



## POLARIS PL

### COMPOUND

The waterproofing compound of POLARIS membranes is made up of a mix of empty residue distilled bitumen modified with elastoplastomeric polymers based on atactic polypropylene, isotactic polypropylene, synthetic rubber and stabilizing aggregate fillers. The compound is UV rays resistant, thermally stable and duly flexible at low temperatures.

### REINFORCEMENT

The reinforcement used for POLARIS PL membranes is made up of a non-woven polyester mat stabilized with glass fibres, which gives to the product excellent mechanical and breaking elongation characteristics, as well as excellent dimensional stability. Such characteristics allow to use these membranes also on mechanically and thermally stressed surfaces.

### OUTSIDE FINISHING



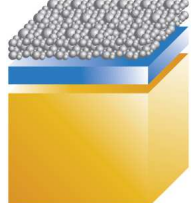

The POLARIS PL membrane is treated on the upper side with non-stick filler; other finishings such as polymeric film and non-woven may also be used. The lower side is finished with PE torch-on film; other finishings such as aggregate, polymeric films, non-woven non-stick polymers may also be used.

### LAYING METHOD

The laying deck shall be clean, smooth and dry. For a better adhesion it may be previously treated either with solvent based primer or with water based primer. The membrane is then laid by melting the lower side with light propane gas flame. Edges shall be overlapped, always by torch, by at least 10 cm. on the sides and 15 cm. on top so that the roofing watertightness is granted.

### USE

The POLARIS PL membranes are planned to be used as under and middle layer, top layer, under heavy protection, against humidity from soil.

|   |   |  |   |
|---|---|--|---|
|  |  |  |  |
| Under and middle layer membranes  | Top layer membranes   | Under heavy protection membranes   | Membranes against humidity from soil  |

### PACKAGING

| PRODUCT      | THICKNESS (mm) | WEIGHT (kg/m <sup>2</sup> ) | ROLL DIM. (m) width x length | ROLLS per PALLET | m <sup>2</sup> per PALLET |
|--------------|----------------|-----------------------------|------------------------------|------------------|---------------------------|
| POLARIS 3 PL | 3              | -                           | 1 x 10                       | 33               | 330                       |
| POLARIS 4 PL | 4              | -                           | 1 x 10                       | 27               | 270                       |

The published data are indicative average values of the current manufacture and can be modified by producer without notice. The technical information come from our experience with regard to characteristics and use of the product. Given the many different uses and possible factors beyond our control which may intervene, we are not to be held responsible for the results. Purchasers have to assess under their responsibility if the product is suitable for the required use. The Nuova Meridiana polymer bitumen membranes products are based on bitumen coming from crude oil distillation and do not contain coal tar, asbestos or chlorine, they are recyclable and are not a dangerous waste. The polymer bitumen membrane which this data sheet refers to, is not subject to the obligation of safety profile issuing. An informative data sheet, inclusive of laying method instructions for a correct use of the product, is available on request.



## POLARIS PL

|                                |  |
|--------------------------------|--|
| <b>O.N. Notice code:</b>       | 1370   |
| <b>FPC certificate number:</b> | 1370-CPR-0042  |
| <b>Reinforcement type:</b>     | Reinforced and stabilized non-woven polyester mat.   |
| <b>Compound type:</b>          | Bitumen modified with Polypropylene (BPP).   |
| <b>Surface finishing:</b>      | Upper side: aggregate / PE / PP polymeric film, NON-WOVEN, non-stick polymers<br>Lower side: aggregate / PE / PP polymeric film, NON-WOVEN, non-stick polymers.                            |
| <b>Laying method:</b>          | - For lower side finishing with aggregate, polymeric films, non-stick polymers, Non-Woven:<br>Propane-gas light flame<br>- For lower side finishing with aggregate: hot glues, cold glues. |

FOR A CORRECT USE OF THE PRODUCT PLEASE REFER ANYWAY TO THE MANUFACTURER'S TECHNICAL DOCUMENTS

| TEST DESCRIPTION  | STANDARDS                    | M / U        | NOMINAL VALUES   |  | TOLERANCES    |
|---|------------------------------|--------------|--|--|---------------|
|   |                              |              | POLARIS 3 PL   | POLARIS 4 PL   |               |
| Reference norms   |                              |              | EN 13707   | EN 13707 / EN 13969  |               |
| Use   | -                            | -            | Under and middle layer / Under heavy protection / Against humidity from soil | Under and middle layer / Top layer / Under heavy protection / Against humidity from soil | -             |
| Visible defects   | UNI EN 1850-1                | -            | Pass the test  | Pass the test  | -             |
| Length  | UNI EN 1848-1                | m            | 10,00 - 1%   | 10,00 - 1%   | Min.          |
| Width   | UNI EN 1848-1                | m            | 1,00 - 1%  | 1,00 - 1%  | Min.          |
| Straightness  | UNI EN 1848-1                | mm           | 20 mm x 10 m   | 20 mm x 10 m   | Max           |
| Thickness   | UNI EN 1849-1                | mm           | 3  | 4  | ± 0,2         |
| Watertightness (B method)   | UNI EN 1928                  | Kpa          | 60 - Pass the test   | 60 - Pass the test   | Kpa Min. ≥ 10 |
| External fire exposure behaviour  | EN 13501-5                   | -            | Froof  | Froof  | -             |
| Reaction to fire  | EN 13501-1                   | Class        | E  | E  | -             |
| Shear resistance of joints  | UNI EN 12317-1               | N/50mm       | 500 / 400  | 500 / 400  | -20%          |
| Water vapour transmission   | UNI EN 1931 (2002)           | $\mu$ Sd (m) | 20.000 NPD   | 20.000 NPD   | -<br>± 60     |
| Tensile strenght L/T (max load)   | UNI EN 12311-1               | N/50mm       | 600 / 430  | 600 / 430  | -20%          |
| Breaking elongation L/T   | UNI EN 12311-1               | %            | 35 / 35  | 35 / 35  | -15 absolute  |
| Resistance to impact  | UNI EN 12691                 | mm           | 800  | 800  | Min.          |
| Static load (A method)  | UNI EN 12730                 | Kg           | 10   | 10   | Min.          |
| Resistance to tearing L/T   | UNI EN 12310-1               | N            | 150 / 150  | 150 / 150  | -30 %         |
| Dimensional stability L/T   | UNI EN 1107-1 A method       | %            | ± 0,3  | ± 0,3  | Min.          |
| Flexibility at low temperature  | UNI EN 1109                  | °C           | -15  | -15  | Min.          |
| Flow resistance at elevated temperature   | UNI EN 1110                  | °C           | 130  | 110  | Min.          |
| Flow resistance at elevated temperature after ageing  | UNI EN 1296<br>UNI EN 1110   | °C           | 130  | 130  | -10°C         |
| Artificial ageing through long term exposure at UV radiations combined with temperature and water | UNI EN 1297<br>UNI EN 1850-1 | Visual       | -  | No defects   | Min.          |
| Watertightness after artificial ageing through long term exposure at high temperatures            | UNI EN 1296<br>UNI EN 1928   | Kpa          | NPD  | NPD  | Kpa Min. ≥ 10 |
| Watertightness determination after exposure to chemical agents                                    | UNI EN 1847<br>UNI EN 1928   | Kpa          | NPD  | NPD  | Kpa Min. ≥ 10 |