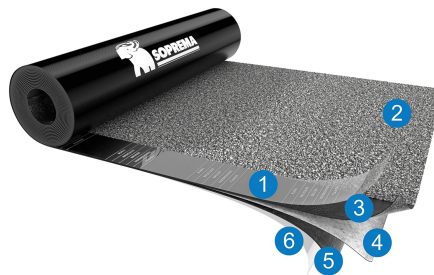


# NOVATOP MINERAL

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|                               |  |
|-------------------------------|--|
| <b>DESCRIPTION</b>            | <p>NOVATOP MINERAL is a plastomeric modified bitumen waterproofing membrane (APP), industrially manufactured by impregnation of the reinforcement with the waterproofing compound based on distilled bitumen modified with polyolefin polymers of the latest generation, which gives to the compound superior technical characteristics.</p> <p>The composite reinforcement, made of nonwoven spunbond polyester in combination with fiberglass, conveys high mechanical characteristics, excellent dimensional stability, isotropic behaviour and elastic performance.</p> <p>Shaping of sheets, straightness, dimensional and surface uniformity are accomplished by hot calendaring of the mass at hot melt fluid state.</p> <p>It is a self-protected membrane. The upper surface is coated with coloured slate chips and selvedge slate free at one side for easy welding overlap. Upon request and only for the version with 4 mm thickness on the selvedge, the coating of the upper surface can be made with special REFLECTA white slate flakes with high solar reflectance (SR 0.699 / SRI 84.8%). The high reflection property combined with a high emissivity allows the covering which the membrane is applied, on a lower heat absorption during the day and subsequently to transmit and emit such thermal energy in the infrared field. This determines a lowering of the operating temperature of the waterproofing system and consequently of the indoor environments underneath the roof, with benefits in terms of energy saving and longer membrane lifespan.</p> <p>On the upper face there is a selvedge free of self-protection and covered with a polycarbonate film, that can be torched to facilitate overlap welding. The lower face is coated with a thermofusible polyolefin film.</p> |
| <b>FIELD OF APPLICATION</b>   | <p>NOVATOP MINERAL is a high performance membrane. It is particularly suitable as top layer in multi-layer waterproofing systems, with compatible membranes or as underlayers for discontinuous roofing. General roofing, vehicles parking roofs, foundations, on or under floors or ground slabs, wall constructions, water tanks, tunnels, as protection from acid and basic solutions are valid examples of the design application of this product. It is not suitable for roof gardens. It can be applied onto every substrate (concrete, masonry, steel, wood, insulation panel, membrane, etc.) and under heavy protection.</p> <p>The excellent mechanical characteristics and high level thermo-dynamic stability make it suitable for any climate conditions and all the situations where a barrier against water is required.</p>  |
| <b>METHOD OF INSTALLATION</b> | <p>The excellent thermoplastic properties of the waterproofing compound allow the application with torch-on system or hot air generator. In particular situations, it could be applied with appropriate sealants or mechanical fastenings.</p> <p>The application of the membrane must be carried in good weather conditions and after the substrate has been adequately cleaned and prepared.</p>   |
| <b>PACKING AND STORAGE</b>    | <p>The product is packed as standing rolls on wooden pallets wrapped with thermoshrinking protective hoods. Rolls must be stored in the upright position, without stacking the pallets to avoid deformations which can compromise the correct application of the membrane. The product must be stored indoor, protected from heat and frost.</p>   |
| <b>INTENDED USE OR USES</b>   | <p>Flexible sheets for waterproofing. Reinforced bitumen sheets for roof waterproofing</p> <p>Flexible sheets for waterproofing. Bitumen damp proof sheets including bitumen basement tanking sheets</p> <p>Flexible sheets for waterproofing. Underlays for discontinuous roofing</p>   |

1. Selvedge
2. Mineral protection
3. Waterproofing mass
4. Reinforcement
5. Waterproofing mass
6. Torch-off film



# NOVATOP MINERAL

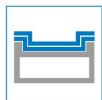
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## TECHNICAL DATA

|  | Norm                   | Value         |     | Unit                 | Tolerance    |
|--|------------------------|---------------|-----|----------------------|--------------|
| Thickness  | EN1849-1               | 4 (su cimosa) | -   | (mm)                 |              |
| Weight   | EN1849-1               | -             | 4,5 | (kg/m <sup>2</sup> ) | ±10%         |
| Roll length  | EN1848-1               | 7,5           | 10  | (m)                  | -1%          |
| Roll width   | EN1848-1               | 1             | 1   | (m)                  | -1%          |
| Straightness   | EN1848-1               | PASSED        |     | -                    | 20 mm / 10 m |
| Flexibility at low temperature (pliability)  | EN1109                 | -20           |     | (°C)                 | ≤            |
| Heat flow resistance   | EN1110                 | 140           |     | (°C)                 | ≥            |
| Watertightness   | EN1928-B               | 60            |     | (kPa)                | ≥            |
| Watertightness   | EN1928-A W1            | PASSED        |     | (kPa)                | 2 kPa/24h    |
| Water vapour transmission properties   | EN1931                 | 20.000        |     | (μ)                  | -            |
| M.d. C.d.  |                        |               |     |                      |              |
| Tensile properties: maximum tensile strength   | EN12311-1              | 850 / 750     |     | (N/50 mm)            | -20%         |
| Tensile properties: elongation at break  | EN12311-1              | 45 / 45       |     | (%)                  | -15          |
| Resistance to tearing (nail shank)   | EN12310-1              | 250 / 250     |     | (N)                  | -30%         |
| Dimensional stability  | EN1107-1               | ±0,3 / ±0,3   |     | (%)                  | ≤            |
| Peal resistance of joints  | EN12316-1              | 50 / 50       |     | (N/50 mm)            | -20          |
| Shear resistance of joints   | EN12317-1              | 850 / 750     |     | (N/50 mm)            | -20%         |
| Resistance to static puncture  | EN12730-A              | 15            |     | (kg)                 | ≥            |
| Resistance to impact   | EN12691-A              | 1250          |     | (mm)                 | ≥            |
| External fire performance (note 1)   | EN1187/EN13501-5+A1    | Froof         |     | Class                | -            |
| Reaction to fire   | EN11925-2/EN13501-1+A1 | E             |     | Class                | -            |
| Root resistance  | EN13948                | NPD           |     |                      |              |
| Determination of adhesion of granules (Loss)   | EN12039                | PASSED        |     | (%)                  | <30          |
| Visible defects  | EN1850-1               | PASSED        |     | -                    | -            |
| Durability: Flexibility at low temperature after artificial ageing   | EN1296/EN1109          | -20           |     | (°C)                 | +15          |
| Durability: Flow resistance at elevated temperature after artificial ageing  | EN1296/EN1110          | 130           |     | (°C)                 | -10          |
| Durability: Watertightness after artificial ageing   | EN1296/EN1928-B        | PASSED        |     | (kPa)                | ≥ 60         |
| Durability: Watertightness against chemicals   | EN1296/EN1847          | NPD           |     |                      |              |
| Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Tensile strength | EN1296/EN12311-1       | NPD           |     |                      |              |
| Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Elongation       | EN1296/EN12311-1       | NPD           |     |                      |              |
| Artificial ageing by long term exposure to the combination of UV radiation and elevated temperature and heat: Watertightness   | EN1296/EN1928-A        | W1            |     | Class                | -            |
| Solar Reflectance (SR)   | ASTM C1549             | 0,699 *       |     | -                    | ± 0,009      |
| Solar Reflectance Index (SRI) at medium wind hc= 12 W/m <sup>2</sup> *K  | ASTM E1980             | 84,8 *        |     | (%)                  |              |
| Infrared emittance (IE)  | EN15976                | 0,911 *       |     | -                    | ± 0,020      |

**WARNINGS** \* values refer to the coating of the upper surface with REFLECTA white slate flakes

**NORMS** EN13707; EN13969; EN13859-1



Top layer in multi-layer systems



Under layers for discontinuous roofing



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