



PRODUCT	Dermacem
MISSION	Two component cement and synthetic polymer based liquid waterproofing membrane, that may be coloured on request, suitable for the containment of drinking water
CHARACTERISTICS	<p>Dermacem is a synthetic polymer and cement based two-component liquid membrane in water dispersion, with CE marking complying with EN 1504-2, used for waterproofing concrete surfaces such as flat roofs, balconies, terraces, bathrooms, etc. and is ideal for irregular structured decks and for waterproofing water containing basins such as tanks, cisterns, pools and fountains thanks to his great resistance to the chlorine pool treatments. Dermacem is also available in the light blue color that can be used in the waterproofing system for pool or only like final coat. Dermacem can be used for the waterproofing of tanks for the containment of drinking water because has been tested by the Isogea S.r.l. lab, with test report n. 26950020/21, according to the D.M. 186/06, the D.lg. 152/06 and the D.M. 06/04/2004 n. 174 (these ones follows the CE directive 98/83 of the European community) resulting in accordance.</p> <p>When used on terraces and balconies, the ceramic covering (tiles) may be glued directly on the surface with a glue suitable for outdoor use, without laying a cement deck. When used on terraces and balconies, the ceramic covering (tiles) may be glued directly on the surface with a glue suitable for outdoor use (type C2), without laying a cement deck (Dermacem has been tested as under-tile waterproofing in accordance with EN 14891 : 2012). Thanks to its micro-porous structure, the membrane also ensures a certain degree of transpiration to the deck. The membrane is elastic and thus absorbs small cracks due to structural movements caused by settlement of the building and thermal expansion, and also compensates micro-cracks that may appear on the deck due to shrinkage of the cement screeds.</p> <p>Dermacem is the ideal choice for:</p> <ul style="list-style-type: none">-1 Waterproofing walking surfaces such as balconies, terraces, flat roofs, bathrooms, showers and valley gutters, gluing the flooring directly on the product.-2 Restoring old bituminous coverings (with a specific primer, Acrybase S)-3 Waterproofing foundations, supporting structures and wherever the application of a bituminous membrane is difficult.-4 Waterproofing swimming pools or R.C. water reservoirs..-5 Waterproofing irregular-shaped surfaces.-6 Protecting cement structures from penetration by aggressive substances in the atmosphere such as carbon dioxide, sulphur dioxide and sulphur trioxide, soluble salts such as chlorides and sulphates in soil and/or sea water-7 Waterproofing small parking lots with cement deck (Colorpark system) <p>Dermacem is also available in three colours on request (red (102D), green (201D) and grey (401D), with the pigment supplied, named Dermacem Color, in a pre-dosed container that is added to component A when mixing the product), ensuring excellent UV resistance and making it possible to apply the product as a top layer without any protection (paint or tiles). Dermacem may also be produced as a coloured product for minimum production batches. Dermacem is also resistant to aggressive pH (from 3 to 12) for accidental contact (see the relative table for more information). Dermacem (neutral and colored version) is tested following the EN 1297 standard (method of</p>





artificial ageing by long term exposure to the combination of UV radiation, elevated temperature and water) resulting in accordance.
 Dermacem is resistant to aggressive pH (from 3 to 12) for accidental contact (consult the table for more information); can be used for the protection of concrete sawage water tanks, septic tanks both civil and industrial where the pH is less aggressive. Dermacem can also be used as carbonation protective coat on concrete, external facades and cementitious surfaces.

APPEARANCE	Component A: milky white liquid. Component B: grey powder.
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CHARACTERISTICS OF THE LIQUID PRODUCT			
CHARACTERISTICS	VALUE	TOLERANCE	U.M.
Specific weight	1,52	± 0,05	Kg/dm ³
Dry residue	76	± 1	%
Brookfield viscosity (with Brookfield viscosimeter , rotor n. 4, speed 20)	2800	± 400	mPa.s
Mixing ratio by weight	A : B = 67 : 33		

APPLICATION INSTRUCTIONS			
TOOLS	THINNING	TYPE OF THINNER	TOOL CLEANING
Brush Roller Spray	As a primer: 15 – 20 % As a filler: 20% As a membrane: undiluted or diluted 5 %	Water	Water

APPLICATION TO AIR-LESS			
DILUTION	0%		
PUMP MODEL	THOR (LARIUS)	NOZZLE TYPE AND SIZE	SFC 27-40
GUN MODEL	L91X	FILTER MANAGEMENT	Without filters
GUN TUBE DIMENSIONS	3/8" x 15 Mt	PUMP SET PRESSURE	220 BAR

The data reported above are the result of tests carried out by our Technical Office in collaboration with our technical partner Larius, aimed at identifying the ideal equipment and setup for the most correct, easy and effective installation of the product.

In the case of spray applications, the dilution of the product and the preparation may vary depending on the type of pump used.

It is always recommended to carry out preventive tests before using the product with air-less equipment.





APPLICATION METHOD	Start applying the waterproofing by laying the embossments and perimeter corners with the reinforcement bands Acryfelt Band and/or Casaband SA. Pour component B (powder) into half part of component A (resin) slowly, and mix with a propeller mixer to obtain a perfectly smooth and lump free mixture, scraping the powder from the bottom and sides; once obtained an homogeneous blend add the rest of the resin and mix again. The product may be applied by roller or brush, as a primer to fix suspended particles on the deck, diluting the product by 15-20%; when used as an impregnating agent for reinforcements (Acryfelt Mesh, Acrymat 225 g/sq.m. and Acryfelt T1) the product should be diluted with up to 20% water; when used as waterproofing membrane it should be applied "as is" or diluted with no more than 5% water.
RECOMMENDED PRIMER	Acrybase S on bituminous decks Multifixo 100 on metal non-porous decks Epobase FU 14 or Epocon 312 Thixo on decks subject to vapour pressure

LAYING SURFACE	Ensure that the deck is clean removing all traces of dirt, grease and loose parts, if necessary, repair excessive roughness and ensure sufficient slope to ensure rainwater runoff. The deck should be perfectly dry and any residual moisture, measured on the screed, should be under 3%. If not, install vents or vapour barriers depending on the type of deck (please contact Casali's Technical Office).
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CONSUMPTION	If reinforcement is used, coverage is 2,5 Kg/sqm, if not coverage is 1,8 Kg/sqm. In case the colored version of Dermacem is used such as final cot, are necessary 2 coats for a consumption of 1 Kg/sq.m. If applied as carbonation protective the consumption is 04 – 0,5 Kg/sqm in 2 coats (dry film thickness 200 – 250 µm).
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APPLICATION INSTRUCTIONS	Environmental and deck temperature limit during application: MIN 5 ° C - MAX 40° C Product may be applied on surfaces subject to water pooling. Do not apply the product in frost conditions, rain or snow.
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DRYING AT 23° C AND 50 % U.R.	Pot life: 60' On surface: 30' To touch: 1 h 30' Interval between coatings: 5 – 6 h The times shown are intended for standard laboratory conditions. Drying times are strongly affected by weather conditions; high temperatures and direct sunlight reduce the drying times; areas in shadow, low temperatures and high humidity increase the drying times. In winter the product should be laid in the middle of the day when it is warmer. Ensure that the previous layer has dried properly before applying the next layer.
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CHARACTERISTICS OF THE DRY PRODUCT			
CHARACTERISTICS	VALUE	TOLERANCE	U.M.
Breaking load without reinforcement	0,91	± 0,2	N/mm ²
Elongation at break without reinforcement	138	± 10	%





Permeability to water vapour (on membrane thickness of 700 micron)	16	± 3	g/mq
Flexibility at low temperatures	-15	± 2	° C
Resistance to abrasion (weight loss)	9	± 2	G
Resistance to ageing according to EN 1297 (weathering test)	Accordant		
Contact with drinkable water according to D.M. 186/06 and D.M. 06/04/2004 n. 174	Accordant		
Water vapor permeability (UNI 1062)	V3 = low		
Water permeability (UNI 1062)	W3 = low		



BREAKING LOAD AND ELONGATION AT BREAK OF DERMACEM WITH REINFORCEMENT		
TYPE OF REINFORCEMENT	VALUE	U.M.
Longitudinal ultimate strength with Acryfelt 60 g	108,2	N/mm ²
Longitudinal elongation with Acryfelt 60 g	68,65	%
Transverse ultimate strength with Acryfelt 60 g	207,34	N/mm ²
Transverse elongation with Acryfelt 60 g	30,78	%
Longitudinal ultimate strength with Acrymat 225 g	469,63	N/mm ²
Longitudinal elongation with Acrymat 225 g	1,63	%
Transverse ultimate strength with Acrymat 225 g	507,42	N/mm ²
Transverse elongation with Acrymat 225 g	1,41	%
PERFORMANCE IN ACCORDANCE WITH EN 14891		
CHARACTERISTICS	VALUE	U.M.
Adhesion strength	0.5	N/sq.mm
Adhesion strength after contact with water	0.5	N/sq.mm
Adhesion strength after thermal ageing	0.7	N/sq.mm
Adhesion strength after freeze-thaw cycles	0.6	N/sq.mm
Adhesion strength after contact with chlorinated water	0.6	N/sq.mm
Adhesion strength after contact with hard water	0.6	N/sq.mm
Determination of impermeability to water (increase in weight)	6.2	g



CHEMICAL RESISTENCES FOR ACCIDENTAL CONTACT AT 30 DAYS	
TEST LIQUID	RESULT
Acetic acid 10 % (pH 4)	Pass
Acetic acid al 50 % (pH 2,5)	Not pass (7 days MAX)
Propionic acid 50 % (pH 4,5)	Not pass (14 days MAX)
sodium hydroxide 20 % (pH 14)	Pass
Sulfuric acid 20 % (pH 1)	Not pass
Chlorine (water solution with an increase concentration of chlorine respect the normal product for the pool treatment)	Pass

The tests were performed internally following the ISO EN 13529 standard. The specimens were inserted into a climatic chamber at 21 ° C throughout the test period.

PACKAGING INSTRUCTIONS	COLOURS AVAILABLE Standard grey, red (102D), green (201D), grey (401D), light blue (316D)	PACKAGING A + B = 10 – 20 Kg
STORAGE INSTRUCTIONS	STORAGE TEMPERATURE MIN. 3° C – MAX 40° C	STABILITY IN THE ORIGINAL PACKAGE 6 months
SAFETY STANDARDS	Please read the safety data sheet carefully before using this product.	

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<p>14 1381-CPR-490 EN 1504-2 : 2004 Products used to protect concrete decks</p> <p>Dermacem</p> <p>Two-component synthetic resin and cement based waterproofing in water emulsion used to protect concrete against penetration; humidity control and improved resistivity</p> <table> <tbody> <tr> <td>Liquid water permeability</td> <td>< 0.1 Kg/sq.m · h^{0,5}</td> </tr> <tr> <td>Permeability to carbon dioxide</td> <td>sd > 50 m</td> </tr> <tr> <td>Adhesion to standard traction</td> <td>≥ 0.8 MPa</td> </tr> <tr> <td>Permeability to water vapour</td> <td>Class I</td> </tr> <tr> <td>Crack bridging ability</td> <td>Class A5</td> </tr> <tr> <td>Freeze-thaw cycles with immersion in thawing salt</td> <td>no alteration</td> </tr> <tr> <td>Hazardous substances</td> <td>See SDS</td> </tr> <tr> <td>Class reaction to fire</td> <td>Bfl – S1</td> </tr> </tbody> </table>		Liquid water permeability	< 0.1 Kg/sq.m · h ^{0,5}	Permeability to carbon dioxide	sd > 50 m	Adhesion to standard traction	≥ 0.8 MPa	Permeability to water vapour	Class I	Crack bridging ability	Class A5	Freeze-thaw cycles with immersion in thawing salt	no alteration	Hazardous substances	See SDS	Class reaction to fire	Bfl – S1
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