SYSTEM ENDURA

4.5kg APP Membrane | Technical Data Sheet

Lancastria™

Waterproofing Membrane

lancastria.com

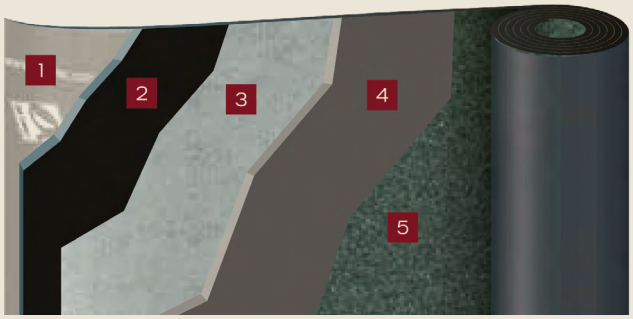
Description

SYSTEM ENDURA 4.5kg is a pre-fabricated waterproofing membrane made of distilled bitumen and elastoplastic polymers (APP) having a woven non woven single strand composite polyester reinforcement, which provide the membrane with good mechanical characteristics and excellent dimensional stability. This is a cap sheet that has a mineral slate finish to be self-protected on the upper face which reduce superficial heat absorption improving the durability of the membrane. The self-protected versions have a side selvedge of 10mm to improve adhesion between the sheets.

Stratigraphy

BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 16/5373

1. PE film
2. Waterproofing mass
3. Single strand composite polyester fabric
4. Waterproofing mass
5. Charcoal mineral finish



Method of application

- For the application of this membrane the use of heat is used by means of a gas torch or specific hot welder. Please ensure safe working practices are abided by to prevent any accidents from happening.
- When applying the membrane ensure that it is left sealed if the work job site has to be left before completion to prevent any water ingress or contamination.
- The application surface must not have any depressions to avoid the risk of ponding water, the slope must be at least 1.5% on concrete decks and 3% for steel or wooden ones, this to guarantee a proper run off of rainwater.
- The water drainage outlets should be sufficiently big enough to allow for rain water to be eliminated in an efficient way.
- Prepare cementitious substrates, including upstands and details, with a bituminous primer.
- Allow this preparation layer to dry before proceeding with any other operation.
- With prefabricated constructions, apply a suitable reinforcing strip along all joints. In the presence of construction joints, prefabricated panels or metal decks, suitable expansion joints are to be considered.
- The membranes must be applied to the substrate fully bonded.
- All details, perimeters, upstands, change of slope as well as projecting area must be fully bonded.

Fields of use

EN13707 Continuous roofs (Certificate n° 0958-CPR-2045/2)		
SYSTEM ENDURA PA 4.5 KG/M²		
N° layers	Single Layer	
	Double Layer	■
	Mutlilayer	■
Method of application	Torch	■
	Hot Air	
	Mixed (Torch/Air)	
	Cold Bond Glue	
	Mechanical Fixing	
	Thermo Adhesive / Self Adhesive	
Type of application	Fully Bonded	■
	Partially Bonded	
	Loose Laid	
Type	Complimentary Layer	
	Top Layer	■
	Heavy Protection	
	Anti-root	
	Other Uses	

The waterproofing membrane based on distilled bitumen and polymers, as shown in this data sheet does not require the issue of a MSDS, because it does not contain dangerous substances. The information data sheet for the proper use of products is available.

CE

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How to apply

Sizes & packing	
Rolls Size (m)	7.5 x 1
Rolls per pallet	30
Square meters per pallet (m²)	225

Sizes and packing may vary depending on the type of transportation. The technical data given is based on average values obtained during production. We reserve the right to change or modify the nominal values without prior notice or advice. The information contained in this data sheet is based on our experience. We do not take any responsibility for a possible incorrect use of the products. The customer is responsible for selecting the correct product for the intended use.

Application method

- Apply by torch application a 250mm strip of membrane reinforced with polyester along all vertical up stands.
- To have all overlaps with the slope, always position the membrane starting from the lowest point. (Draw. N.1)
- Position the membrane sheets staggered, avoiding any overlaps against the slope. (Draw. N.2)
- Cut the corners of membrane sheet which will be laid under the nest sheet at a 45° angle (100x100mm). (Draw. N.3)
- The joints, both side and head, must be respectively overlapped by 100 and 150mm. (Draw. N.3)
- The second layer of membrane will be applied astride and over the first one, always in the same direction, and approx. 1/4 of its length from the previous sheet. (Draw. N.4)
- The bituminous membrane will be applied with a propane gas torch to the substrate. It is necessary to heat the entire surface, except for the side and head laps, making sure that the compound forms a liquid mass in front of the roll to assure that it saturates any superficial porosity.
- The side laps (100mm) and head laps (150mm) will be heat welded with an appropriate torch; during this stage the overlaps should be pressed by using a roller (15kg) from which a bead of compound should flow of at least 5mm.
- Apply the vertical membrane sheet with the same characteristics of the waterproofing membrane and with dimensions equal to the width of the roll, making sure that it overlaps the horizontal one by at least 100m, heating it with a gas torch and squeezing it with a trowel until a bead of compound appears from underneath.
- The height of the verticals must be equivalent or superior to the finished surface by at least 150mm.

Recommendations

For the best use of the technical characteristics of bituminous membranes, and to guarantee the maximum performance and durability of the jobs where they are used, some simple but fundamental rules must be respected.

- Rolls to be stored in an upright position, indoors, in a dry and ventilated area, away from heat sources. Absolutely avoid the stacking of rolls and pallets for storage or transport to avoid possible deformations which may compromise a perfect installation. It is recommended to store the product at temperatures above 0°C.
- The rolls must be kept in a warm or heated storage area during application. Should the workability of the material deteriorate or become stiff and difficult to install during application, these should be returned to the heated storage area and substituted with new rolls. The rolls that are temporarily stored on the roof before application should be kept elevated by remaining on their own pallets and covered and protected from the weather.
- The application surface must be smooth dry and clean.
- The application surface must be previously treated with a suitable bituminous primer, to eliminate dust and enhance the adhesion of the membrane.
- The application surface must not have any depressions to avoid the risk of ponding water, the slope must be at least 1.5% on concrete decks and 3% for steel or wooden ones, to guarantee a proper run off of rainwater.
- In situations of application on vertical surfaces superior to 2 meters or on very sloped substrates, apply suitable mechanical fixings to the head laps, after which they will be sealed when torching the head laps.
- The application must be done at temperature higher than +5°C.
- The application must be interrupted/ceased in adverse weather conditions (high humidity, rain, etc.).

Technical data

Technical Characteristics	Measure Units	Reference Norm	P	Tolerance
Type of reinforcement			Single strand polyester	
Upper face finish			Charcoal mineral *	
Lower face finish			PE film	
Visible defects		EN 1850-1	No	
Straightness	mm / 10 m	EN 1848-1	< 20	
Length	m	EN 1848-1	7,5 -1%	
Width	m	EN 1848-1	1 -1%	
Mass	kg/m²	EN 1849-1	4,5	±10%
Cold flexibility	°C	EN 1109	-20	
Flow resistance	°C	EN 1110	140	
Flow resistance after ageing	°C	EN 1296	130	-10°C
Shear Resistance L / T	N / 5 cm	EN 12317-1	750/550	±20%
Tensile strength L / T	N / 5 cm	EN 12311-1	850/650	±20%
Elongation at break L / T	%	EN 12311-1	40/40	±15
Tearing resistance L / T	N	EN 12310-1	200/200	±30%
Static puncture resistance	kg	EN 12730	20	
Dynamic puncture resistance	mm	EN 12691	1250	
Dimensional stability	%	EN 1107-1	-0,3	
Loss mineral	%	EN 12039	30	
Fire resistance		EN 13501-5	F ROOF	
Fire reaction		EN 13501-1	F	
Tensile strength after ageing L / T	N / 5 cm	EN 1296	NPD	±20%
Impermeability after artificial ageing	kPa	EN 1296	60	
Watertightness	kPa	EN 1928	60	

*Mineral self-protected products may undergo colour tone variations due to the time and length of storage. Exposure to application will tend to uniform the colour after a few months. The change in colour tone cannot therefore cannot be contested and/or be a basis for complaint as this is a natural process of the materials. NPD = No Performance Declared in accordance with the EU Construction Products Directive.