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| PRODUCT         | <b>Polyroof P 1500</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| MISSION         | Polyurea-based waterproofing membrane, free of mineral fillers and plasticizers, for waterproofing roofs, roof gardens, car parks, landfills and for protecting soil from chemical leachate (NMDC System)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| CHARACTERISTICS | <p>Polyroof P 1500 is a two-component 100% Hot Spray thermosetting liquid membrane based on polyurea, free of mineral fillers, plasticizers and solvents based on polyol/polyamine and aromatic isocyanate prepolymer. For the application, a Hot Spray Bi Mixer pump is required which allows the correct mixing of the two components to form a continuous sheath, without joints. Once hardened, the product has excellent mechanical characteristics upon impact, resistance to abrasion, high chemical resistance; for this reason it is able to resist small micro-movements of the substrate without cracking. It is resistant to fouling and root penetration, is totally stable to hydrolysis, insensitive to thermal shocks and extreme temperatures</p> <p>It has good UV resistance, the aromatic nature undergoes a change in color without loss of mechanical properties. UV protection with a pigmented aliphatic finish such as Polytop or Polytop W is recommended</p> |
| APPEARENCE      | Component A: dark yellow liquid (Supplied neutral, it can be colored by adding color paste)<br>Component B: amber liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**CHARACTERISTICS OF THE LIQUID PRODUCT**

| CHARACTERISTICS        | VALUE            | TOLERANCE | U.M.               |
|------------------------|------------------|-----------|--------------------|
| Specific weight        | 1,08             | ± 0,05    | Kg/dm <sup>3</sup> |
| Dry mass residue       | 100              | ± 0,05    | mPa.s              |
| Viscosity              | 770              | ± 50      | %                  |
| Mixing ratio by volume | A : B = 1 : 1    |           |                    |
| Mixing ratio by weight | A : B = 1 : 1,05 |           |                    |

**APPLICATION INSTRUCTIONS**

| TOOLS              | THINNING     | TYPE OF THINNER | TOOL CLEANING |
|--------------------|--------------|-----------------|---------------|
| Bi mixer Hot spray | Ready to use |                 | DIL A1        |

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| LAYING SURFACE | The substrates in general must be compact, free of release substances, oils, grease, dust and cracks and have a relative humidity of <4%. Always provide for a mechanical treatment and / or the use of a suitable primer to ensure the best coupling surface for Polyroof P 1500 (contact the technical office of Casali S.p.A.). For cementitious surfaces, a compressive strength of 25 MPa and a tensile strength of at least 1.5 N / mm <sup>2</sup> are also required. All substrate repair operations must be carried out before applying the product. |
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| CONSUMPTION              | Consumption depends on the roughness and conformation of the background, in general it is recommended to apply 2 kg/m <sup>2</sup> for a thickness of 2 mm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| APPLICATION INSTRUCTIONS | <p>The temperature of the substrate must be between 10 and 40 ° C and the relative humidity of the environment must not exceed 85%. Always apply at a temperature 3 ° C above the dew point to avoid detachment.</p> <p>The hot spray bi mixer machine must have separate feed pumps, have a product flow rate between 2 and 10 l / minute, and must be able to preheat the components and pipes. Furthermore, it must have a variable mixing system, electronically controlled, capable of maintaining the mixture ratio indicated in the technical data sheet unchanged and having the right spray pressure (between 140 and 240 bar).<br/>We recommend:</p> <ul style="list-style-type: none"><li>- mount a pneumatic mixer on the lid of component A to make the product uniform</li><li>- on the cover of component B fit a dehumidifying filter to prevent air infiltration that could cause the component to harden</li></ul> <p>At perimeter or expansion joints and in connections between different substrate materials, the use of elastic reinforcement bands from the CasaBand or Acryfelt Band Line selected according to the specific requirement is strongly recommended.</p> <p>Do not apply with wind speeds exceeding 25 km/h.<br/>Pressure between 135 – 170 BAR -- temperature of component A 65° C<br/>temperature of component B 70° C</p> |
| HARDENING                | <p>Pot life: 8 – 9 sec at 25° C<br/>4 – 6 sec at 60° C<br/>Interval between coatings: MAX 2 h</p> <p>The times shown are intended for standard laboratory conditions and can vary depending on environmental conditions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| CHARACTERISTICS OF THE DRY PRODUCT          |                                        |           |          |
|---------------------------------------------|----------------------------------------|-----------|----------|
| CHARACTERISTICS                             | VALUE                                  | TOLERANCE | U.M.     |
| Breaking load                               | 15                                     | ± 1       | MPa      |
| Elongation at break                         | 400                                    |           | %        |
| Shore hardness                              | 90 A - 40 D                            |           |          |
| Water vapour permeability                   | 0,9                                    |           | g/mq * g |
| Tear resistance                             | 69                                     |           | N/mm     |
| Thermal stability (UNE EN 495-5:2)          | 180                                    | ± 10      | °C       |
| Dielectric strength (IEC/EN 60243 – 1:2013) | 17,6                                   | ± 1       | Kv/mm    |
| Dynamic Crack Bridging                      | B.4.2 (-20°C)                          |           |          |
| Static Crack Bridging                       | Method A - C.1. class A5 (-10°C +23°C) |           |          |
| Fire behavior (roofs)                       | B <sub>roof</sub> (t2)                 |           |          |
| Fire behavior (floors)                      | C <sub>floor</sub> - s1                |           |          |



| <b>LAYING SURFACE ADHESION</b> |       |           |      |
|--------------------------------|-------|-----------|------|
| LAYING SURFACE                 | VALUE | TOLERANCE | U.M. |
| Concrete (with epoxy primer)   | 5,6   | ± 0,1     | MPa  |
| Steel (PU primer)              | 3,6   | ± 0,1     | MPa  |
| PU foam 150 Kg/m <sup>3</sup>  | > 1,5 |           | MPa  |
| Fiber cement                   | 2,5   |           | MPa  |
| Lamellar (with epoxy primer)   | 1,6   |           | MPa  |

| <b>CHEMICAL RESISTANCE</b>                     |                                        |
|------------------------------------------------|----------------------------------------|
| SUBSTANCE                                      | RESISTANCE 5=excellent 0=no resistance |
| Distilled water (15 days, 80° C)               | 5                                      |
| Salt water (15 days, 80° C)                    | 5                                      |
| Xilene (7 days, 80° C)                         | 1                                      |
| Ethyl acetate (7 days, 80° C)                  | 0                                      |
| Isopropyl alcohol (7 days, 80° C)              | 0                                      |
| Sodium hydroxide (40 g/l) (7 days, 80° C)      | 5                                      |
| Phosphoric acid 10% (7 days, 80° C)            | 4                                      |
| Hydrogen peroxide (33%) (7 days, 25° C)        | 4                                      |
| Ammonia (7 days, 80° C)                        | 5                                      |
| Bleach (7 days, 80° C)                         | 4                                      |
| Diesel (16 days, 80° C)                        | 5                                      |
| Concentrated hydrochloric acid (7 days, 80° C) | 0                                      |
| Sulphaminic acid (8,5%) (7 days, 60° C)        | 4                                      |

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| <b>PACKAGING INSTRUCTIONS</b> | <b>COLOURS AVAILABLE</b><br>RAL 1001, RAL 7011, RAL 5015, tile and other<br>on request | <b>PACKAGING</b><br>Component A. = 188 + 4 Kg<br>Component B. = 208 Kg                                         |
| <b>STORAGE INSTRUCTIONS</b>   | <b>STORAGE TEMPERATURE</b><br>MIN 10° C – MAX 30° C                                    | <b>STABILITY IN THE ORIGINAL PACKAGE</b><br>12 months if perfectly stored in the<br>original packaging, sealed |
| <b>SAFETY STANDARDS</b>       | Please read the safety data sheet carefully before using this product.                 |                                                                                                                |

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| <b>WARNINGS</b> | Component B fears humidity and if kept at low temperatures it can become cloudy. If this occurs, simply heat the product. Always keep the drums on pallets and in any case never in contact with the ground. |
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