-cell foam, chipboard, chipboard and pressed with horizontal grooves in the round perforated 12 mm thick, laminated to a nonwoven geotextile

APPLICATIONS

Applications according to product standards: UNI EN 13252:2005 UNI EN 13257:2005 UNI EN 13255:2005
In Draining systems for Landfills and Roof Gardens, for large and small , civil and public works



Channels made during the high compression to achieve high mechanical strength, high flow capacity and good flexibility

FEATURES GEOCOMPOSITE	UNIT OF MEASURE	VALUE	TOLERANCE	REFERENCE STANDARD
PHYSICAL CHARACTERISTICS				
Mass per unit area	g/mq	3.500	± 5%	EN ISO 9864
Thickness at 2 kPa	mm	12	± 5%	EN ISO 9863
CHARACTERISTICS MECHANICAL				
Tensile strength longitudinal	kN/m	10,9	-1,5	UNI EN 10319:2008
Tensile strength transverse	kN/m	12,9	-1,6	UNI EN 10319:2008
Elongation at break	%	65	± 10 %	UNI EN 10319:2008
Elongation transverse	%	62	± 10 %	UNI EN 10319:2008
Resistance to impact static	N	2197	/	UNI EN ISO 12236:2006
Resistenza al punzonamento dinamico	mm	No drilling	/	UNI EN ISO 13433:2006
Residual depth to the test impact of damage	%	88	/	EN ISO 13428
HYDRAULIC CHARACTERISTICS				
Drainage capacity in the plane (i=1)	l/s*m (10 kPa)	4,10	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=1)	l/s*m (20 kPa)	3,65	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=1)	l/s*m (40 kPa)	2,35	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=1)	l/s*m (100 kPa)	1,84	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=1)	l/s*m (200 kPa)	1,01	/	UNI EN ISO 12958:2010

Drainage capacity in the plane (i=0,1)	l/s*m (10 kPa)	1,94	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=0,1)	l/s*m (20 kPa)	1,41	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=0,1)	l/s*m (40 kPa)	1,05	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=0,03)	l/s*m (10 kPa)	0,99	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=0,03)	l/s*m (20 kPa)	0,81	/	UNI EN ISO 12958:2010
Drainage capacity in the plane (i=0,03)	l/s*m (40 kPa)	0,69	/	UNI EN ISO 12958:2010
Water permeability normal to the plane	m/s	0,07	± 30	UNI EN ISO 11058:2010
DURABILITY				
The residual strength of the product at the end of this test, it appears to be <20% as required in Table B.1 of Appendix B of the UNI EN ISO 13252:2005				

Protection efficiency	
Standard used: UNI EN 13719: 2004	Test Conditions: 300 kN/m ²
Product standard: UNI EN 13255:2005	Result: < 2,0 %

FEATURES GEOTEXTILE	UNIT OF MEASURE	VALUE	TOLERANCE	REFERENCE STANDARD
PHYSICAL CHARACTERISTICS				
Mass per unit area	g/mq	160	/	EN ISO 9864
Thickness at 2 kPa	mm	1,9	/	EN ISO 9863/1
Thickness at 20 kPa	mm	1,2	/	EN ISO 9863/1
Thickness at 200 kPa	mm	0,3	/	EN ISO 9863/1
CHARACTERISTICS MECHANICAL				
Tensile strength longitudinal	kN/m	11,2	-1,5	UNI EN 10319:2008
Tensile strength transverse	kN/m	12,2	-1,6	UNI EN 10319:2008
Elongation at break	%	80	± 16	UNI EN 10319:2008
Elongation transverse	%	80	± 16	UNI EN 10319:2008
Resistance to impact static	N	1800	- 180	UNI EN ISO 12236:2006
Resistance to impact dynamic	mm	15,5	2,8	UNI EN ISO 13433:2006
HYDRAULIC CHARACTERISTICS				
Drainage capacity in the plane (i=1)	$m^2/s \times 10^{-6}$ (20 kPa)	3,7	-1,7	UNI EN ISO 12958:2010
Water permeability normal to the plane	l:s*mq	73	± 30	UNI EN ISO 11058:2010
Opening Size feature	µm	65	±30	UNI EN ISO 12956:2010