

# AQUAMAT-FLEX

## Two-component, flexible, waterproofing cement-based slurry

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Technical data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------|-------------|------------|---------------------|-----------------------------|------------------|-------------------------------|-----------------|------------------------------------------------|--------------------------------|---------------------------------------------|-------------------------------|------------------------------|-------------------------|-------------------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------|------------------------|--------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------|----------------|
| <p>AQUAMAT-FLEX is a two-component, flexible waterproofing slurry consisting of a cement-based powder mortar (component A) and an emulsion resin (component B). After hardening, it forms a seamless, jointless membrane with the following advantages:</p> <ul style="list-style-type: none"><li>• Crack-bridging ability.</li><li>• Total waterproofing against positive hydrostatic pressure up to 5 atm according to EN 12390-8. It can also withstand negative pressure.</li><li>• Vapor permeability.</li><li>• Suitability for potable water tanks, as well as food contact surfaces, according to W-347.</li><li>• Protection of concrete from carbonation.</li><li>• No corrosive effect on the reinforcing steel in concrete.</li><li>• Resistance to aging.</li><li>• Bonding to wet surfaces without priming.</li><li>• Simple and low cost application.</li></ul> <p>Certified according to EN 1504-2 and classified as a coating for surface protection of concrete. CE marked. Certificate No.: 2032-CPR-10.11. AQUAMAT-FLEX has received an Environmental Product Declaration (EPD) following an assessment of its life-cycle environmental impacts. Registration No: S-P-06177, The International EPD® System.</p> | <table><tr><th></th><th>Component A</th><th>Component B</th></tr><tr><td>Basis:</td><td>cementitious powder</td><td>acrylic polymer dispersion</td></tr><tr><td>Colors:</td><td>grey</td><td>white</td></tr><tr><td>Mixing ratio:</td><td>3.125 parts by weight</td><td>1 part by weight</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            | Component A  | Component B | Basis:     | cementitious powder | acrylic polymer dispersion  | Colors:          | grey                          | white           | Mixing ratio:                                  | 3.125 parts by weight          | 1 part by weight                            |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Component A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Component B                |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Basis:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | cementitious powder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | acrylic polymer dispersion |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Colors:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | grey                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | white                      |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Mixing ratio:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3.125 parts by weight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1 part by weight           |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><u>Wet mix:</u></p> <table><tr><td>Mixing time:</td><td>3 min</td></tr><tr><td>Pot life*:</td><td>45-60 min</td></tr><tr><td>Bulk density of dry mortar:</td><td>1.36 ± 0.05 kg/l</td></tr><tr><td>Bulk density of fresh mortar:</td><td>1.90 ± 0.1 kg/l</td></tr><tr><td>Compressive strength after 28 days: (EN 12190)</td><td>17.50 ± 2.50 N/mm<sup>2</sup></td></tr><tr><td>Flexural strength after 28 days: (EN 12190)</td><td>8.50 ± 1.50 N/mm<sup>2</sup></td></tr><tr><td>Adhesion strength: (EN 1542)</td><td>≥ 1.0 N/mm<sup>2</sup></td></tr><tr><td>Permeability to CO<sub>2</sub>: (EN 1062-6 Method A, requirement: S<sub>d</sub> &gt; 50m)</td><td>145 m</td></tr><tr><td>Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w &lt; 0.1)</td><td>0.011 kg/m<sup>2</sup>·h<sup>0.5</sup></td></tr><tr><td>Water vapor permeability: (EN ISO 7782-2, Class I: S<sub>d</sub> &lt; 5m)</td><td>S<sub>d</sub> = 0.45m</td></tr><tr><td>Crack-bridging ability at +23°C: (EN 1062-7, Method A)</td><td>Class A3 – crack width mm: &gt; 0.5 and &lt; 1.25</td></tr><tr><td>Water penetration under positive hydrostatic pressure: (EN 12390-8, 3 days at 5 bar)</td><td>no penetration</td></tr></table> |                            | Mixing time: | 3 min       | Pot life*: | 45-60 min           | Bulk density of dry mortar: | 1.36 ± 0.05 kg/l | Bulk density of fresh mortar: | 1.90 ± 0.1 kg/l | Compressive strength after 28 days: (EN 12190) | 17.50 ± 2.50 N/mm <sup>2</sup> | Flexural strength after 28 days: (EN 12190) | 8.50 ± 1.50 N/mm <sup>2</sup> | Adhesion strength: (EN 1542) | ≥ 1.0 N/mm <sup>2</sup> | Permeability to CO <sub>2</sub> : (EN 1062-6 Method A, requirement: S <sub>d</sub> > 50m) | 145 m | Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1) | 0.011 kg/m <sup>2</sup> ·h <sup>0.5</sup> | Water vapor permeability: (EN ISO 7782-2, Class I: S <sub>d</sub> < 5m) | S <sub>d</sub> = 0.45m | Crack-bridging ability at +23°C: (EN 1062-7, Method A) | Class A3 – crack width mm: > 0.5 and < 1.25 | Water penetration under positive hydrostatic pressure: (EN 12390-8, 3 days at 5 bar) | no penetration |
| Mixing time:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3 min                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Pot life*:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 45-60 min                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Bulk density of dry mortar:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.36 ± 0.05 kg/l                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Bulk density of fresh mortar:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1.90 ± 0.1 kg/l                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Compressive strength after 28 days: (EN 12190)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 17.50 ± 2.50 N/mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Flexural strength after 28 days: (EN 12190)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8.50 ± 1.50 N/mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Adhesion strength: (EN 1542)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ≥ 1.0 N/mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Permeability to CO <sub>2</sub> : (EN 1062-6 Method A, requirement: S <sub>d</sub> > 50m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 145 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Capillary absorption and permeability to water: (EN 1062-3, requirement of EN 1504-2: w < 0.1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.011 kg/m <sup>2</sup> ·h <sup>0.5</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Water vapor permeability: (EN ISO 7782-2, Class I: S <sub>d</sub> < 5m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | S <sub>d</sub> = 0.45m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Crack-bridging ability at +23°C: (EN 1062-7, Method A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Class A3 – crack width mm: > 0.5 and < 1.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Water penetration under positive hydrostatic pressure: (EN 12390-8, 3 days at 5 bar)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | no penetration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| Fields of application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |
| <p>It is used for waterproofing surfaces made of concrete, plaster, bricks, cement blocks, terrazzo, etc. that show or are expected to show hairline cracks. Ideal for application on terraces, rooftops, balconies and damp areas to be covered with tiles (bathrooms, kitchens), inverted roofs, underground reservoirs, flower stands, etc. It can also be used for waterproofing basements, internally or externally, against humidity or water under pressure.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                            |              |             |            |                     |                             |                  |                               |                 |                                                |                                |                                             |                               |                              |                         |                                                                                           |       |                                                                                                |                                           |                                                                         |                        |                                                        |                                             |                                                                                      |                |

# AQUAMAT-FLEX

Water penetration under negative hydrostatic pressure:  
(at 1.5 bar) no penetration

\* At 21±2°C and 60±10% RH.

## Durability against:

- Rain: after approx. 4 h
- Walking: after approx. 1 day
- Tile fixing: after approx. 1 day
- Water under pressure: after approx. 7 days
- Backfill: after approx. 3 days

## Directions for use

### 1. Substrate preparation

- The substrate must be clean, free of oil or grease, loose material, dust, etc.
- Water leaks should be plugged with AQUAFIX ultra rapid-setting, cementitious leak-plugging mortar.
- Any cavities on concrete surface should be filled and smoothed out with DUROCRET, RAPICRET or a cement mortar improved with ADIPLAST, after all loose aggregate has been removed and the surface has been well dampened.
- Starter bars and wooden molds should be cut to a depth of about 3cm into the concrete and the holes should be sealed, as described above.
- Existing construction joints are opened longwise in a V shape to a depth of about 3cm and are subsequently filled, as above.
- Corners like wall-floor junctions should be filled and smoothly rounded with DUROCRET or a cement mortar improved with ADIPLAST (formation of a fillet, triangular in cross section, with sides of 5-6cm).
- In case of masonry walls, joints should be first filled carefully; otherwise, it is recommended to apply a cement mortar layer first improved with ADIPLAST.
- For waterproofing basements in old buildings, any existing plaster coat should be removed to a height of at least 50cm above the water level and then proceed as above.
- Wherever flat surface formation is required (smoothing, slope creation, etc.) the use of DUROCRET, RAPICRET or a mortar improved with ADIPLAST is recommended.

### 2. Application

The whole content of the 25kg bag (component A) is added to the 8kg of the liquid component B under continuous stirring, until a uniform, viscous mixture is formed, suitable for brush application. The entire surface of the substrate should be well dampened, but without ponding water.

The material is applied by brush in two or more layers, depending on the water load. Layers thicker than 1mm should be avoided, because the material may crack. Each new layer is applied after the previous one has dried. The freshly coated surface should be protected from high temperatures, rain and frost.

In case AQUAMAT-FLEX needs to be locally reinforced (inside corners where forming fillets is not necessary, at junctions, etc.), the use of a 10 cm wide fiberglass mesh strip (65 g/m<sup>2</sup>) or the 12 cm wide JOINT SEALING TAPE AR is recommended.

## Consumption

Depending on the water load, minimum consumption and relevant thickness should be as follows:

| Water load             | Minimum consumption       | Minimum thickness |
|------------------------|---------------------------|-------------------|
| Moisture               | 2.0 kg/m <sup>2</sup>     | ~ 1.5mm           |
| Water without pressure | 3.0 kg/m <sup>2</sup>     | ~ 2mm             |
| Water under pressure   | 3.5-4.0 kg/m <sup>2</sup> | ~ 2.5mm           |

## Packaging

- 33 kg packaging (25 kg cement-based powder mortar bag + 8 kg emulsion plastic container).
- 18 kg packaging (13.6 kg cement-based powder mortar bag + 4.4 kg emulsion resin plastic container).

# AQUAMAT-FLEX

## Shelf life – Storage

### Component A:

12 months from production date if stored in original, unopened packaging in a frost-free and dry place.

### Component B:

12 months from production date if stored in original, unopened packaging at temperatures between +5°C and +35°C. Protect from direct sunlight and frost.

## Remarks

- In cases of water under pressure, care should be taken so that pumping, which keeps the water level low, does not stop before AQUAMAT-FLEX has sufficiently hardened. About 7 days are needed.
- In case of water under pressure, the structure that bears the waterproofing layer (wall, floor, etc.) should have been properly designed in order to be sufficiently static to withstand hydrostatic pressure.
- Temperature during application should be between +5°C and +35°C.
- Due to cement content, component A reacts with water forming alkaline solutions, thus is classified as irritant.
- Consult the directions for safe use and precautions written on the packaging before use.

## Volatile Organic Compounds (VOCs)

According to Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory j, type WB is 140 g/l (2010) for the ready-to-use product.

The ready-to-use product AQUAMAT-FLEX contains a maximum of 140 g/l VOC.



2032

### ISOMAT S.A.

17<sup>th</sup> km Thessaloniki – Ag. Athanasios  
P.O. BOX 1043, 570 03 Ag. Athanasios, Greece

10

2032-CPR-10.11

**DoP No.: AQUAMAT-FLEX /1622-02**

EN 1504-2

Surface protection products

Coating

Permeability to CO<sub>2</sub>: Sd > 50m

Water vapor permeability: Class I (permeable)

Capillary absorption: w < 0.1 kg/m<sup>2</sup>·h<sup>0.5</sup>

Adhesion: ≥ 1.0 N/mm<sup>2</sup>

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

### ISOMAT S.A.

BUILDING CHEMICALS, MORTARS & PAINTS  
HEADQUARTERS – THESSALONIKI, GREECE

17<sup>th</sup> km Thessaloniki – Ag. Athanasios Road  
P.O. BOX 1043, 570 03 Ag. Athanasios, Greece  
T +30 2310 576000

**www.isomat.eu e-mail: support@isomat.eu**