CASALI

bitumen polymer membranes products catalogue waterproofing solutions

2017-2018

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INDEX

CASALI S.p.A.

In one hundred Countries all over the world, Casali is a benchmark brand synonymous of quality, professionalism and technical assistance in the building trade.

Casali was founded in 1936 as a manufacturer of products for the protection of buildings against the action of water and since then has worked to find the most innovative and efficient solutions, taking into account the most up-to-date developments in building techniques and the need to protect the natural environment as a precious resource.
In our very long history, we have acquired an experience which is unique, placing it at the service of our customers with reliable products and systems, to resolve even the most complex building problems, above all those related to waterproofing, and later with products to ensure sound comfort and high performance sports surfaces.

Casali is organised in four divisions (Membranes, Synthetics, Synthetic Geomembranes and Acoustic) and is today a customer-oriented company that relies on its highly specialised products.
Our historical Membrane Division includes: the modern line of modified bitumen-based (APP APAO, APP and SBS) prefabricated membranes developed especially for roofing and large structures, the line for special applications (such as root-stop, fire retardant, radon/vapour barrier membranes and self-protected metal lamina membranes, etc.) and the waterproofing thermal insulation line.
The Synthetics Division which was introduced in 1992 includes the line of liquid waterproofing products, the line of asbestos consolidating products and resin lines for industrial and sports floorings.
Finally, the Synthetic Geomembrane Division includes the innovative line of eco-compatible TPO polyolefin waterproofing membranes for the civil building trade and large structures while the Acoustic Division includes the line of sound insulating products against airborne and footstep noise to ensure acoustic comfort in buildings.
The world of Casali products guarantees the best technology and high quality raw materials, all subject to strict controls.

Since 1996 Casali's production process has been certified by UNI EN ISO 9001 and the company is certified for application of the CE mark.
Casali has also been awarded numerous international and national certifications in the different Countries, all attesting the exceptional performance and durability of its products, as in the case of Enduring Quality waterproofing membranes that have proved to be efficient after thirty years from installation.

In Italy, Casali's production factories cover a surface area of 25.000 sq.m. (11.000 sq.m. under roofing) and are strategically located between Ancona airport, Falconara Marittima railway station and the seaport of Ancona.

Cutting-edge technology, innovative plants and constant attention to the specific requirements of our customers are the cornerstones of our philosophy that places people (with their human and professional skills) at the centre of our work, allowing us to achieve a real synthesis between research, projects, products and services to guarantee just the right solution to traditional and new problems in the continuously evolving building trade industry all over the world.

CASALI
www.casaligroup.it

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THE MEMBRANE DIVISION

WATERPROOFING SYSTEMS

This historical line of waterproofing systems, born in 1936, today offers high quality bitumen-polymer membranes that have earned a reputation on the market as products of exceptional durability. The top-of-the-range line, which includes more than 100 different types of products, and is certified in more than 20 countries all over the world, is the bituminous membrane "family" of products called EQ (Enduring Quality)* made with compounds of the finest quality that ensure long-term resistance and performance.

SYSTEMS FOR SPECIAL APPLICATIONS

Casali products for special applications are designed to solve the most common problems encountered in the building process, in order to help installers to do their work. From solving technical and aesthetical problems to waterproofing systems for vertical walls, from the vapour barrier to vapour pressure diffusion layer and from the root barrier system to under-tile waterproofing, with the help of Casali's technical and sales staff, you will be sure of finding the ideal solution for your application.

THERMO-INSULATION WATERPROOFING SYSTEMS

The thermo-insulation waterproofing system is the new line of products introduced by Casali. The range includes thermo-insulating materials coupled through an industrial thermo-fusion process with Casali bitumen-polymer waterproofing membranes, reinforced with glass fibre felt or composite “non-wowen” polyester fabric stabilized with fiberglass. The thermal insulation materials used, expanded (PSE) or extruded (XPS) polystyrene, are in rolls or panels; the panels are available with smooth, corrugated and folded roofing profiles. This new range of products, which are efficient and versatile, meets one of the most important requirements of the modern building trade: reducing heat dispersion from the ceiling-with the added value of having a waterproof roofing which is guaranteed by Casali’s experience.

THE SYNTHETICS DIVISION

THE BUILDING INDUSTRY LINE

This is the historical Casali S.p.A. line that includes complementary products to those of the Membrane Division such as bituminous primers, liquid membranes of different kinds (bituminous, acrylic, epoxy and polyurethane) used to waterproof complex structures like terraces, balconies and damaged waterproofing, paints both for bituminous membranes (aluminium, acrylic) and cement surfaces (anti-acid protecting paints, non-toxic paints for use in contact with foodstuffs), and a complete line of resins for chemical fixing, special wall paints, bituminous conglomerate for road works, latex for concrete, strippers etc.

THE SPORTS SYSTEMS LINE

Casali dedicates a great deal of time and effort to developing high performance sports flooring. This wide range of fully certified products, includes indoor and outdoor sports flooring, such as tennis courts, 5-Aside Soccer fields, gym flooring, cycling tracks multipurpose sports flooring as well as products catering for many different sports flooring application needs like glues, synthetic grass, binders for athletic fields, pool paint and many more.

THE ASBESTOS ENCAPSULATION LINE

The recovery of asbestos cement structures is a rapidly expanding sector thanks to the introduction of the recent law dated 20 August 1999 (published in Official Gazette N° 249 on 20 October 1999), that established the minimum thickness requirements for encapsulation [Type A (outdoor top layers), Type B (indoor top layers), Type C (under-layers), Type D (auxiliary]. Our encapsulation materials for compact and loose asbestos cement are the best that modern technology can offer today, tested and fully certified by specialised external laboratories and extremely successful with asbestos cement encapsulation specialists.

THE INDUSTRIAL FLOORING LINE

This line offers products manufactured with highly specialised materials for traditional coating of cement and non cement surfaces in factories, workshops, company cafeterias, stores etc., including heavy seamless industrial flooring and special paints to protect the finished surface.

THE GEOMEMBRANE DIVISION

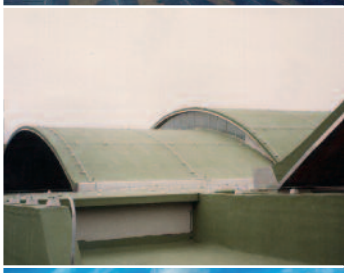
This line (Flexine) is developed to combine the most complex requirements of waterproofing with those of the new technological frontier of the eco-sustainable building industry.
The polyolefin membranes (TPO), resolve the waterproofing needs of the civil, industrial and large structures; these membranes are especially developed to ensure fast, safe and lasting waterproofing of different building structures.

THE ACOUSTIC DIVISION

To meet the requirements of sound insulation in the building industry, Casali has developed a special line of products (Silent-e) to reduce impact noises of storey floors and foot trafficable coverings.
These products are very commonly used for the sound insulation of floating floors in new buildings or for restructuring existing floors.





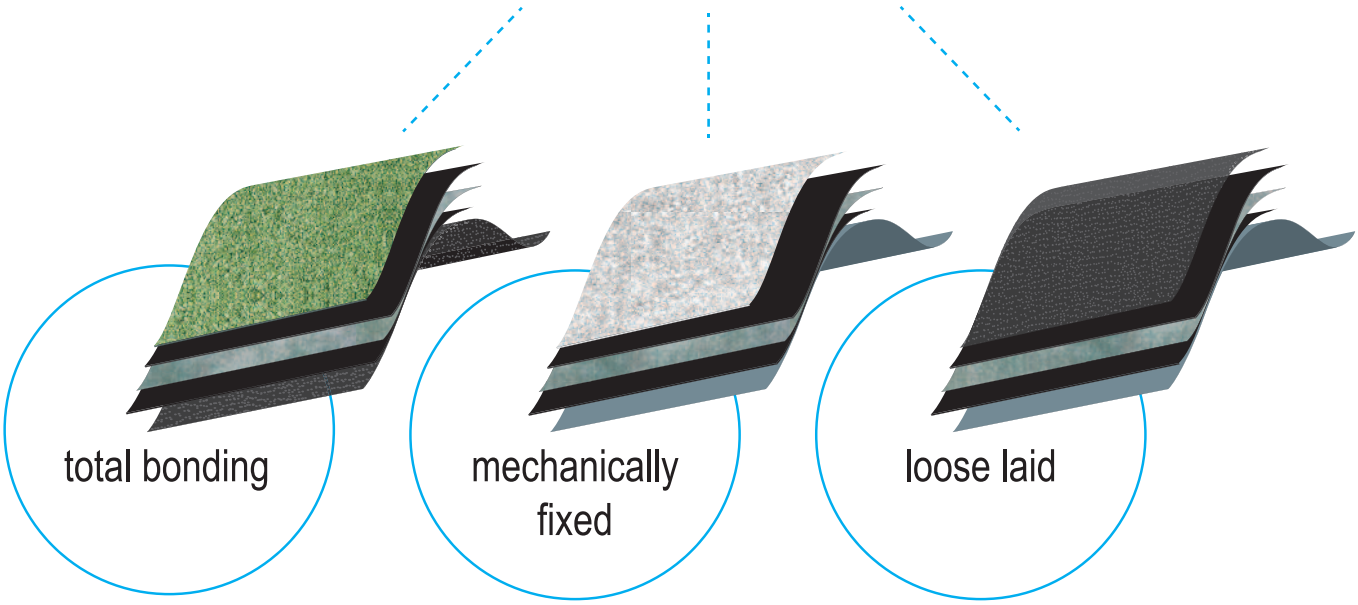




Where we are: Albania, Angola, Australia, Austria, Argentina, Antigua, Azerbaijan, Bangladesh, Barbados, Belarus, Bhutan, Bolivia, Bosnia-Herzegovina, Brazil, Bulgaria, Burkina Faso, Cabo Verde, Cambodia, Cameroon, Canaries, Chile, China, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Dominican Republic, Ecuador, Egypt, Estonia, Ethiopia, Ghana, Georgia, Germany, Jamaica, Greece, Guatemala, Holland, Honduras, Hungary, India, Indonesia, Iran, Ireland, Israel, Italy, Kazakhstan, Kuwait, Latvia, Lebanon, Libya, Lithuania, Macedonia, Madagascar, Malaysia, Malta, Mauritius, Morocco, Mexico, Moldavia, Montenegro, Myanmar, New Zealand, Nigeria, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Puerto Rico, Qatar, Reunion Island, Romania, Russia, San Salvador, Saudi Arabia, Senegal, Serbia, Singapore, Syria, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Taiwan, Thailand, Trinidad e Tobago, Tunisia, Turkey, U.A.E., Ucraine, UK, Uruguay, U.S.A, Venezuela, Vietnam.

CASALI
advanced solutions for building

DERMABIT®
single-ply

Up to 20 years warranted membranes.
Waterproofing design support.
Ideal for new constructions or refurbishment.
Complete system supply.
Qualification for approved contractors.
High-tech flame free solutions:
Gluty, Fixus,Liber.



The perfect waterproofing protection.

Enduring Quality
0120
GB06/69288
flame free

Want to know more? Contact our Technical Assistance or visit our website
www.casali-group.com

Enduring Quality

BITUMEN POLYMER MEMBRANES
ENDURING QUALITY

Auditorium, Guadalajara - Mexico

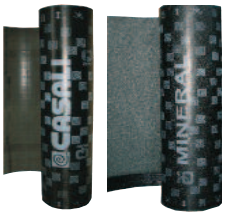
Casali's **Enduring Quality** brand stands for membranes of tested durability.
The Dermabit®, Dermaflex, Dermafil, Extensa range of membranes is certified in accordance with leading national and international standards and enjoys an unrivalled reputation for technical excellence and durability; the product formulas are the result of successful synergy between innovation and tradition and the use of polymers of the highest quality.
Reinforcement receives double impregnation with the same compound (used for all Casali products) and the choice to keep surfaces smooth make EQ membranes extremely uniform and reduces stress during production.
The membranes under the Enduring Quality brand are guaranteed by more than **40 years in the field** and are preferred by our leading clients for their most important projects.

Enduring Quality

DERMABIT® EXTRA
DERMABIT®
CASALI DERMABIT® EXTRA

APP-APAO

DERMABIT®



PROJECT SPECIFICATIONS: single and multi-layer solutions for large commercial and industrial roofing, residential buildings, large metal structures with and without insulation, exposed waterproofing systems mechanically fixed, roofing with photovoltaic panels, waterproofing foundations, retaining walls and large structures in general.

REINFORCEMENTS: polyester with high mechanical properties and excellent dimensional stability.

FINISHES: sand, mineral self-protection in different colours.

PLUS: an APAO synthesis engineering polymer based compound that ensures a thermal operating range of -25°C/+150°C, high elasticity, excellent resistance to atmospheric ageing, perfect joint seal and excellent adhesion to any type of deck, high resistance to mechanical and thermal stress; the family of Dermabit® membranes has been certified by the most prestigious certification institutes such as BBA, ITC, BRANZ and have been used for more than 40 years in more than thirty countries all over the world. Dermabit Mineral Fire Off is a fire resistant certified version classified as Broof (t_2) according to EN 13501-5.

BRANZ Appraised
Appraisal No.647 [2009]

Enduring Quality

DERMABIT® EXTRA
DERMABIT®
CASALI DERMABIT® EXTRA

PROFESSIONAL

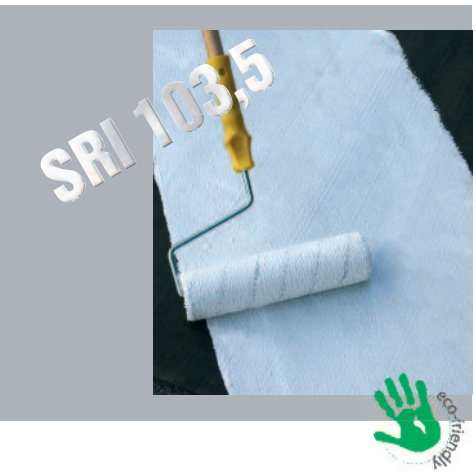
APP-APAO

DERMABIT®	STANDARD	U.M.	DERMABIT EXTRA 40180	DERMABIT EXTRA 4 mm	DERMABIT 30160	4170 CASALI DERMABIT EXTRA	43170 CASALI DERMABIT EXTRA	DERMABIT 40250 - 50250	DERMABIT Fire Off (F.O.)
					BBA	BBA	BBA		LAPI
Finishing	-	-	SAND	MINERAL	SAND	SAND	MINERAL	SAND	MINERAL
Reinforcement type	-	-	HSP POL	HSP POL	SP POL	HSP POL	HSP POL	GS POL	HSP POL
Thickness	EN 1849 - 1	mm	4	4*	3	4	4*	4 / 5	4*
Weight	EN 1849 - 1	kg	4	5,2	3	4	5,2	4 / 5	5,2
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	900 / 700	900 / 700	700 / 600	850 / 650	850 / 650	1200 / 900	850 / 650
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	45 / 45	45 / 45	40 / 40	40 / 40	40 / 40	45 / 45	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	200 / 200	200 / 200	150 / 150	170 / 170	170 / 170	220 / 240	170 / 170
Flow resistance at elevated temperature	EN 1110	°C	150	150	150	150	150	150	150
Flexibility at low temperatures	EN 1109	°C	-25	-25	-20	-20	-20	-20	-20
Dimensional stability	EN 1107-1	%	±0,2%	±0,2%	±0,3%	±0,2%	±0,2%	±0,2%	±0,2%
Thermal ageing in air VARIATION OF LOW TEMPERATURE FLEXIBILITY	EN 1296 EN 1109	Δ°C	5	5	5	5	5	5	5
Peel resistance of joints	EN 12316-1	N/5cm	40	40	40	40	40	40	40
External fire performance	EN 13501-5	Class	F roof	F roof	F roof	F roof	F roof	F roof	B roof (t2)

* THICKNESS MEASURED EXCLUDING MINERAL FINISHING

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.



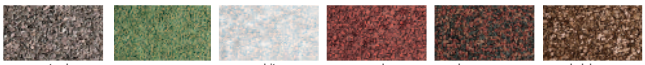
IMPROVING WATERPROOFING PERFORMANCE OF DERMABIT®, SAVING ENERGY, WITH DERMACOLOR COOL ROOF

Dermacolor Cool Roof is a high-reflectance synthetic resin-based white paint in water emulsion, which thanks to a special formulation containing special glass micro-spheres, is used to protect bitumen-polymer waterproofing membranes against UV radiation, significantly lowering the surface temperature (by up to 40°C with respect to a black membrane).This attenuates the urban heat island effect and reduces damage to waterproof systems installed on roofs, giving a considerable energy saving due to reduced use of the air conditioning system of the building.

Dermacolor Cool Roof was tested for its Solar Reflection Index (SRI) obtaining the excellent result of 103.5 (Test Report No. 313875 issued by the Giordano Institute on 05/03/2017). The SRI index indicates the ability of a material to reflect ultraviolet rays, so that the higher the index the greater the solar rays transmitted by the material will be, meaning that less heat is accumulated and transmitted to the rooms below; tests carried out on the polymer bitumen membrane Casali Dermabit®.

DERMACOLOR COOL ROOF
(pg. 44)

Slated Self Protection available for Dermabit®
Other finishing, on request. For finishing details refer to pg. 34



natural | green | white | red | bourgogne | dark brown

CASALI
DIVISIONE MEMBRANE
MEMBRANES DIVISION

DERMAFLEX

APP

PROJECT SPECIFICATIONS: suitable for use in the residential building trade, for pitched roofs or roofs with a complex design, large prefabricated structures and industrial buildings; also suitable when very thick insulation or when technical equipment installation is provided.

REINFORCEMENTS: a wide range of TNT polyester characterised by excellent mechanical properties and excellent dimensional stability.

FINISHES: sand, mineral self-protection in different colours.

PLUS: a bitumen based mixture modified with a selection of polypropylene polymers (APP) and copolymers, characterised by a wide thermal operating range (-15°C/+140°C), excellent mechanical strength, durability of the rheological properties in time and a constant nominal thickness even after application, thanks to the smooth bottom finish.

CE

igmdt d.d. institut za gradbene materiale

DERMAFLEX	STANDARD	U.M.	DERMAFLEX 30160 - 40160	DERMAFLEX 40180	DERMAFLEX 4 mm - 5 mm
Finishing	-	-	SAND	SAND	MINERAL
Reinforcement type	-	-	SP POL	HSP POL	HSP POL
Thickness	EN 1849 - 1	mm	3 / 4	4	4* / 5 *
Weight	EN 1849 - 1	kg	-	-	-
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	700 / 600	850 / 650	850 / 650
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	40 / 40	40 / 40	40 / 40
Tearing resistance	EN 12310-1	N	150/150	170/170	170/170
Flow resistance at elevated temperature	EN 1110	°C	140	140	140
Flexibility at low temperatures	EN 1109	°C	-15	-15	-15
Dimensional stability	EN 1107-1	%	±0,3%	±0,2%	±0,2%

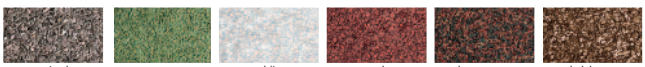
* THICKNESS MEASURED INCLUDING MINERAL FINISHING

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

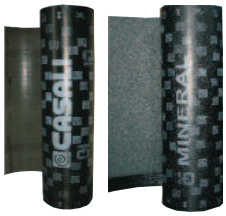
Slated Self Protection available for Dermaflex

Other finishing, on request. For finishing details refer to pg. 34


natural green white red bourgogne dark brown

DERMAFIL

APP



PROJECT SPECIFICATIONS: the ideal choice for a wide range of multi-layer waterproofing applications in the field of residential, industrial and prefabricated roofing, with or without insulation. Particularly suitable for waterproofing bridges and other structures subject to traffic in accordance with EN 14695 (in the 40250 and 50250 GS POL versions), waterproofing underground structures, and to renovate existing roofing (resurfacing).

REINFORCEMENTS: a wide range of TNT polyester characterised by excellent mechanical properties and excellent dimensional stability.

FINISHES: sand, mineral self-protection in different colours.

PLUS: a bitumen based compound modified with select polypropylene polymers (APP) and copolymers.
Highly reliable solutions, wide thermal operating range (-15°C/+130°C), perfect adhesion to different types of decks (reinforced concrete, wood, metal) and constant nominal thickness even after application, thanks to the smooth bottom finish.

DERMAFIL	STANDARD	U.M.	DERMAFIL 30200 - 40200	DERMAFIL 40160	DERMAFIL 40250 - 50250	DERMAFIL 40200 - 45200 50200	DERMAFIL 4 mm - 5 mm
Finishing	-	-	SAND	SAND	SAND	MINERAL	MINERAL
Reinforcement type	-	-	SP POL	SP POL	GS POL	SP POL	SP POL
Thickness	EN 1849 - 1	mm	3 / 4	4	4 / 5	-	4* / 5 *
Weight	EN 1849 - 1	kg	-	-	-	4 / 4,5 / 5	-
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	600 / 500	700 / 600	1200 / 900	600 / 500	700 / 600
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	40 / 40	40 / 40	45 / 45	40 /40	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	150 / 150	150 /150	200 / 220	150 / 150	150 / 150
Flow resistance at elevated temperature	EN 1110	°C	130	130	130	130	130
Flexibility at low temperatures	EN 1109	°C	-15	-15	-15	-15	-15
Dimensional stability	EN 1107-1	%	±0,3%	±0,3%	±0,2%	±0,3%	±0,3%

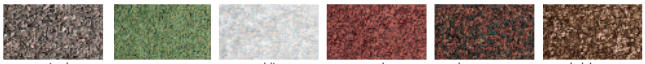
* THICKNESS MEASURED INCLUDING MINERAL FINISHING

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Dermafil

Other finishing, on request. For finishing details refer to pg. 34

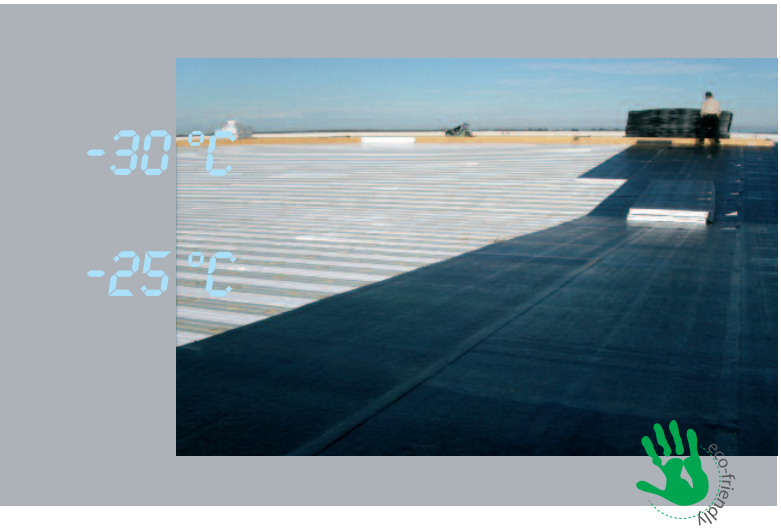


natural | green | white | red | bourgogne | dark brown

Enduring Quality

EXTENSA/EXTENSA FLEX

SBS



PROJECT SPECIFICATIONS: elastomer membrane with a high content of SBS rubbers perfect for all single and multi-layer solutions protected from UV rays, in the case of roofing in very cold areas and/or areas subject to very extreme temperature fluctuations and high-intensity mechanical actions: roofs subject to micro-settlements, vibrations, cyclic thermal-mechanical expansion and actions in cement, metal or wooden structures, even in the case of thick insulation and underground waterproofing (foundations, retaining walls, heavy under-slabs, bridges and large structures, etc.).

REINFORCEMENTS: a select range of TNT polyester characterised by high mechanical properties and excellent dimensional stability.

FINISHES: sand, mineral self-protection in different colours.

PLUS: immediate adhesion on horizontal and vertical decks, high flexibility at low temperatures, a wide thermal operating range (-30°C/+125°C), high mechanical strength, fast and easy laying.

CE

EXTENSA / EXTENSA-FLEX	STANDARD	U.M.	EXTENSA 40180 - 50180	EXTENSA 40250 - 50250	EXTENSA 45180 - 50180	EXTENSA 50250	EXTENSA FLEX 30160 - 40160	EXTENSA FLEX 40180 - 50180	EXTENSA FLEX 4 mm - 5 mm
Finishing	-	-	SAND	SAND	MINERAL	MINERAL	SAND	SAND	MINERAL
Reinforcement type	-	-	HSP POL	GS POL	HSP POL	GS POL	SP POL	HSP POL	HSP POL
Thickness	EN 1849 - 1	mm	4 / 5	4 / 5		5*	3 / 4	4 / 5	4* / 5*
Weight	EN 1849 - 1	kg	4 / 5	4 / 5	4,5 / 5	5,2	-	-	-
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	900 / 700	1200 / 900	900 / 700	1200 / 900	700 / 600	850 / 650	850 / 650
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	45 / 45	50 / 50	45 / 45	50 / 50	40 / 40	40 / 40	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	200 / 200	220 / 240	200 / 200	220 / 240	150 / 150	170 / 170	170 / 170
Flow resistance at elevated temperature	EN 1110	°C	125	125	125	125	120	120	120
Flexibility at low temperature	EN 1109	°C	-30	-30	-30	-30	-25	-25	-25
Dimensional stability	EN 1107-1	%	±0,2%	±0,2%	±0,2%	±0,2%	±0,3%	±0,2%	±0,2%
Thermal ageing in air VARIATION OF LOW TEMPERATURE FLEXIBILITY	EN 1296 EN 1109	Δt°C	10	10	10	10	10	10	10
Peel resistance of joints	EN 12316-1	N/5cm	100	100	100	100	100	100	100

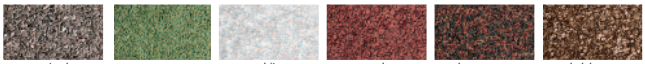
* THICKNESS MEASURED INCLUDING MINERAL FINISHING

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Extensa/Extensa Flex

Other finishing, on request. For finishing details refer to pg. 34

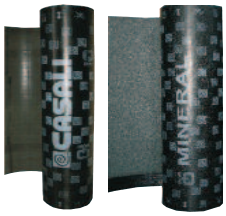


natural | green | white | red | bourgogne | dark brown

CASALI DIVISIONE MEMBRANE MEMBRANES DIVISION

EXTENSA FIL

SBS



PROJECT SPECIFICATIONS: elastomer membrane with a high content of SBS rubbers perfect for all multi-layer solutions protected from UV rays, in the case of roofing in very cold areas and/or areas subject to very extreme temperature fluctuations and high-intensity mechanical actions: roofs subject to micro-settlements, vibrations, cyclic thermal-mechanical expansion and actions in cement, metal or wooden structures, even in the case of thick insulation and underground waterproofing (foundations, retaining walls, heavy under-slabs etc.).

REINFORCEMENTS: a select range of TNT polyester characterised by high mechanical properties and excellent dimensional stability.

FINISHES: sand, mineral self-protection in different colours.

PLUS: excellent adhesion on horizontal and vertical decks, high flexibility at low temperatures, a wide thermal operating range (-20°C/+110°C), high mechanical strength, fast and easy laying.

EXTENSA FIL	STANDARD	U.M.	EXTENSA FIL 30200 - 40200	EXTENSA FIL 40160	EXTENSA FIL 40180	EXTENSA FIL 40200 45200 - 50200	EXTENSA FIL 4 mm - 5 mm	EXTENSA FIL 4 mm - 5 mm	EXTENSA F.O.
Finishing	-	-	SAND	SAND	SAND	MINERAL	MINERAL	MINERAL	MINERAL
Reinforcement type	-	-	SP POL	SP POL	HSP POL	SP POL	SP POL	HSP POL	SP POL
Thickness	EN 1849 - 1	mm	3 / 4	4	4	-	4* / 5*	4* / 5*	-
Weight	EN 1849 - 1	kg	-	-	-	4 / 4,5 / 5	-	-	4,5
Maximum Tensile Force Longitudinal / Trasversal	EN 12311-1	N/5cm	600 / 500	700 / 600	850 / 650	600 / 500	700 / 600	850 / 650	700 / 600
Elongation at break Longitudinal / Trasversal	EN 12311-1	%	40 / 40	40 / 40	40 / 40	40 / 40	40 / 40	40 / 40	40 / 40
Tearing resistance Longitudinal / Trasversal	EN 12310 -1	N	150 / 150	150 / 150	170 / 170	150 / 150	150 / 150	170 / 170	150 / 150
Flow resistance at elevated temperature	EN 1110	°C	110	110	110	110	110	110	110
Flexibility at low temperature	EN 1109	°C	-20	-20	-20	-20	-20	-20	-20
Dimensional stability	EN 1107-1	%	±0,3%	±0,3%	±0,2%	±0,3%	±0,3%	±0,2%	±0,3%
External fire performance	EN 13501-5	Class	F roof	F roof	F roof	F roof	F roof	F roof	B roof (t2)

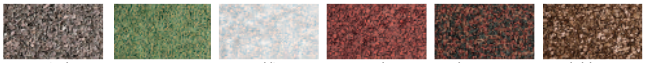
* THICKNESS MEASURED INCLUDING MINERAL FINISHING

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Extensa Fil

Other finishing, on request. For finishing details refer to pg. 34



natural | green | white | red | bourgogne | dark brown

DERMABIT® / EXTENSA F.O.

Protected from water, shielded from fire.

$B_{roof}(t2)$
FIRE OFF
resistente al fuoco
fire resistant
EN13707+A2

0402 - CPD - 3P02976-1
SP
your Science Partner

LAPI SPA

FIRE OFF

The safety of fire resistance in APP/SBS waterproofing membranes for roofing comes from the great family of Casali's bitumen-polymer products.
Dermabit Fire Off and Extensa Fire Off are Casali's versions of professional Fire resistant type membranes that comply with European Directives on products that may potentially be exposed to fire, layed on different kind of substrates. Easy to apply, these membranes with white slate finish reduce the thermal impact of "heat spots" on the roofing, improving the efficiency of photovoltaic systems and giving a considerable energy saving.

CASALI
advanced solutions for building

Want to know more? Contact our Technical Assistance or visit our website
www.casali-group.com

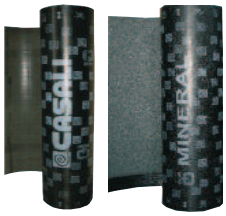
BITUMEN POLYMER MEMBRANES
VERSATILE

Thanks to our worldwide experience in over 70 countries, in the last 40 years CASALI's R&D departement has successufully developed the range of waterproofing membranes "VERSATILE" to meet the different climate conditions and the technical solutions in the construction field.

VERSATILE range of membranes, as result of our long experience, offers the best quality-price ratio for the most popular request in the foreing markets.

POLTEX

APP



PROJECT SPECIFICATIONS: polyolefin polymer APP compound suitable for exposed multilayer systems with self-protected finish, painted or under heavy protection; finishing element in multi-layer systems and for waterproofing projects used with bituminous waterproofing membranes of the Enduring Quality range.

REINFORCEMENTS: polyester with good mechanical properties and excellent dimensional stability.

FINISHES: sand, mineral self-protection in different colours.

PLUS: easy to lay and versatile as an underlayer in complex waterproofing projects used together with bituminous waterproofing membranes of the *Enduring Quality* range.

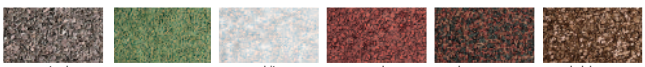
POLTEX	STANDARD	U.M.	POLTEX 3 mm - 4 mm	POLTEX 4 kg - 4,5 kg
Finishing	-	-	SAND	MINERAL
Reinforcement type	-	-	SP POL	SP POL
Thickness	EN 1849 - 1	mm	**3 / 4**	**-**
Weight	EN 1849 - 1	kg	**-**	**4 / 4,5**
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	600 / 500	600 / 500
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	40 / 40	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	150 / 150	150 / 150
Flow Resistance at Elevated temperature	EN 1110	°C	**130**	**130**
Flexibility at low temperatures	EN 1109	°C	**-15**	**-15**
Dimensional stability	EN 1107-1	%	**±0,3%**	**±0,3%**

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Poltex

Other finishing, on request.For finishing details refer to pg. 34


natural green white red bourgogne dark brown

OLYMPIA

APP

PROJECT SPECIFICATIONS: the ideal choice for multi-layer waterproofing applications, in the field of residential, industrial and prefabricated roofing, with or without insulation.

REINFORCEMENTS: polyester with good mechanical properties and excellent dimensional stability.

FINISHES: sand, mineral self-protection in different colours.

PLUS: A modified bitumen (APP) and copolymer based compound, wide thermal operating range (-10°C/+130°C), perfect adhesion to different types of decks (reinforced concrete, wood, metal).

CE

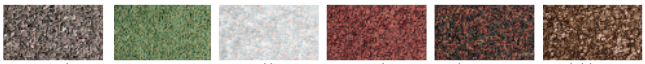
OLYMPIA	STANDARD	U.M.	OLYMPIA 3 kg - 4 kg	OLYMPIA 3 mm - 4 mm	OLYMPIA 4 kg - 4,5 kg 5 kg	OLYMPIA 4 kg - 4,5 kg 5 kg
Finishing	-	-	SAND	SAND	MINERAL	MINERAL
Reinforcement type	-	-	POL	SP POL	POL	SP POL
Thickness	EN 1849 - 1	mm	-	3 / 4	-	-
Weight	EN 1849 - 1	kg	3 / 4	-	4 / 4,5 / 5	4 / 4,5 / 5
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	500 / 400	600 / 500	500 / 400	600 / 500
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	35 / 35	40 / 40	35 / 35	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	140 / 140	150 / 150	140 / 140	150 / 150
Flow resistance at elevated temperature	EN 1110	°C	130	130	130	130
Flexibility at low temperatures	EN 1109	°C	-10	-10	-10	-10
Dimensional stability	EN 1107-1	%	±0,3%	±0,3%	±0,3%	±0,3%

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Olympia

Other finishing, on request . For finishing details refer to pg. 34



natural | green | white | red | bourgogne | dark brown

ROOFSTAR

APP

PROJECT SPECIFICATIONS: suitable for use in the residential building trade, applied in exposed multi-layer systems, systems to stop water infiltration and humidity in foundations and underground structures; high quality under-tile layer (slate version).

REINFORCEMENTS: reinforced glass mat, polyester with good mechanical properties and excellent dimensional stability.

FINISHES: polyethylene film, sand, mineral self-protection in different colours.

PLUS: a versatile membrane that is perfect for use in multi-layer applications with a wide thermal operating range of
-5°C/+130°C, that has been used for more than 25 years in many countries all over the world. Roofstar compound is ideal as a roots-stop membrane when antiroots additives are added.

CE

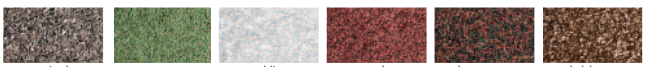
ROOFSTAR	STANDARD	U.M.	ROOFSTAR 2 mm - 3 mm - 4 mm	ROOFSTAR 3 mm - 4 mm	ROOFSTAR 3 mm - 4 mm	ROOFSTAR 4 kg - 4,5 kg - 5 kg	ROOFSTAR 4 mm - 5 mm
Finishing	-	-	PBS	SAND	SAND	MINERAL	MINERAL
Reinforcement type	-	-	GLASS FIBER	POL	SP POL	POL	SP POL
Thickness	EN 1849 - 1	mm	2 / 3 / 4	3 / 4	3 / 4	-	4* / 5*
Weight	EN 1849 - 1	kg	-	-	-	4 / 4,5 / 5	-
Maximum Tensile Force Longitudinal / Trasversal	EN 12311-1	N/5cm	350 / 190	500 / 400	600 / 500	500 / 400	600 / 500
Elongation at break Longitudinal / Trasversal	EN 12311-1	%	>2 / >2	35 / 35	40 / 40	35 / 35	40 / 40
Tearing resistance Longitudinal / Trasversal	EN 12310 -1	N	60 / 70	140 / 140	150 / 150	140 / 140	150 / 150
Flow resistance at elevated temperature	EN 1110	°C	130	130	130	130	130
Flexibility at low temperatures	EN 1109	°C	-5**	-5**	-5**	-5**	-5**
Dimensional stability	EN 1107-1	%	-	±0,3%	±0,3%	±0,3%	±0,3%

* THICKNESS MEASURED INCLUDING MINERAL FINISHING; ** ROOFSTAR may be supplied on request with flexibility at low temperatures up to -10°C

rev 01/2017

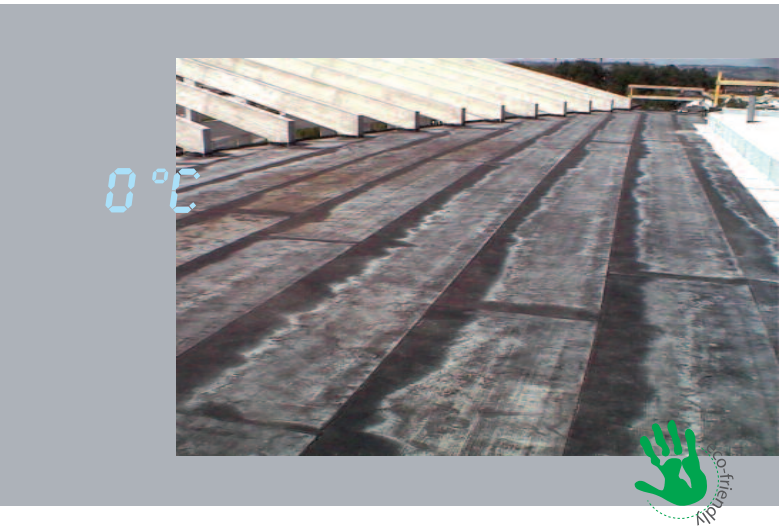
***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Roofstar
Other finishing, on request. For finishing details refer to pg. 34


natural green white red bourgogne dark brown

VISCOGUM

APP



PROJECT SPECIFICATIONS: modified bitumen APP membrane particularly suitable for multi-layer solutions in cement, metal or wooden structures, with or without thermal insulation. The versions with HSP polyester are specifically used in applications that require particular mechanical properties (foundations, retaining walls and heavy under-slabs etc.).

REINFORCEMENTS: a wide range of stabilised polyester TNT reinforcements with different mechanical properties in order to meet the design requirements of different technical solutions. Also available with fibre glass reinforcement.

FINISHES: polyethylene film, sand, mineral self-protection in different colours.

PLUS: thanks to the excellent performance of the compound at high temperatures even after ageing, VISCOGUM has been used very successfully for more than 25 years in countries with very hot climates such as those in the following geographical areas: Africa, Middle East, South-East Asia and South America. The wide range of Viscogum products makes it possible to design and customise the most common technical solutions.

CE

VISCOGUM	STANDARD	U.M.	VISCOGUM 2 mm - 3 mm 4 mm	VISCOGUM 3 kg - 4 kg - 4,5 kg	VISCOGUM 3 mm - 4 mm	VISCOGUM 3 mm - 4 mm	VISCOGUM 4 mm	VISCOGUM 4 kg - 4,5 kg 5 kg	VISCOGUM 4 kg - 4,5 kg 5 kg	VISCOGUM 4 mm
Finishing	-	-	PBS	SAND/PBS	SAND/PBS	SAND/PBS	SAND/PBS	MINERAL	MINERAL	MINERAL
Reinforcement type	-	-	GLASS FIBER	POL	POL	SP POL	HSP POL	POL	SP POL	HSP POL
Thickness	EN 1849 - 1	mm	2 / 3 / 4	-	3 / 4	3 / 4	4	-	-	4*
Weight	EN 1849 - 1	kg	-	3 / 4 / 4,5	-	-	-	4 / 4,5 / 5	4 / 4,5 / 5	-
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	350 / 190	400 / 300	500 / 400	600 / 500	850 / 650	400 / 300	600 / 500	850 / 650
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	>2 / >2	35 / 35	35 / 35	40 / 40	40 / 40	35 / 35	40 / 40	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	60 / 70	130 / 130	130 / 130	150 / 150	170 / 170	130 / 130	150 / 150	170 / 170
Flow Resistance at Elevated temperature	EN 1110	°C	130	130	130	130	130	130	130	130
Flexibility at low temperatures	EN 1109	°C	0	0	0	0	0	0	0	0
Dimensional stability	EN 1107-1	%	-	±0,3%	±0,3%	±0,3%	±0,2%	±0,3%	±0,3%	±0,2%
Thermal ageing in air Variation of flow resistance at elevated temperature	EN 1296 EN 1110	Δt°C	10	10	10	10	10	10	10	10
Softening point (ring & ball test)	EN 12316-1	°C	>150	>150	>150	>150	>150	>150	>150	>150

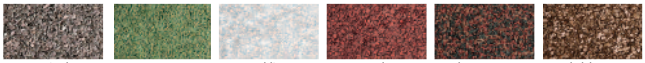
* THICKNESS MEASURED INCLUDING MINERAL FINISHING

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Viscogum

Other finishing, on request. For finishing details refer to pg. 34



natural | green | white | red | bourgogne | dark brown

EXTENDER

SBS

PROJECT SPECIFICATIONS: perfect for multi-layer solutions protected from UV rays, in case of roofing in cold areas with high temperature fluctuations: roofs subject to micro-settlements, vibrations, cyclic thermal-mechanical expansion and actions in cement, metal or wooden structures, even in case of thick insulation.

REINFORCEMENTS: selected reinforcement in stabilised polyester TNT with excellent mechanical properties.

FINISHES: polyethylene film, mineral self-protection in different colours.

PLUS: bitumen-based compound modified with SBS (Styrene-Butadiene-Styrene) rubber, formulated to ensure a minimum flexibility of -15°C, excellent adhesion on decks, easy to apply even in critical points.

CE

EXTENDER	STANDARD	U.M.	EXTENDER 3 mm - 4 mm	EXTENDER 3 mm - 4 mm	EXTENDER 4 kg - 4,5 kg 5 kg	EXTENDER 4 mm
Finishing	-	-	PBS	PBS	MINERAL	MINERAL
Reinforcement type	-	-	SP POL	HSP POL	SP POL	HSP POL
Thickness	EN 1849 - 1	mm	3 / 4	3 / 4	-	4*
Weight	EN 1849 - 1	kg	-	-	4 / 4,5 / 5	-
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	600 / 500	850 / 650	600 / 500	850 / 650
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	40/ 40	40 / 40	40 / 40	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	150 /150	170 /170	150 / 150	170 / 170
Flow resistance at elevated temperature	EN 1110	°C	100	100	100	100
Flexibility at low temperatures	EN 1109	°C	-15	-15	-15	-15
Dimensional stability	EN 1107-1	%	±0,3%	±0,2%	±0,3%	±0,2%

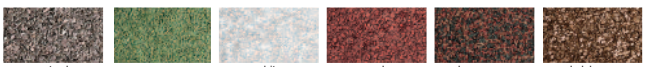
* THICKNESS MEASURED INCLUDING MINERAL FINISHING

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Extender

Other finishing, on request. For finishing details refer to pg. 34


natural green white red bourgogne dark brown

EXTENDER H

SBS

PROJECT SPECIFICATIONS: Bitumen membrane modified with SBS (styrene-butadiene-styrene) especially formulated for warm climates, and for areas subject to high temperature fluctuations. Perfect for multi-layer solutions protected from UV rays, in case of roofing subject to micro-settlements, vibrations, cyclic thermal-mechanical expansion and actions in cement, metal or wooden structures, even in case of thick insulation. The versions in HSP reinforcement are ideal for underground waterproofing applications (foundations, retaining walls and heavy under-slabs etc.).

REINFORCEMENTS: A wide range of stabilised polyester TNT reinforcements to meet the design requirements of different technical solutions.

FINISHES: polyethylene film, mineral self-protection in different colours.

PLUS: the perfect balance, between the flexibility at low temperatures of the SBS compounds and the shape stability at high temperatures (-10°C/130°C)** makes Extender H elastomer membranes the most commonly used membranes in countries with hot climates like those in the following areas: Africa, Middle East, South-East Asia and South America. The wide range of Extender H products makes it possible to design and customise even the most complex technical solutions. Extender H compound, is ideal as a root-stop membrane when antiroots additives are added.

CE

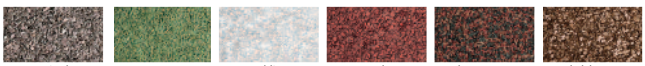
EXTENDER H	STANDARD	U.M.	EXTENDER H 3 mm - 4 mm	EXTENDER H 3 mm - 4 mm	EXTENDER H 4 mm	EXTENDER H 4 kg - 4,5 kg 5 kg	EXTENDER H 4 kg - 4,5 kg 5 kg	EXTENDER H 4 mm
Finishing	-	-	PBS	PBS	PBS	MINERAL	MINERAL	MINERAL
Reinforcement type	-	-	POL	SP POL	HSP POL	POL	SP POL	HSP POL
Thickness	EN 1849 - 1	mm	3 / 4	3 / 4	4	-	-	4*
Weight	EN 1849 - 1	kg	-	-	-	4 / 4,5 / 5	4 / 4,5 / 5	-
Maximum Tensile Force Longitudinal / Trasversal	EN 12311-1	N/5cm	500 / 400	600 / 500	850 / 650	500 / 400	600 / 500	850 / 650
Elongation at break Longitudinal / Trasversal	EN 12311-1	%	35 / 35	40 / 40	40 / 40	35 / 35	40 / 40	40 / 40
Tearing resistance Longitudinal / Trasversal	EN 12310 -1	N	140 / 140	150 / 150	170 / 170	140 / 140	150 / 150	170 / 170
Flow resistance at elevated temperature	EN 1110	°C	130	130	130	130	130	130
Flexibility at low temperatures	EN 1109	°C	-10**	-10**	-10**	-10**	-10**	-10**
Dimensional stability	EN 1107-1	%	±0,3%	±0,3%	±0,2%	±0,3%	±0,3%	±0,2%

* THICKNESS MEASURED INCLUDING MINERAL FINISHING; ** EXTENDER H may be supplied on request with flexibility at low temperatures up to -15°C

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Extender H
Other finishing, on request. For finishing details refer to pg. 34

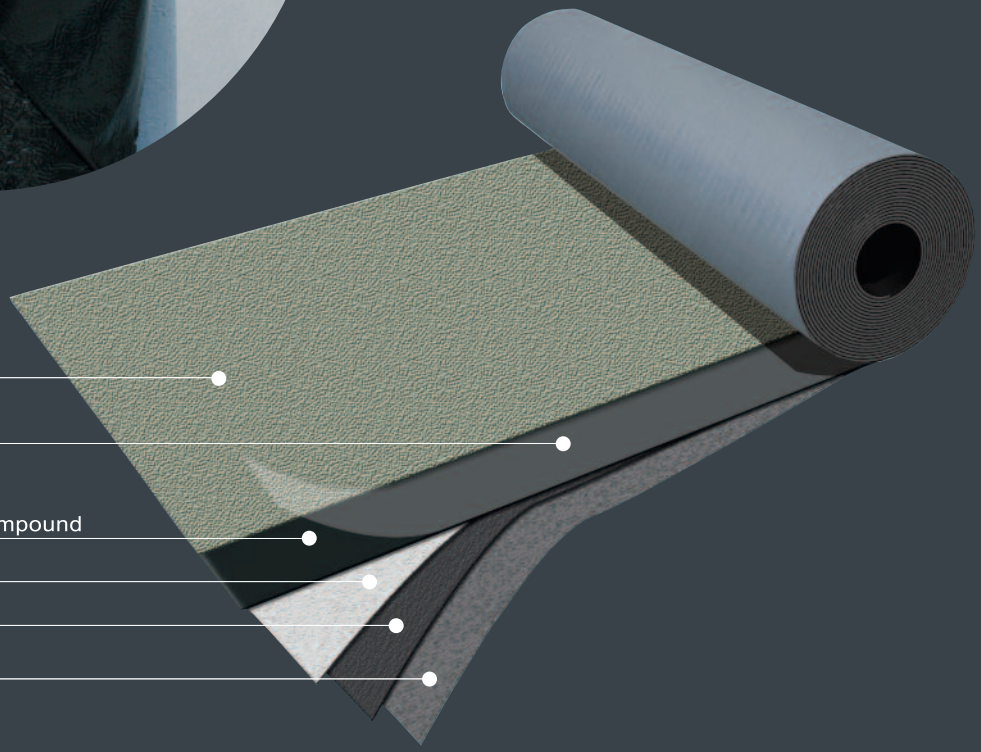

natural green white red bourgogne dark brown

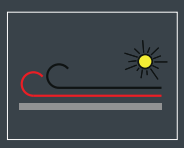
Flame free laying
Innovative APP/SBS compound
Mineral, PE, TEX finishing, HDPE Cross Laminated
Wide range of applications

CASALI
advanced solutions for building

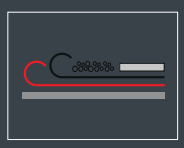
ADERIX

the cutting-edge of self-adhesion

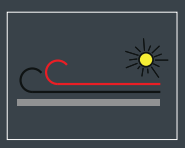




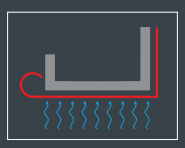
EN 13707
Underlayer in Multilayer Systems without permanent heavy protection.



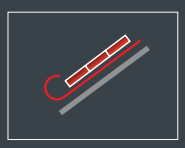
EN 13707
Underlayer in Multilayer Systems under heavy protection.



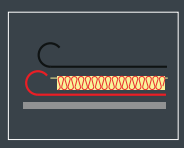
EN 13707
Top layer in Multilayer Systems without perma- nent heavy protection.



EN 13969
Dump proof bituminous sheet.



EN 13859-1
Undertile.



EN 13970
Vapour barrier.

Want to know more? Contact our Technical Assistance or visit our website
www.casali-group.com

PRODUCTS FOR SPECIAL APPLICATIONS

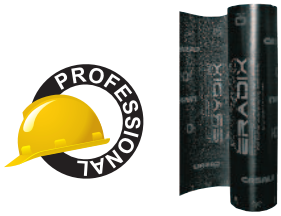
In addition to the waterproofing membranes for traditional uses, CASALI has developed a complementary range of products necessary for the correct design of the most complex waterproofing packages.

ERADIX

root-barrier waterproofing membrane

APP -15 °C

SBS -20 °C



PROJECT SPECIFICATIONS: root-stop waterproofing finish in multi-layer systems for waterproofing garden roofs or decks with vegetation in contact with the structure to be protected.

REINFORCEMENTS: stabilised polyester with different technical performances.

FINISHES: polyethylene film, mineral self-protection in different colours.

PLUS: barrier against the perforating action of roots guaranteed by the addition of a certified additive (complying with EN 13498). High mechanical strength, a wide thermal operating range that may be varied with respect to the type of compound modification (APP/SBS), better indoor temperature and humidity conditions and reduced environmental impact when applied as a waterproofing solution in the presence of vegetation on the roofing. In the 40200 version, the product has successfully passed the 4 year FLL root stop test.

FLL
Test di resistenza
alla propagazione delle radici

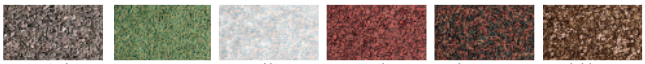
ERADIX	STANDARD	U.M.	ERADIX 4 mm (SBS)	ERADIX 40160	ERADIX 40200	ERADIX 45160
					FLL	
Finishing	-	-	PBS	PBS	PBS	MINERAL
Reinforcement type	-	-	SP POL	SP POL	HSP POL	SP POL
Thickness	EN 1849 - 1	mm	4	4	4	-
Weight	EN 1849 - 1	kg	-	-	-	4,5
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	700 / 600	600 / 500	800 / 800	600 / 500
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	40 / 40	40 / 40	45 / 45	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	150 / 150	150 / 150	220 / 240	150 / 150
Flow resistance at elevated temperature	EN 1110	°C	110	130	130	130
Flexibility at low temperatures	EN 1109	°C	-20	-15	-15	-15
Dimensional stability	EN 1107-1	%	±0,3%	±0,3%	±0,2%	±0,3%
Resistance to root penetration	EN 13948		PASS	PASS	PASS	PASS

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Slated Self Protection available for Eradix

Other finishing, on request. For finishing details refer to pg. 34


natural green white red bourgogne dark brown

VAPOREX

vapour barrier

APP

Rn barrier

PROJECT SPECIFICATIONS: **Vapour Barrier** for all those solutions with thermal insulation that cannot come into contact with humidity or in environments with high relative humidity levels such as swimming pools, drying chambers, industrial laundries etc., **Radon Gas Barrier** for the 4 mm Vaporex AL certified version, **Electromagnetic Wave Shield**.

REINFORCEMENTS: aluminium foil coupled with stabilised polyester.

FINISHES: polyethylene film.

PLUS: Excellent protection of the roofing system insulated against moisture seepage thanks to temperature and humidity regulation, perfect seal against Radon Gas.

NOTES: In case of insulated roofing, Vaporex must be used together with the humidity regulation membrane Gruver, installing also breather vents depending on the project specs.

VAPOREX	STANDARD	U.M.	VAPOREX AL 3 kg - 4 kg	VAPOREX AL 4 mm ANTIRADON
Finishing	-	-	PBS	PBS
Reinforcement type	-	-	AL + POL	AL + POL
Thickness / Weight	EN 1849 - 1	mm	-	4
Weight	EN 1849 - 1	kg	3 / 4	-
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	450 / 200	450 / 200
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	15 / 15	15 / 15
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	120 / 120	120 / 120
Flow resistance at elevated temperature	EN 1110	°C	-	-
Flexibility at low temperatures	EN 1109	°C	-5	-10
Dimensional stability	EN 1107-1	%	±0,3%	±0,3%
Permeability to vapour Resistance factor	EN 13948	μ	1.000.000	1.000.000

rev 01/2017

Reinforcement **- POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing*** **- MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

BASIC / EXTENDER VERT

bituminous membrane for vertical waterproofing applications

APP -10 °C

SBS -15 °C

PROJECT SPECIFICATIONS: torch-on waterproofing membranes for vertical applications designed specifically for underground projects requiring integrated systems that include a protective and drainage waterproofing membrane such as HDPE Protector.

REINFORCEMENTS: stabilised polyester TNT with excellent mechanical properties.

FINISHES: polyethylene film.

PLUS: easy to apply, perfect adhesion to vertical cement surfaces.

NOTES: This product should be used together with the protective membrane HDPE Protector.

BASIC / EXTENDER VERT	STANDARD	U.M.	BASIC 4 mm	BASIC 4 mm	EXTENDER VERT 4 mm	EXTENDER VERT 4 mm
Finishing	-	-	PBS	PBS	PBS	PBS
Reinforcement type	-	-	SP POL	HSP POL	SP POL	HSP POL
Thickness	EN 1849 - 1	mm	**4**	**4**	**4**	**4**
Weight	EN 1849 - 1	kg	**-**	**-**	**-**	**-**
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	600 / 500	850 / 650	700 / 600	850 / 650
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	40 / 40	40 / 40	40 / 40	40 / 40
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	150 / 150	170 / 170	150 / 150	170 / 170
Flow resistance at elevated temperature	EN 1110	°C	**130**	**130**	**100**	**100**
Flexibility at low temperatures	EN 1109	°C	**-10**	**-10**	**-15**	**-15**
Dimensional stability	EN 1107-1	%	**±0,3%**	**±0,2%**	**±0,3%**	**±0,2%**

rev 01/2017

***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

PROTECTOR

HDPE drainage and protection layer

PROJECT SPECIFICATIONS: HDPE membranes are designed to protect waterproofing for retaining walls in integrated systems using BASIC and EXTENDER VERT membranes, laying polyester TNT as a separator and installing a drainage system (perforated pipe) to collect the water and channel it towards the drain.

PLUS: very high mechanical strength, root-stop membrane that permits drainage thanks to its structure with truncated-conical embossing.

CASALI S.p.A. o.c. C.S.A.P.
Castelfiorentino (AN) • ITALY
www.casaligroup.it
info@casaligroup.it

PROTECTOR

PROTEZIONE E DRENAGGIO - *PROTECTION AND DRAINAGE*

MADE IN ITALY

Membrane HDPE per impieghi speciali

Membranes HDPE for special applications

PROTECTOR	STANDARD	U.M.	PROTECTOR HDPE
Thickness	EN 1849-1	mm	7,5
Colour	-	a	black
Length of the roll	-	m	20
Height of the roll	-	m	2
Mass per unit area	EN ISO 9864	kg/m²	0,4
Application temperature	-	°C	-40 / +80
Compression resistance	-	kN/m²	>120
Drainage air space	-	l/m²	5,8

rev 01/2017

GRUVER

vapour control layer

PROJECT SPECIFICATIONS: regulation element used on roofing where the membrane is partially bonded and when a vapour barrier and thermal insulation is installed.

REINFORCEMENTS: perforated glass mat.

FINISHES: Polyethylene film.

PLUS: allows the condensate under the vapour barrier to flow to the vents, improving the response of lightweight structures to mechanical stress.

NOTES: in case of insulated roofing, Vaporex must be used together with the humidity regulation membrane Vaporex, installing also breather vents, depending on project specs.

GRUVER	STANDARD	U.M.	15050
Finishing	-	-	PBS
Reinforcement type	-	-	GLASS FIBRE
Thickness	EN 1849 - 1	mm	-
Length of the roll	-	m	20
Height of the roll	-	m	1
Mass per unit area	EN 1849 - 1	Kg/m²	1,3
Flexibility at low temperatures	EN 1109	°C	-5
Softening point	-	°C	+120

***Reinforcement* - GLASS FIBRE**: fibre glass mat reinforced with threads - ***Finishing* - PBS**: Polyethylene on both sides.

rev 01/2017

UNIVERSAL UNDERLAY

universal multiuse underlayer

APP -5 °C

SBS -15 °C

PROJECT SPECIFICATIONS: waterproofing membranes suitable for use as an underlayer in multilayer systems. The versions with APP and SBS compound together with the stability of the glass mat makes it possible to use these membranes as complementary or vapour pressure check layers in systems with thermal insulation.

REINFORCEMENTS: reinforced glass mat.

FINISHES: polyethylene film.

PLUS: excellent dimensional stability thanks to the inner properties of the glass mat reinforcement.

UNIVERSAL UNDERLAY	STANDARD	U.M.	CASALI VV (APP) 2 kg - 3 kg	CASALI VV (SBS) 2 kg - 3 kg
Finishing	-	-	PBS	PBS
Reinforcement type	-	-	GLASS FIBRE	GLASS FIBRE
Thickness	EN 1849 - 1	mm	-	-
Weight	EN 1849 - 1	kg	**2 / 3**	**2 / 3**
Maximum Tensile Force LONGITUDINAL / TRASVERSAL	EN 12311-1	N/5cm	350 / 190	350 / 190
Elongation at break LONGITUDINAL / TRASVERSAL	EN 12311-1	%	>2 / >2	>2 / >2
Tearing resistance LONGITUDINAL / TRASVERSAL	EN 12310 -1	N	60 / 70	60 / 70
Flow resistance at elevated temperature	EN 1110	°C	**120**	**100**
Flexibility at low temperatures	EN 1109	°C	**-5**	**-15**

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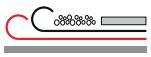
***Reinforcement* - POL**: standard performance stabilized non woven polyester / **SP POL**: medium performance stabilized non woven polyester / **HSP POL**: high performance stabilized non woven polyester / **GS POL**: special performance stabilized non woven polyester for great structure / **GLASS FIBRE**: fibre glass mat reinforced with threads / **ALL + POL**: aluminium foil coupled with non woven polyester - ***Finishing* - MINERAL**: slated / **SAND**: sanded / **PBS**: Polyethylene on both sides.

Adhesive compound
Loose laid
Time and energy saving
Ideal for flame sensitive substrate

THERMO ADER

Thermal activated compound waterproofing membrane.

EN 13707
Underlayer in Multilayer Systems without permanent heavy protection.



EN 13707
Underlayer in Multilayer Systems under heavy protection.

EN 13859-1
Undertile.

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SAFETY DATA SHEETS

REINFORCED BITUMEN SHEETS FOR ROOF WATERPROOFING

PRELIMINARY REMARKS
In compliance with current legislation on substances and mixtures, especially Regulation REACH (EC) N° 1907/2006 and Regulation CLP (EC) N° 1272/2008, the product subject of this documentation is defined an "article". Unlike suppliers of substances and mixtures, suppliers of articles are not required to provide its customers standardized information[1]. The product covered by this document is not subject of issuance of Safety Data Sheet (SDS). However, it seems appropriate, in order to allow a correct use, to provide the following information using the scheme in sixteen points of Annex II of the REACH Regulation.

FEDERCHIMICA
CONFINDUSTRIA
AISPEC
MBP Gruppo produttori membrane bitume polimero

SAFETY DATA SHEETS
Reinforced bitumen sheets for roof waterproofing

1. PRODUCT AND PRODUCER IDENTIFICATION
1.1 Product identifier: Waterproofing membrane.
1.2 Relevant use: Waterproofing applications
1.3 PRODUCER IDENTIFICATION
Name: CASALI S.p.A.
Address: Zona Industriale C.I.A.F. 60015 Castelferretti Falconara M.ma Ancona
E-mail: info@casaligroup.it
1.4 EMERGENCY TELEPHONE NUMBER: +39 (0)71 9162095

2. HAZARD IDENTIFICATION
2.1 CLASSIFICATION. The product is not classified as hazardous in accordance with the national regulation (D.Lgs. n. 65/03).
2.2 HEALTH RISK Acute nose and throat irritation are possible during the heat treatment and application of the product, especially in indoor areas, due to the inhalation of potentially hazardous substances such as gas and condensed fumes.
2.3 SAFETY RISK The molten product may adhere to the skin and may cause burns. The presence of inflammable materials (HC vapours, etc.) may cause fire events.
2.4 ENVIRINMENTAL RISKS Membranes may cause long-term adverse effects because their components are not biodegradable.

3. COMPOSITION/INFORMATION ON INGREDIENTS
3.1 COMPOSITION. The product consists in a mixture of penetration grade bitumen and polyolefin and/or elastomer polymers, manufactured in membrane rolls.
3.2 INFORMATION ON INGREDIENTS: The product does not contain any hazardous components in accordance with the national regulation (D.Lgs. n. 65/03 and subsequent modifications).

4. FIRST AID MEASURES
4.1. INHALATION In case of long-term inhalation of fumes, particularly in indoor or poorly ventilated environments, move person to fresh air and call for medical assistance..
4.2. SKIN CONTACT In case of skin contact with molten product, immediately flush skin with plenty of fresh water. Do not pull solidified product away from the skin by using solvents. Remove contaminated clothing immediately and seek immediate medical advice.
4.3 EYE CONTACT If substance has got into eyes, wash out with water for at least 15 minutes and seek immediate medical attention. Do not pull product away from the eye. In case of irritation by fumes wash out with cold water.
4.4 INGESTION: Seek immediate medical attention.

5. FIREFIGHTING MEASURES
5.1. EXTINGUISHING MEDIA: CO_2, nebulized water, foam, dry chemical. Do not use direct stream of water to extinguish.
5.2. PERSONAL PROTECTION: In the event of fire, use supplied air respirators with universal filter U.P. In the case of indoor or poorly ventilated environments the personnel involved must be equipped with the breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES
Not applicable.

7. HANDLING AND STORAGE
7.1 CONDITIONS FOR SAFE STORAGE Protect material from heat and direct sunlight (temperature 0°- 40°C) and keep away from electrical equipment. Keep rolls in a vertical position and do not stack them. For safe storage follow the specific storage recommendations for this product. It is not necessary to take precautionary measures to prevent the formation of static electricity. Open flames are prohibited. Keep extinguish media available (Point 5).
7.2 PRECAUTIONS FOR SAFE HANDLING
Provide appropriate ventilation when the product is applied in indoor or poorly ventilated environments.
7.3 PRECAUTIONS FOR USE
Membrane applications should follow the “Technical instructions” provided by the manufacturer, according to the principles of good technique and Safety (point 8,16).
In case of indoor or poorly ventilated applications, use the Personal Protective Equipment (Point 8). Avoid open flames

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 EXPOSURE CONTROLS
Open flame operations involved in installing bitumen-polymer waterproofing membranes may generate the dispersion of potentially hazardous substances, among which polycyclic aromatic compounds. Provide appropriate ventilation when the product is applied in indoor or poorly ventilated environments (Point 2) in order to keep the exposure levels below the required limits (T.L.V.- ACGIH).
8.2 PERSONAL PROTECTIVE EQUIPMENT
During product applications, the following personal protective equipment is recommended: Skin protection: protective gloves; long sleeve shirt, trousers, safety shoes. Eye protection: safety glasses. In case of indo or poorly ventilated indoor applications provide appropriate ventilation (Point 8.1). In case of inadequate ventilation system, use a respiratory protection equipment. The use of particulate filter respirators against solid & liquid particles is recommended (P3 protection).
8.3 HYGIENIST MEASURES
Wash hands before every break and after the work shift. Keep work clothes separate from the other clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES
- PHISICAL FORM: membrane rolls
- ODOUR: slight bitumen odour
- pH: not applicable
- BOILING POINT/RANGE: > +470 °C approx. (bitumen)
- MELTING POINT/RANGE: > +100 °C
- FLASH POINT: > + 230° C approx. (bitumen)
- INFIAMMABILITY(solid, gas): calorific value 9000 kcal/kg approx.
- AUTOIGNITION TEMPERATURE: > +485°C approx. (bitumen)
- EXPLOSIVE PROPERTIES: NO
- OXIDIZING PROPERTIES: NO
- VAPOUR PRESSURE: not applicable
- DENSITY 1 ÷ 1.5 kg/dm³
- SOLUBILITY IN WATER: NO
- LIPID SOLUBILITY: YES (organic solvents, oils)

10. STABILITY AND REACTIVITY
10.1 STABILITY: The product is stable and is not considered to be reactive under normal temperature and pressure.
10.2 REACTIVITY: The product is chemically inert.
10.3 INCOMPATIBLE MATERIALS: Avoid contacts with oxidizing agents, especially under high temperatures, because the product may have exothermic reactions.

11. TOXICOLOGICAL INFORMATION
11.1 THE PRODUCT: The product consists in a mixture of distilled bitumen and polyolefin and/or elastomer polymers and reinforcement.
The product does not contain coal tar and asbestos.
The product is not classified as hazardous.
11.2 INFORMATION ON TOXICOLOGICAL EFFECTS
The product may be applied in adhesive cold or heat welded. Open flame operations involved in installing bitumen-polymer waterproofing membranes may generate the dispersion of potentially hazardous substances, among which polycyclic aromatic compounds. The exposure levels to these substances are widely below the normative limits for IPA fumes in metropolitan areas (Source: Bertazzi PA, FOA' V., Fustinoni S., see section 16)
Acute health hazards:
- eye irritation
- skin irritation
- nose and throat irritation

Repeated long-term exposure needs regular medical examination, in accordance with national regulation (D.L. 25/2002 and DLgs 81/2008 and subsequent modifications).
The product should be applied in accordance with the rules of hygiene, safety and good industrial practice, according to the technical instructions provided by the manufacturer.

12. ECOLOGICAL INFORMATION
The product must be stored and used in accordance with the rules of hygiene, safety and good industrial practice, according to the technical guidance provided by the manufacturer (Point 7). Dispose of this product according to national regulations, in order to avoid environmental pollution (Point 13).

13. DISPOSAL CONSIDERATIONS
Dispose of the product in landfill. The product is classified as non hazardous special waste in accordance with national regulations (D.Lgs 152/2006 and subsequent modifications).

14. TRANSPORT INFORMATION
No special trasportation or shipping requirements.

15. REGULATORY INFORMATION
15.1 LABEL: no labelling required
R - Phrases: not applicable (or hazard statements)
S - Phrases: not applicable (or precautionary statements)
15.2 EUROPEAN REGULATION: Directive 67/548/CEE, Directive 1999/45/CE, Directive 91/155/CEE (and subsequent modifications and integrations). Directive 92/32/CEE, Directive 93/67/CEE Regulation 793/93, Regulation1488/94, Directive 98/24/CE, Directive 2001/60/CE, Directive 2004/73/CEE, Regulation (CE) n.1907/2006 (REACH), Directive 2008/98/CE.
15.3 ITALIAN REGULATION: D.Lgs. 14 marzo 2003, n. 65; DPR 9 giugno 1975 n. 482, DPR 13 aprile 1994, n. 336, D.Lgs. 2 febbraio 2002 n. 25, D.Lgs. 3 febbraio 1997 n.52; D.Lgs n° 285/98; D.lgs 152/2006, D.Lgs. n. 81/2008; D.lgs. n. 106/2009 (and subsequent modifications) .This safety Information data sheet includes the following 16 headings in accordance with Annex II of COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No.1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

16. OTHER INFORMATION
16.1 Check of application temperature
• CORRECT TEMPERATURE: when using hot air or flame , the correct application temperature is showed by
- a complete retraction of fusible surfacing film;
- blackening of talc/mineral finishing and polished surface.

In any case, the application is correct when a part of molten stream comes out from overlapped sheets. The maximum size of this part of stream has to be 1÷2 cm.
• FLAME COLOUR: During the application of the product, the colour of the flame has to be blue. If the colour of the flame is reddish it means that too much heat has been reached: this is not a correct and good practice.
• THERMOMETER USE: in case of application with molten bitumen, the temperature of the tank can be checked by a thermometer.
• OPEN FLAMES: avoid open flames in order to avoid risks of fire; keep fire extinguish media available.

1. with the exception of articles that contain SVHC (Substances of Very High Concern) in a concentration above 0.1% weight by weight (w/w), for which information must be provided in accordance with Article 33 of the REACH Regulation.

16.2 Main sources used to edit this safety data sheet:
• Istituto Superiore di Sanità – Prot. 30189/TOA6 del 10 ottobre 1997 "Classificazione di pericolosità del bitume e del catrame"
• NIOSH Registry of toxic effects of chemical substances SAX Dangerous Properties of industrial materials.
• Bertazzi P.A., Foà V., Fustinoni S., "Esposizione professionale a idrocarburi policlinici aromatici durante la stesura bituminosa", Università degli Studi di Milano, Dipartimento di Medicina del Lavoro, Milano, 2005.
• ACGIH: Threshold Limit Values (TLV) for chemical substances (2008).
• Atti del Convegno su Salute e sicurezza nelle opere di impermeabilizzazione con membrane bituminose, Albino 18 dicembre 2009)
The information contained herein is provided in the present state of our knowledge and may be subject to change and/or upgrades. The product must be stored and used in accordance with the rules of hygiene, safety and good industrial practice, according to the technical guidance provided by the manufacturer CASALI S.P.A. and in accordance with local and European regulations.

WARNINGS

ROOFING IN PREFABRICATED MEMBRANE REINFORCED WITH MODIFIED BITUMEN

A roofing project consisting of prefabricated waterproofing membrane reinforced with modified bitumen requires the correct planning of a number of different factors: proper dimensioning of the slope lines, a thermal-hygrometry test including the number of the vents, the number and dimensioning of the water drainage outlets on the roof, a study of "packet's" stability to wind action in accordance with the local weather conditions and use of the structure; installation of a vapour barrier or screen and calculation of the dimensions as well as the type, dimensions and density of the insulation and the dimensions and number of air vents; calculation of the dimensions and number of drainage points and the dimensions and number of mechanical fixing points; finally the method for laying the waterproofing membrane and the roofing packet as a whole must also be decided.

SHIPPING, HANDLING, STORAGE OF THE WATERPROOFING MEMBRANES

During shipment pallets should be firmly secured by means of transverse edges with padding to prevent signs on the rolls. Cover the pallets to prevent tears, cuts, damage from jolting, above all at very high or low temperatures. If the pallets are to be stored for a long period of time, keep them out of direct sunlight and protect them from very low temperatures. Violent jolting may tear, crack or bend a smooth surface and damage the waterproofing properties of the membrane, especially at low temperatures. Pallets should be stacked very carefully; black membranes should be stored in no more than two stacks (separated by a rigid partition to share the load while membranes protected with slate or metal lamina must not be stacked. Always rotate the materials in your warehouse remembering that materials delivered for example in January are designed for use at the specific weather conditions at that time of the year and the characteristics of these materials are not suitable, for example, for use in July. Self-protected membranes require particular handling both in terms of the above problems and because lots of the same colour may have a different shading. Rolls should not be lifted on the yard with ropes and cables fitted horizontally around the roll since these may bend the roll. The rolls should be handled with the pallets on which they are loaded and only the quantity of material required should be unloaded at the yard. This will greatly facilitate yard operations and handling. When pallets are to be left in the sun, even for short periods, longitudinal slits should be made on the shrink-wrapping to ensure proper ventilation thus preventing overheating of the membrane due to greenhouse phenomena which might damage the properties of the material and blacken the sanding and/or slate.

WORKPLACE SAFETY AND HEALTH REGULATIONS

Applicable safety regulations should at all times be followed at the workplace, implementing all the measures required to ensure proper processing, regular maintenance and cleaning of the premises, tools, machinery and equipment, ensuring that personnel use appropriate protection gear. Training courses and instructions should also be provided for workers on the proper method of handling loads: men may lift weights of up to 30 kg. women weights of up 20 kg. and teenagers weights of up to 15 kg. When working with an open flame, operators should follow the instructions of the manufacture of the propane gas torch, ensuring that fire extinguishers are present and in efficient working order and that the workplace is at all times well ventilated.

LAYING AND MAINTENANCE OF THE WATERPROOFING MEMBRANES

Membranes are fully bonded by torching the entire surface, the perimeters and vertical embossments. The second membrane should always be fully bonded on the first, staggering the sheets longitudinally by 50 cm and crosswise by half a roll. This laying technique is ideal for roofing with rigid supports (clay-cement, concrete or R.C. floors). In the case of partial bonding, the membrane is torched on in part or a GRUVER membrane with 119 holes per sq.m. is laid on the deck fully bonding both the perimeters and the vertical embossments. The second membrane should always be fully bonded on the first, staggering the sheets longitudinally by 50 cm and crosswise by half a roll. This laying technique is ideal for roofing with a slope of no more than 30%, medium deformation rate, or over critical areas where low differentiated creep is expected. In the case of loose laying, the membrane is placed on the deck, fully bonding the perimeter and vertical embossment by torch.
The second membrane should always be fully bonded on the first, staggering the sheets longitudinally by 50 cm and crosswise by half a roll. This laying technique is ideal for flat roofing or in the case of roofing with slops of less than 5%, with heavy protection such as gravel ballasting, cement blocks, or cement casts, or when the deck, in contact with the sealing element, is subject to differentiated creep, in order to prevent damage to the same. When thermally welded elements are to be laid, follow the instructions of the insulation manufacture using a system that ensures continuity between the deck and the membrane in order to ensure the stability of the roofing packet indicated by the specifications. Membranes laid in this way should be anchored with wide-head nails under the top and side overlaps of the membranes, making the overlap at least 5 cm wider; The number of anchor points should be calculated appropriately by the engineer but should in any case ensure the stability of the roofing to wind action. Tear-resistant membranes with high dimensional stability should be used in systems of this kind. When carrying out Periodic Maintenance on the roofing, at least the following operations should be carried out: clear wind-borne organic and inorganic waste, repair all the drainage outlets and protection devices (leaf grids), check the seal of the flashing, check and repair the route used for maintenance of the applications on the roofing, check the structural and expansion joints on the roofing and touch up the pain if necessary.

PREPARING THE DECK FOR THE WATERPROOFING MEMBRANES

Check the slope and the joints with the vertical walls and ensure that the areas around particular points on the roofing are laid efficiently and in accordance with specifications. Remove all traces of roughness, sand, iron, nails etc. that might damage the deck or the efficiency of the successive layers; if necessary level off the deck with cement mortar or lay a partition and/or a bitumen membrane connection layer. The deck should be prepared and the roofing packet laid at temperatures (winter 5°C, summer 35°C) that do not cause condensate, ice, delay curing and excessively rapid evaporation which might cause cracks, bubbles or lamination to the detriment of the properties of the materials.
Cement-mortar and R.C. structures and Pre-compressed R.C.: in addition to the above, allow the deck to cure properly and then apply a coating of DERMAPRIMER bitumen primer using at least 300 ml per sq.m. along all the perimeters and on critical points as well as on the surface if the next layer is to be apply by brush or spray. When the deck has cured, start laying the elements of the packet. Corrugated sheet-plate structures: ensure that the deck has no projecting nails and that the joints between the metal elements and the vertical walls are perfectly smooth and have no edges that might damage the membrane or the successive elements; if necessary install "links" of at least 50 cm on the areas you are treating or along the joints of the metal panels. Apply a coating of DERMAPRIMER bitumen primer using at least 200 ml per sq.m. along all the perimeters and specific areas and on the deck if the next layer is to be brushed or sprayed on. When the primer has cured, start laying operations. Wooden structures: these structures must be protected from flames. To do this, dry lay a separating polyester reinforced membrane orthogonally to the slope anchoring it with wide-head nails staggered at intervals of 33 cm.
In the case of gabled roofing in wind exposed areas, the separation layer should be nailed in applying a coat of ECOMASTIK environmentally-friendly glue using at least 300 ml/sq.m., to ensure total adherence of the layer before laying the membrane.

LAYING SINGLE-LAYER WATERPROOFING MEMBRANES

Only specifically designed membranes should be used for single-layer applications and used as expressly provided by EN 13707. Single-layer applications require correct planning and use of control and protection accessory and supplementary elements such as continuity layers in the correct order: this layer prepares the deck for the waterproofing membrane and may be nailed in or hot or cold glued to improve the planarity of the surface, for example, above thermal insulating panels on cement decks etc.. In the case of prefabricated concrete structures, a "link" system consisting of a polymer bituminous membrane section along the joints, fully bonded only on one side before applying the equalisation layer. Protection Layer: this layer checks alterations due to mechanical stress (treading or placement of objects), physical/chemical or decorative elements (prevents natural ageing of the bitumen by UV rays). Separation and/or Creep Layer: this layer prevents physical/chemical interaction between adjacent layers, for example it may be used to protect the underlying layer from flames as in the case of unprotected insulation or wooden roofing or limit the binding points between adjacent layers having different thermal or mechanical mobility. Layer for Controlled Applications: this layer controls the adhesion of the bituminous layer to the layer below. It generally consists of a fairly thin bituminous membrane (approx. 1.2 – 1.5 mm), with holes which is dry laid with jointly freely overlapped. It is essential to install this layer under vapour barriers in the case of thermally insulated roofing in that it allows the water vapour to migrate under the roofing packet to the condensate outlets. Vapour Pressure Equalisation or Diffusion Layer: it is essential to install this layer in the case of thermally insulated roofing in order to prevent the excess condensate which forms under the roofing packet to penetrate to the overlying layers and flow to the air vents. Generally, it consists of a bituminous membrane reinforced with a semi-bonded "Vaporex" type lamina (GRUVER), connected to a network of condensate outlets spaced appropriately over the entire surface. Other control and protection devices are as follows: air vents, metal protection flashing for the perimeter walls, banisters etc., metal joint caps dimensioned specifically for the applicable load of the roofing along the structural and/or expansion joints, drainage outlets, reflecting paint requiring periodic touching up.

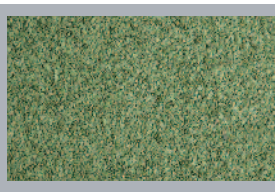
LAYING WATERPROOFING MEMBRANES SELF-PROTECTED WITH SLATE

These membranes are fully bonded to the first layer staggering the sheets longitudinally by 50 cm and crosswise by half a roll. The longitudinal joints are torched off welding the selvage by about 10 cm (+ 5 cm for single-layer applications), while overlaps of at least 15 cm should be made for the head joints (+5 cm for single-layer applications), torching off excess slate before welding the joint in order to ensure major adhesion. In the case of vertical embossments, they should be overlapped by an extra 5 cm with respect to the underlying layer and fully bonded. In the case of particular weather and/or project conditions, a styrol-acrylic slate fixation such as DERMAFIX, should be sprayed on using 250 ml per sq.m. to prevent excessive loss of the slate protection. Overlaps should be made very carefully, directing the flame in such a way as to avoid damaging the chips laid immediately after (the operation should therefore be carried out by two operators) using a dampened wooden hammer (to prevent any molten compound that may have leaked from sticking to the hammer); the overlap should be hammered to improve adhesion between the two sheets without interfering with the uniform distribution of the slate chip protection.

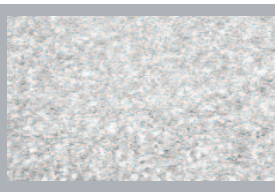
SLATED SELF-PROTECTION PROTECTIVE PAINTS

SLATED SELF-PROTECTION * COLOURS

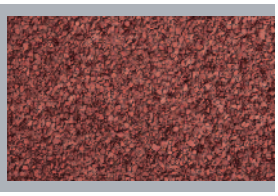
natural



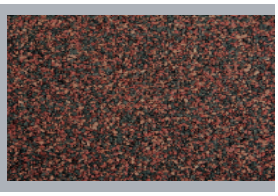
green



white



red

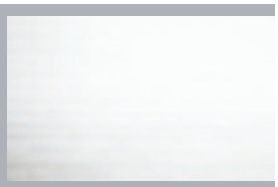


bourgogne

dark brown

PROTECTIVE PAINTS

DERMACOLOR
Acrylic paint in water emulsion for bituminous membranes.
Colours availeable: red grey, white, green
(pg. 44)



DERMACOLOR COOL ROOF
High reflectance protective paint in water emulsion for bituminous membranes and metal surfaces
Colour: white
(pg. 44)

REFLEX
REFLEX AR
REFLEX W
Reflective aluminium paint for bituminous membranes.
(pg. 42-43)

**) Available upon request white high reflectance chips and other types of mineral finishing protections, such as ceramic granules, micro-mineral etc. For further information please contact our Sales Department.*

POLYETHYLENE FINISHING

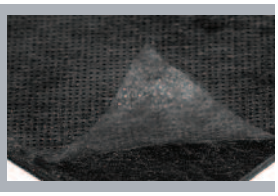
Branded
Polyethylene sheet

Casali PE film

Casali Mineral PE film

Casali Eradix PE film

PP NON-WOVEN FINISHING



Functional Polypropylene
non-woven finishing

ACCESSORIES

EXHALATORS

DRAINS

DRAINS

DRAINS

LEAF GUARD

TROWEL

BURNERS

GENERAL INSTRUCTIONS

PACKAGING
Membranes are supplied in rolls secured by tape and packaged on pallets. The number of rolls per pallet depends on the type of membrane, weight, thickness and length, as indicated by the relevant product datasheet. The rolls are packed on the pallet in upright position and should remain in this position at all times.

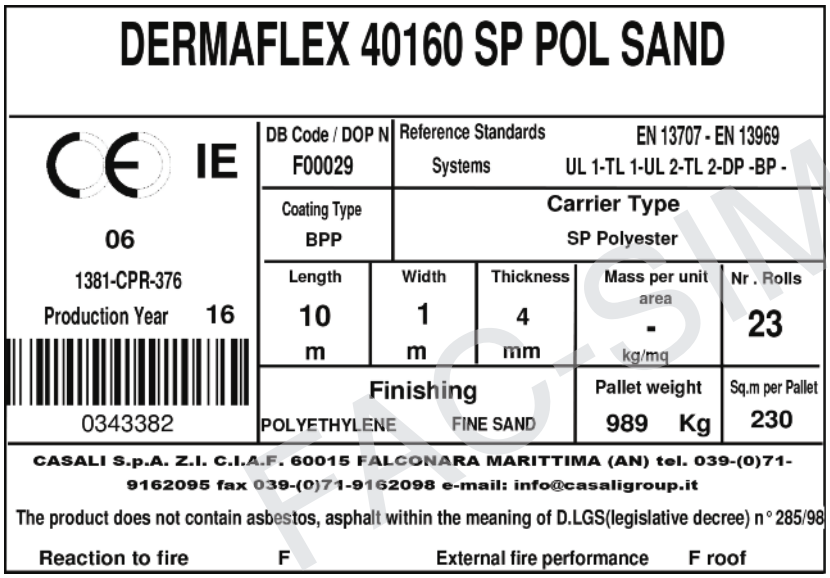
MEMBRANE PALLETS
The membrane pallets used by Casali are covered by white shrink wrapped polyethylene film with the Casali logo and artwork.

STORAGE
The pallets should be stored in a warehouse or under roofing, and protected from very low and very high temperatures. This rule should also be followed at the work site since this will ensure that the membrane is perfect condition when laid. The membrane pallets should be stacked in rows of no more than two (and only one row in the case of the slated or metal lamina protected membranes) with dividing panel between the pallets to prevent the rolls on the bottom pallet from warping; this arrangement also ensures that stacks are perfectly stable. Loose rolls should be stacked upright on a flat and level surface.

TRANSPORT
Pallets must be perfectly stable during transport. Materials should be secured with transverse corner guards which do not mark the membrane rolls. The pallets must be protected so as to prevent slashing or jolting, above all at harsh temperature conditions.

LOADING-UNLOADING
Pallets should be handled with fork lifts or cranes at the work site, ensuring that equipment of appropriate capacity is used and that pallets are balanced to prevent accidents. Single rolls should be handled with care and should not be crushed, bent, cut or subject to heavy jolting; the rolls should not be lifted by means of ropes.

PALLET LABEL



DERMAFLEX 40160 SP POL SAND

CE IE

06

1381-CPR-376

Production Year 16

0343382

DB Code / DOP N	Reference Standards	EN 13707 - EN 13969
F00029	Systems	UL 1-TL 1-UL 2-TL 2-DP -BP -

Coating Type	Carrier Type
BPP	SP Polyester

Length	Width	Thickness	Mass per unit area	Nr . Rolls
10 m	1 m	4 mm	- kg/mq	23

Finishing		Pallet weight	Sq.m per Pallet
POLYETHYLENE	FINE SAND	989 Kg	230

CASALI S.p.A. Z.I. C.I.A.F. 60015 FALCONARA MARITTIMA (AN) tel. 039-(0)71-9162095 fax 039-(0)71-9162098 e-mail: info@casaligroup.it

The product does not contain asbestos, asphalt within the meaning of D.LGS(legislative decree) n° 285/98

Reaction to fire F External fire performance F roof

ROLL LABEL

CE

1381-CPR-376

06

DERMAFLEX 40160 SP POL SAND

DB Code / DOP Number F00029

Production Year 16

EN 13707 - EN 13969 Systems UL 1-TL 1-UL 2-TL 2-DP -BP -

3322342

Coating Type	BPP	
Carrier Type	SP Polyester	
Length	10	m
Width	1	m
Thickness	4	mm
Mass per unit area	-	kg
Roll weight	43	kg
Finishing	POLYETHYLENE FINE SAND	

CASALI S.p.A. Z.I. C.I.A.F. 60015 FALCONARA MARITTIMA (AN) tel. 039-(0)71-9162095 fax 039-(0)71-9162098 e-mail: info@casaligroup.it

The product does not contain asbestos, asphalt within the meaning of D.LGS(legislative decree) n° 285/98

Reaction to fire F External fire performance F roof

TAPES

Casali tapes are applied to each roll as follows:

Tape 1 (top):
- trade name of the product
- product certification (e.g. BBA, BRANZ, etc.)
- product mission
- Quality System logo
- Casali logo
- Casali company address

Tape 2 (bottom):
- type of reinforcement, weight or thickness of the membrane

Tape 3 (centre)
- additional production information

LIQUIDS

COMPLEMENTARY AND REFURBISHMENT PROTECTIVE COATINGS AND WATERPROOFING PRODUCTS

Casali's Line of liquid products for the building trade offers a wide range of alternative and/or complementary solutions for waterproofing systems commonly used on construction sites.
Thanks to work carried out by Casali's Research and Development laboratory, each product is constantly tested in different climatic conditions and for application on complex structures.
The line of liquid products include a very important range of acrylic or aluminised high-reflectance protective paints and bituminous products used as accessories in bituminous-polymer waterproofing membrane systems.
All products are guaranteed by Casali experience and quality.

To see the full range of Casali liquid waterproofing products, ask your area dealer for a copy of the catalogue or download the catalogue from our website www.casali-group.com.

DERMAPRIMER

Solvent-based bituminous primer

DESCRIPTION
DERMAPRIMER is a primer for bituminous waterproofing materials such as prefabricated membranes, liquid membranes and hot bitumen.
DERMAPRIMER consists of bitumen in solution, with solvents regenerated by distillation; the product is fast-drying and adheres to any surface. Dermaprimer may also be used to coat and protect ferrous materials such scaffolding, tanks, pipes, structures etc.

APPLICATION METHOD
Ready-to-use product, apply with a roller or brush. Dermaprimer may also be sprayed on (airless pump), after thinning the product with 10% solvent DIL R1.

AVERAGE CONSUMPTION
Coverage depends on the absorption properties of the deck.
As rule of thumb, about 0,2 kg/sq.m. should be used for cement decks.

COLOURS
Black

PACKAGING
metal drum:
5 l. - 10 l. - 20 l.

IDROPRIMER

Bituminous primer in water emulsion (environmentally friendly primer)

DESCRIPTION
IDROPRIMER consists of distilled bitumen, water and additives that ensure rapid drying. Idroprimer is a product with high binding properties, that improves the adhesion of bituminous waterproofing materials (prefabricated membranes, liquid membranes and hot bitumen) on any deck, including treated decks. Thanks to its composition in water emulsion, the product ensures a low level of harmfulness.

APPLICATION METHOD
Apply by roller or brush thinning the product with about 20% clean water. Idroprimer may also be sprayed on (airless pump), after thinning the product with 25% clean water.

AVERAGE CONSUMPTION
Coverage depends on the absorption properties of the deck. As rule of thumb, about 200 g./sq.m. should be used for cement decks.

COLOURS
Black

PACKAGING
Metal drum:
5 kg - 10 kg - 20 kg

DERMASTIK BS

Bituminous solvent-based glue for cold glueing bituminous membranes

DESCRIPTION
DERMASTIK BS is a black solvent-based bituminous glue formulated for gluing on old membranes and waterproofing new concrete or wooden decks as an alternative to the traditional torching on method. This is perfect solution for applications where torching on is not possible or risky and when laying membranes on decks made of combustible materials such as wooden roofs etc.
The layer of glue, which should be applied uniformly, also acts as an additional sealing and adhesive layer for decks with flaws or micro-cracks.

APPLICATION METHOD
DERMASTIK BS is a ready-to-use easy-to-apply paste, that is applied uniformly on flat horizontal decks (pitch of no more than 10%) with a notched trowel. When applying the product, the deck temperature should be above +10°C. In the case of lower temperatures, pre-heat Dermastik BS before application.

AVERAGE CONSUMPTION
1 kg/sq.m. - Coverage may vary according to the roughness of the deck.

COLOURS
Black

PACKAGING
Metal drum:
25 kg

IDROMASTIK

Bituminous glue in water emulsion for insulating panels

DESCRIPTION
IDROMASTIK is a bitumen based glue containing elastomers in water emulsion that may be used for gluing (vertical and horizontal) insulating panels, such as mineral wool, glass wool, polystyrene, etc., on transpiring decks made of concrete or wood.

APPLICATION METHOD
IDROMASTIK may be spot glued (40/50 g. each spot) at a distance of 30/35 cm., or glued in strips (width approx. 5 cm., thickness approx. 3-4 mm.) positioned at about 40 cm. from each other.
When applied vertically, use a temporary support while the product is drying.

AVERAGE CONSUMPTION
Approx. 0,5 kg/sq.m.

COLOURS
Black

PACKAGING
Metal drum:
20 kg

SINTOMASTIK

Solvent based bituminous glue for insulating panels

DESCRIPTION
SINTOMASTIK is a solvent-based product consisting of distilled bitumen and elastomers that may be used for gluing (vertical and horizontal) insulating panels, such as mineral wool, glass wool or polyurethane.

APPLICATION METHOD
SINTOMASTIK Sintomastik may be spot glued (40/50 g. each spot) at a distance of 30/35 cm., or glued in strips (width approx. 5 cm., thickness approx. 3-4 mm.) positioned at about 40 cm. from each other. When applied vertically, use a temporary support while the product is drying.

AVERAGE CONSUMPTION
Approx. 0,5 kg/sq.m.

COLOURS
Black

PACKAGING
Metal drum:
20 kg

LIQUID PRODUCTS

PAINTS AND PROTECTIVE COATINGS

REFLEX

Reflective aluminium paint for bituminous membranes

DESCRIPTION
REFLEX is a fast drying aluminium-coloured synthetic resin based paint. Thanks to its special composition after application the product creates a fully UV-opaque film that is reflective, with high coverage properties, and a high coefficient of adhesion to any bituminous surface. Reflex may be used to protect prefabricated and other bituminous waterproofing membranes from bad weather conditions and UV rays. Thanks to its reflective properties, the product insulates the membrane against direct contact with sunlight, thus reducing thermal ageing and consequent degradation. Reflex is also ideal for protecting metal surfaces (containers, tanks, pipes, etc.).

APPLICATION METHOD
Ready-to-use product, applied by roller, brush or spray after thinning with approximately 20% Dil S1. Two coats of the product should be applied, no earlier than 3-4 weeks after laying the bituminous deck.

AVERAGE CONSUMPTION
0,26 l./sq.m.

COLOURS
Aluminium

PACKAGING
Metal drum:
5 l. - 10 l. - 20 l.

REFLEX AR

Highly reflective aluminium paint for bituminous membranes

DESCRIPTION
REFLEX AR is a fast drying highly reflective aluminium-coloured synthetic resin based paint. Thanks to its special composition after application the product creates a fully UV-opaque film that is highly reflective, with high coverage properties, and a high coefficient of adhesion to any bituminous surface. REFLEX AR may be used to protect prefabricated and other bituminous waterproofing membranes from bad weather conditions and UV rays.
Thanks to its reflective properties, the product insulates the membrane against direct contact with sunlight, thus reducing thermal ageing and consequent degradation. Reflex AR is also ideal for protecting metal surfaces (containers, tanks, pipes, etc.).

APPLICATION METHOD
Ready-to-use product, applied by roller, brush or spray after thinning with approximately 20% Dil S1. Two coats of the product should be applied, no earlier than 3-4 weeks after laying the bituminous deck.

AVERAGE CONSUMPTION
0,26 l./sq.m.

COLOURS
Aluminium

PACKAGING
Metal drum:
10 l. - 20 l.

REFLEX W

Water-based reflective aluminium paint for bituminous membranes

DESCRIPTION
REFLEX W is a water-based aluminium coloured paint, formulated to protect prefabricated or liquid bituminous membranes. Thanks to its composition the product reflects UV rays preventing damage to the underlying membrane while keeping the membrane at a lower temperature. Reflex W is also ideal for protecting metal surfaces such as tanks, pipes, metal structures etc.

APPLICATION METHOD
Ready-to-use product that should be applied in two crossed coats no earlier than 3-4 weeks after laying the bituminous deck.

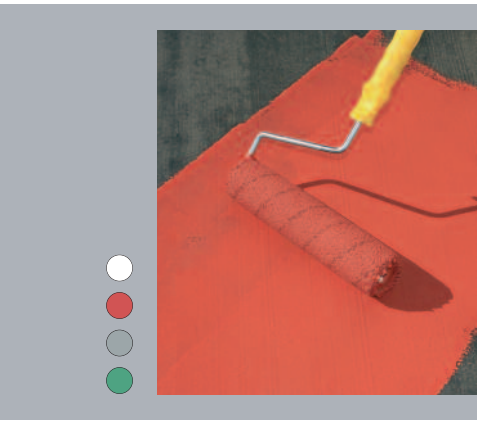
AVERAGE CONSUMPTION
0,20 l./sq.m. according to the absorption properties of the deck.

COLOURS
Aluminium.

PACKAGING
Metal drum:
5 l. - 10 l. - 20 l.

DERMACOLOR

Acrylic paint in water emulsion for bituminous membranes



DESCRIPTION
DERMACOLOR is a styrene-acrylic resin based paint in water solution with internal plasticisation. DERMACOLOR is used to protect prefabricated waterproofing membrane layers and hot (oxidised bitumen) or cold (bituminous liquid membranes) fluid systems from UV rays.
DERMACOLOR may also be used to protect polyurethane foam and as a coloured finish for acrylic and cement liquid waterproofing systems.

APPLICATION METHOD
Ready-to-use product that may be applied in two cross coatings by roller or spray. No primer is required even if the product is applied directly on unoxidised bitumen-polymer membranes that is not yet fully oxidised..

AVERAGE CONSUMPTION
Approx. 0,4 kg/sq.m.

COLOURS
White 601 - Red 102 - Grey 401 - Green 201

PACKAGING
Plastic drum:
20 kg

DERMACOLOR COOL ROOF

High reflectance protective paint in water emulsion for bituminous membranes and metal surfaces

DESCRIPTION
DERMACOLOR COOL ROOF is a high-reflectance synthetic-based white paint in water emulsion whose special formulation with glass micro-spheres makes it the ideal solution for protecting bituminous polymer waterproofing membranes against UV radiation, significantly lowering the surface temperature (up to 40°C with respect to a black membrane). This attenuates the phenomenon of urban heat islands, also reducing the deterioration of exposed waterproofing waterproof systems laid directly on the roofing, and giving significant a energy saving due to less use of the air conditioning systems in buildings.
DERMACOLOR COOL ROOF has been tested to ascertain its solar reflection index (SRI)* obtaining the excellent result of 103.5. The SRI indicates the capacity of a material to reflect ultraviolet rays so that the higher the index the greater the solar rays re-transmitted by the material will be, meaning that less heat is accumulated and transmitted to the rooms below; tests were carried out on the polymer bitumen membrane DermabitR (Casali).
DERMACOLOR COOL ROOF may also be used to protect foamed polyurethane and as an ultra-reflecting protective finish for Casali's liquid waterproofing systems.

APPLICATION METHOD
Ready-to-use product that may be applied in two cross coatings by roller or spray. No primer is required even if the product is applied directly on bitumen-polymer membranes that is not yet fully oxidised. When used to protect acrylic liquid (Acryroof) or cement (Dermacem) waterproofing, DERMACOLOR WL COOL ROOF may be applied immediately at the end of the cycle.

AVERAGE CONSUMPTION
0,4 kg/sq.m. for a sanded membrane
0,6 kg/sq.m. for a slate membrane

COLOURS
White

PACKAGING
Plastic drum:
16 kg

*) SRI: Solar Reflection Index

IDROBIT

Cold asphalt

DESCRIPTION
IDROBIT is a bituminous emulsion paste that ensures high-flow properties even on porous or absorbing decks. IDROBIT may be used to waterproof vertical surfaces where there is no pooling, such as retaining walls, foundations, RC pillars, metal or wooden surfaces.

APPLICATION METHOD
This ready- to-use product may be applied with a smooth metal trowel, roller or brush. DERMAPRIMER or IDROPRIMER should be used to improve the adhesion of the product to the deck. If the product is applied as a surface layer, it should be protected from sunlight with one or two coats of Reflex, Reflex AR, REFLEX W or Dermacolor.

AVERAGE CONSUMPTION
Approx. 1-1.5 kg/sq.m. applied in two coatings.

COLOURS
Black

PACKAGING
Plastic drum:
5 kg - 10 kg - 20 kg

CONGLOMERATO BITUMINOSO

Bituminous compound for road repairs

DESCRIPTION
Bitumen compound consisting of select high-performance long-storage emulsions and aggregates formulated for urgent maintenance work such as repairing potholes on road surfaces even in extreme weather conditions. Its innovative formula consisting of basalt aggregates, modified bitumen and vegetable flux with low environmental impact, ensures long lasting repairs.

APPLICATION METHOD
Ready to use product that may be applied "as it is" on perfectly clean decks with no traces of dust or debris that have been well compacted with a shovel or spade.

COLOURS
Black

PACKAGING
Bag:
25 kg

Apply with a shovel and steamroller.

BITUME OSSIDATO

Oxidised bitumen cakes

DESCRIPTION
Oxidised bitumen for use in waterproofing projects and the protection of concrete decks.

COLOURS
Black

PACKAGING
Bag:
25 kg

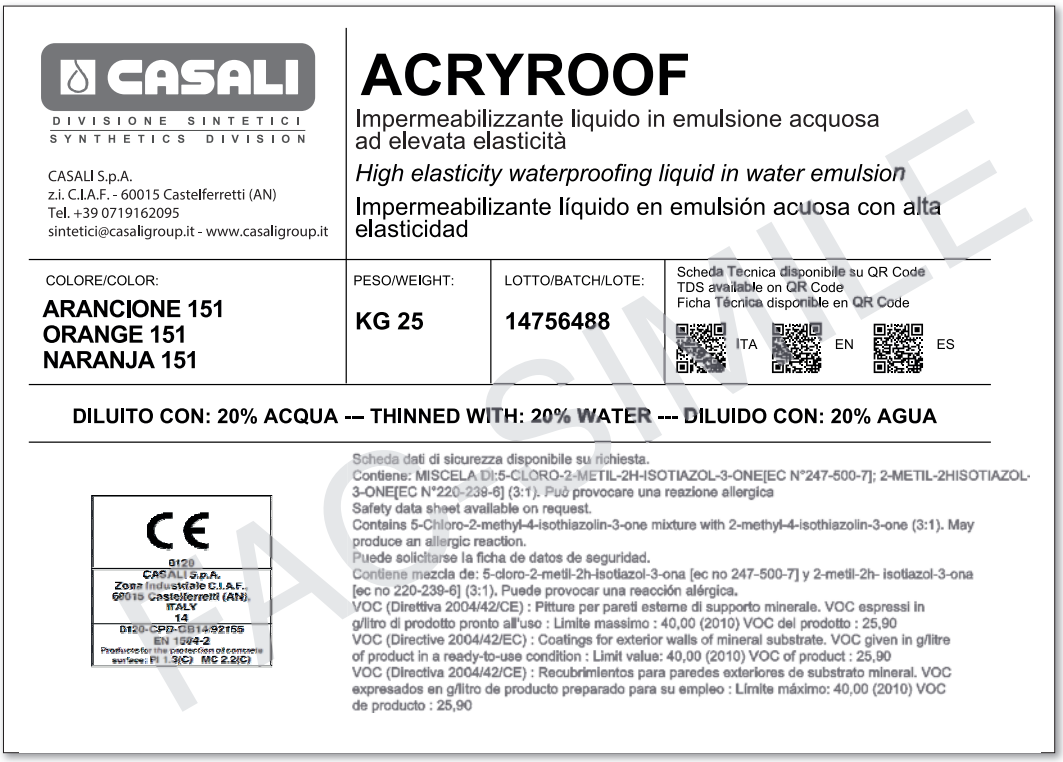
Application by melting pot.

STANDARD PACKAGES FOR COMPLETE PALLETS

The pallets used for our products contain the following number of pieces.
Casali reserves the right to change the number of pieces for reasons related to technical and/or market requirements.

QUANTITY (l.)	QUANTITY (kg.)	PACKAGING	N° PIECES	TOTAL WEIGHT
5 l	**5 kg**	Plastic drum	125	l 625 / kg 625
5 l	**5 kg**	Metal drum	125	l 625 / kg 625
10 l	**10 kg**	Plastic drum	64	l 640 / kg 640
10 l	**10 kg**	Metal drum	64	l 640 / kg 640
-	**10 kg (A+B)**	2 Plastic drums	48	kg 480
16 l	**20 kg**	Plastic drum	42	l 672 / kg 840
-	**20 kg (A+B)**	2 Plastic drums	36	kg 720
20 l	**20 kg**	Metal drum	42	l 840 / kg 840

COPY OF THE PACKAGE LABEL



CASALI
DIVISIONE SINTETICI
SYNTHETICS DIVISION

CASALI S.p.A.
z.i. C.I.A.F. - 60015 Castelferretti (AN)
Tel. +39 0719162095
sintetici@casaligroup.it - www.casaligroup.it

ACRYROOF

Impermeabilizzante liquido in emulsione acquosa ad elevata elasticità

High elasticity waterproofing liquid in water emulsion

Impermeabilizante líquido en emulsión acuosa con alta elasticidad

COLORE/COLOR:	PESO/WEIGHT:	LOTTO/BATCH/LOTE:	Scheda Tecnica disponibile su QR Code TDS available on QR Code Ficha Técnica disponible en QR Code
ARANCIONE 151 ORANGE 151 NARANJA 151	KG 25	14756488	ITA EN ES

DILUITO CON: 20% ACQUA -- THINNED WITH: 20% WATER --- DILUIDO CON: 20% AGUA

CE
0120
CASALI S.p.A.
Zona Industriale C.I.A.F.,
60015 Castelferretti (AN),
ITALY
14
0120-CPD-0814/92155
EN 1062-2
Products for the protection of concrete surfaces: PI 1.3(C) MC 2.2(C)

Scheda dati di sicurezza disponibile su richiesta.
Contiene: MISCELA DI:5-CLORO-2-METIL-2H-ISOTIAZOL-3-ONE[EC N°247-500-7]; 2-METIL-2HISOTIAZOL-3-ONE[EC N°220-239-6] (3:1). Può provocare una reazione allergica
Safety data sheet available on request.
Contains 5-Chloro-2-methyl-4-isothiazolin-3-one mixture with 2-methyl-4-isothiazolin-3-one (3:1). May produce an allergic reaction.
Puede solicitarse la ficha de datos de seguridad.
Contiene mezcla de: 5-cloro-2-metil-2h-isotiazol-3-ona [ec no 247-500-7] y 2-metil-2h- isotiazol-3-ona [ec no 220-239-6] (3:1). Puede provocar una reacción alérgica.
VOC (Direttiva 2004/42/CE) : Pitture per pareti esterne di supporto minerale. VOC espressi in g/litro di prodotto pronto all'uso : Limite massimo : 40,00 (2010) VOC del prodotto : 25,90
VOC (Directive 2004/42/EC) : Coatings for exterior walls of mineral substrate. VOC given in g/litre of product in a ready-to-use condition : Limit value: 40,00 (2010) VOC of product : 25,90
VOC (Directiva 2004/42/CE) : Recubrimientos para paredes exteriores de substrato mineral. VOC expresados en g/litro de producto preparado para su empleo : Límite máximo: 40,00 (2010) VOC de producto : 25,90

SGS ITALIA S.p.A.
ORGANISMO NOTIFICATO N. 1381

Certificate of Conformity of the Factory Production Control

1381-CPR-376 Milan, 29 January 2016

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Product Regulation or CPR), this certificate applies to the construction products

Flexible bitumen sheets for waterproofing

Produced by
Manufacturer: CASALI S.P.A.
Address: Zona Ind.le C.I.A.F. – 60020 – Castelleretti (AN)

This certificate attests that all provisions concerning the assessment and verification of Constancy of performance described in Annex ZA of the Standards

UNI EN 13707:2004+A2:2009 Flexible sheets for waterproofing – Reinforced bitumen sheets for roof waterproofing. Definitions and characteristics.

UNI EN 14695:2010 Flexible sheets for waterproofing – Reinforced bitumen sheets for waterproofing of concrete bridge decks and other trafficked areas of concrete - Definitions and characteristics

UNI EN 13969:2004/A1:2006 Flexible sheets for waterproofing Bitumen damp proof sheets including bitumen basement tanking sheets - Definitions and characteristics.

Under system 2+ for the performances set out above are applied and that the **Factory Production Control fulfils all the prescribed requirements for these performances**

This certificate has been issued on **29 January 2016** and will remain valid as long as the test methods and/or the factory production control requirements included in the harmonized standard, use to assess the performances of the declared essential characteristics, do not change, and the construction product and the manufacturing conditions in the plant are not modified significantly.

This certificate is a translation of the original certificate nr. 1381-CPR-376 in Italian language and must not be used for any legal interpretation.

Last Issue Date : **29 January 2016**

Position: RO CE Name: Renato Bonadio The Authorized Representative

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CE MARKING

All the products in the Casali range of membranes comply with CE marking requirements in accordance with the intended use of the specific products pursuant to EU Regulation for Construction Products 305/2011. CASALI provides a Declaration of Performance (DOP) for all products purchased.

Certificate N. IT06/0617

The quality management system of

CASALI S.p.A.

Zona Ind.le C.I.A.F. - 60020 Castelleretti (AN) - Italy

has been assessed and certified as meeting the requirements of

ISO 9001 / UNI EN ISO 9001:2008

For the following activities

Design, manufacture and marketing of waterproofing membranes and waterproofing systems, acoustic insulation systems for building, synthetic products for sports and industrial flooring, liquid waterproofing products, systems for encapsulating and asbestos removal, coatings and surface treatments. Marketing of synthetic geo-membranes and thermo-insulation waterproofed systems.

EA Sector: 14, 29

This certificate is valid from 01/09/2015 to until 01/09/2018 and remains valid subject to satisfactory surveillance audits. Re-certification audit due before 01/09/2018. Issue A Certified since 03/07/2006

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by contacting the organization

Authorized by Paolo Santarelli

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ISO 9001 QUALITY SYSTEM

In 1996 Casali introduced a certified Quality Management System in accordance with UNI EN ISO 9001:2008. This system requires specific control plans on the complete production and marketing chain (design, product manufacturing, sales and pre/post sales customer servicing) for each product line.

Disclaimer: *the data provided by this catalogue are the average results of tests carried out on our current products, and are therefore merely approximate; Casali S.p.A. accordingly reserves the right to modify the same without prior notice. The uses described are given as an example and not in a limiting sense, and represent case studies based on Casali's experience and are therefore approximate.*
The values and tolerances for the products described in this catalogue comply (according to the type of products) with EN 13707, EN 13969, EN 14695, EN 1504-2, EN 14891 and UEAtc directives. The normal warranty covering the specific characteristics of different types of membranes does not cover the aesthetic quality of the membranes, that may vary according to the combined action of different environmental factors.
The user is exclusively responsible for the proper or improper use of the above products and must assess whether the product is suitable for its requirements before use; the user should also adopt all the normal precautions that are necessary when handling chemical products.
The colours shown in this catalogue may not be true to the original colours. The manufacturer declines all and any liability for any differences in colour of the actual product and the colour shown by the photograph. Samples of the actual colour may be obtained from Casali's Technical Assistance Department.
To ensure uniformity of the colour and the best possible results, we recommend using products from the same production batch.
The conditions of supply are those shown by the price lists in force.
This catalogue does not replace the technical documents (technical specifications and data sheets) that may be obtained from the Technical Office of Casali or downloaded on the website www.casali-group.com.

Casali's Technical Assistance Department is at your complete disposal for any further information you may require, and to answer queries relevant to your specific project (Phone: +39 071 9162095 - e-mail: assistenzatecnica@casaligroup.it, sintetici@casaligroup.it).

CASALI

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