

## Declaration of performance: No. **CPR-IT1/0273**

1. Unique identification code of the product-type: **MAPEWRAP 21**
2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4) of the CPR: **TWO-COMPONENT STRUCTURAL BONDING EPOXY RESIN**
3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: **in bonded plate reinforcement and bonded mortar or concrete for strengthening an existing concrete structure.**
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5): **MAPEI S.p.A. – Via Cafiero, 22 – Milano (Italy)**  
**www.mapei.it**
5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2): **Not applicable**
6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V: **System 2+**  
**System 3 for reaction to fire**
7. In case of the declaration of performance concerning a construction product covered by a harmonised standard:  
**The Notified Body ICMQ S.p.A., No. 1305, performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control, under system 2+, and issued the certificate of conformity of the factory production control No. 1305-CPD-0616.**  
**The notified testing laboratory CSI SpA, No. 0497, performed the determination of the class of reaction to fire on samples taken by the manufacturer under system 3 and issued the report No. 0552\DC\REA\11\_7.**
8. In the case the declaration of performance concerning a construction product for which a European Technical assessment has been issued: **Not applicable**
9. Declared performance:

| Essential characteristics                | Performance                                                  | Harmonised technical specification |
|------------------------------------------|--------------------------------------------------------------|------------------------------------|
| <b>Bond/adhesion strength (EN 12188)</b> | <b>Pull off strength <math>\geq 14 \text{ N/mm}^2</math></b> | <b>EN 1504-4:2004</b>              |
| <b>Shear strength (EN 12188)</b>         | <b>Slant shear strength at degree:</b>                       |                                    |
|                                          | <b>50° <math>\sigma_0 \geq 50 \text{ N/mm}^2</math></b>      |                                    |
|                                          | <b>60° <math>\sigma_0 \geq 60 \text{ N/mm}^2</math></b>      |                                    |
|                                          | <b>70° <math>\sigma_0 \geq 70 \text{ N/mm}^2</math></b>      |                                    |
|                                          | <b><math>\geq 12 \text{ N/mm}^2</math></b>                   |                                    |
| <b>Bond/adhesion strength (EN 12636)</b> | <b>Pass</b>                                                  |                                    |
| <b>Shear strength (EN 12615)</b>         | <b><math>\geq 6 \text{ N/mm}^2</math></b>                    |                                    |
| <b>Compressive strength</b>              | <b><math>\geq 30 \text{ N/mm}^2</math></b>                   |                                    |
| <b>Sensitivity to water (EN 12636)</b>   | <b>Pass</b>                                                  |                                    |
| <b>Shrinkage/expansion</b>               | <b><math>\leq 0,1\%</math></b>                               |                                    |
| <b>Workability</b>                       | <b>40 min at 23°C</b>                                        |                                    |
| <b>Modulus of elasticity</b>             | <b><math>\geq 2000 \text{ N/mm}^2</math></b>                 |                                    |
| <b>Coefficient of thermal expansion</b>  | <b><math>\leq 100 \times 10^{-6} \text{ K}^{-1}</math></b>   |                                    |
| <b>Glass transition temperature</b>      | <b><math>\geq 40^\circ \text{C}</math></b>                   |                                    |
| <b>Reaction to fire:</b>                 | <b>Class E</b>                                               |                                    |
| <b>Durability</b>                        | <b>Pass</b>                                                  |                                    |
| <b>Dangerous substances:</b>             | <b>NPD</b>                                                   |                                    |

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

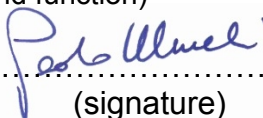
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by: **Paolo Murelli** – **Corporate Quality Management**

(name and function)

**Milan, 01/07/2013**

(place and date of issue)

  
.....  
(signature)

## CE MARKING according to CPR 305/2011 and EN 1504-4:2004

|                                                                                                                                                                                                                                                    |                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>1305, 0497                                                                                                                                                    | <br>Via Cafiero, 22 – 20158 Milano (Italy)<br>www.mapei.it                                                             |
| <b>12</b><br><b>CPR-IT1/0273</b><br><b>EN 1504-4:2004</b><br><b>MAPEWRAP 21</b><br><i>Structural bonding product for intended use in bonded plate reinforcement and bonded mortar or concrete for strengthening an existing concrete structure</i> |                                                                                                                                                                                                          |
| Bond/adhesion strength (EN 12188)                                                                                                                                                                                                                  | Pull off strength $\geq 14 \text{ N/mm}^2$<br>Slant shear strength at degree:<br>50° $\sigma_0 \geq 50 \text{ N/mm}^2$<br>60° $\sigma_0 \geq 60 \text{ N/mm}^2$<br>70° $\sigma_0 \geq 70 \text{ N/mm}^2$ |
| Shear strength (EN 12188)                                                                                                                                                                                                                          | $\geq 12 \text{ N/mm}^2$                                                                                                                                                                                 |
| Bond/adhesion strength (EN 12636)                                                                                                                                                                                                                  | Pass                                                                                                                                                                                                     |
| Shear strength (EN 12615)                                                                                                                                                                                                                          | $\geq 6 \text{ N/mm}^2$                                                                                                                                                                                  |
| Compressive strength                                                                                                                                                                                                                               | $\geq 30 \text{ N/mm}^2$                                                                                                                                                                                 |
| Sensitivity to water (EN 12636)                                                                                                                                                                                                                    | Pass                                                                                                                                                                                                     |
| Shrinkage/expansion                                                                                                                                                                                                                                | $\leq 0,1\%$                                                                                                                                                                                             |
| Workability                                                                                                                                                                                                                                        | 40 min at 23°C                                                                                                                                                                                           |
| Modulus of elasticity                                                                                                                                                                                                                              | $\geq 2000 \text{ N/mm}^2$                                                                                                                                                                               |
| Coefficient of thermal expansion                                                                                                                                                                                                                   | $\leq 100 \times 10^{-6} \text{ K}^{-1}$                                                                                                                                                                 |
| Glass transition temperature                                                                                                                                                                                                                       | $\geq 40^\circ \text{ C}$                                                                                                                                                                                |
| Reaction to fire:                                                                                                                                                                                                                                  | Class E                                                                                                                                                                                                  |
| Durability                                                                                                                                                                                                                                         | Pass                                                                                                                                                                                                     |
| Dangerous substances:                                                                                                                                                                                                                              | NPD                                                                                                                                                                                                      |