



DECLARATION OF PERFORMANCE
DoP No. 2873-CPR-401-6

1. Unique identification code of the product-type: **Toge concrete screw TSM L 6**
2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):

Annex A 3

Batch number: see packaging of the product.

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

| | |
|--------------------------|---|
| generic type | concrete screw |
| for use in | Cracked and non-cracked concrete C 20/25-C 50/60 (EN 206), only for multiple use of non-structural applications covered sizes: 6 |
| option / category | Part 6 |
| loading | static or quasi-static |
| material | <u>zinc-plated steel, steel with zinc flake coating :</u> dry internal conditions only <u>stainless steel</u> internal and external use without particular aggressive conditions <u>high corrosion resistant steel</u> internal and external use with particular aggressive conditions covered sizes: 6 |

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):
Toge Dübel GmbH & Co. KG, Illesheimer Strasse 10, 90431 Nuernberg
5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2): --
6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V: **System 2+**
7. In case of the declaration of performance concerning a construction product covered by a harmonised standard: --
8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

Deutsches Institut für Bautechnik, Berlin

has issued the following:

ETA-15/0555

on the basis of

ETAG 001-1, ETAG 001-6

The notified body **2873-CPR** performed

ii) factory production control.

iii) testing of samples taken at the factory in accordance with a prescribed test plan.

and has issued the following: certificate of conformity 2873-CPR-401-6.

9. Declared performance:

| Essential Characteristics | Design Method | Performance | Harmonized Technical Specification |
|---|----------------------|--------------------|---|
| Characteristic resistance for tension load | ETAG 001 Annex C | Annex C 1 | ETAG 001-06 |
| Characteristic resistance for shear load | ETAG 001 Annex C | Annex C 1 | |
| Characteristic resistance under fire exposure | TR 020 | Annex C 1 | |

Where pursuant to Article 37 or 38 in the Specific Technical Documentation has been used, the requirements with which the product complies: --

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:



A handwritten signature in blue ink, appearing to read 'W. Gunkel', written over a horizontal line.

Waldemar Gunkel

Dipl.-Wirtsch.-Ing. (FH), B.Eng.
Anwendungstechnik und Technische Dokumente

Nuernberg, 2021-03-12

A handwritten signature in blue ink, appearing to read 'A. Gerhard', written over a horizontal line.

Andreas Gerhard
CEO

Nuernberg, 2021-03-12

Table A 1: materials and variants

| part | name | Material |
|---------|-------|--|
| 1,2,3,4 | screw | Steel EN 10263-4 galvanized acc. to EN ISO 4042 or zinc flake coating acc. to EN ISO 10683 ($\geq 5\mu\text{m}$) |
| | | nominal characteristic steel yield strength f_{yk} [N/mm ²] 400 |
| | | nominal characteristic steel ultimate strength f_{uk} [N/mm ²] 600 |



1) screw with pan cross head



2) screw with counter sunk cross head



3) screw with connection thread M6 and hexagon socket



4) screw with connection thread M8 and hexagon socket

TOGE concrete screw TSM L 6

Product description

Material and variants

Annex A 2

Table C 1: Characteristic values for design method C according to ETAG 001, Annex C or according to CEN/TS 1992-4

| anchor identity | | | TSM L 6 |
|--|--------------------------------------|-------|---------|
| Any load direction and failures | | | |
| Characteristic resistance in cracked and non cracked concrete C20/25 to C50/60 | F_{Rk} | [kN] | 0,9 |
| spacing | $s_{cr,N}$ | [mm] | 200 |
| edge distance | $c_{cr,N}$ | [mm] | 150 |
| installation safety factor | $\gamma_2^{1)} = \gamma_{inst}^{2)}$ | [-] | 1,0 |
| Shear load with lever arm | | | |
| Characteristic bending moment | $M_{Rk,s}$ | [Nm] | 11,8 |

¹⁾ Parameter relevant only for design according to ETAG 001, Annex C

²⁾ Parameter relevant only for design according to CEN/TS 1992-4:2009

Table C 2: Characteristic resistance to fire exposure

| anchor identity | | | TSM L 6 |
|-----------------------|---------------------------|----------------|-----------|
| fire resistance class | | | |
| R 30 | characteristic resistance | $F_{Rk,fl30}$ | [kN] 0,27 |
| R 60 | characteristic resistance | $F_{Rk,fl60}$ | [kN] 0,27 |
| R 90 | characteristic resistance | $F_{Rk,fl90}$ | [kN] 0,22 |
| R 120 | characteristic resistance | $F_{Rk,fl120}$ | [kN] 0,17 |
| R 30 bis | spacing | $s_{cr,fl}$ | [mm] 200 |
| R 120 | edge distance | $c_{cr,fl}$ | |

TOGE concrete screw TSM L 6

Performances

Characteristic values according to ETAG 001, Annex C or CEN/TS 1992-4 and resistance to fire exposure

Annex C 1