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WEICON®

EDELSTAHL Rostfrei®

# WEICONLOCK® Anaerobic Adhesives and Sealants

## For high-alloyed steels and other passive materials

German Quality
Industrial grade

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# WEICONLOCK

## Adhesives and Sealants

WEICONLOCK are one-component anaerobic adhesives and sealants, especially made for metal assembly parts. WEICONLOCK is a fast, reliable and economical product for retaining, sealing and gasketing all kinds of threaded, cylindrical, flanged or pipe assemblies.

The one-component adhesives and sealants on the basis of special methacrylate resins remain liquid as long as they are in contact with the oxygen in the air. The hardener component contained in the adhesive thus remains inactive as long as in contact with the atmospheric oxygen.

The cure starts when WEICONLOCK, between the interfaces, comes into contact with metal under the absence of air. The curing time is dependent on the selected type, the ambient temperature and the material.

## Versatile

The distinguishing features of the different types are as follows:

- Viscosity
- Gap filling capacity
- Strength
- Colour
- Individual temperature resistance

The patented Pen system allows to dose the adhesives easily and user-friendly and to process them cleanly. WEICONLOCK products are furthermore resistant to temperature fluctuations, chemical substances and solvents and have a high shock- and vibration resistance.



| Type - No. | Application | Features | Colour | For threaded connections up to - |
|---|---|---|---|---|
| **AN 302-43** | Threadlocking for passive materials, drinking water and DVGW[1] approval | medium strength, higher viscosity | blue | M 36 |
| **AN 302-44** | Threadlocking for passive materials, DVGW[1] approval | medium strength, higher viscosity | blue | M 36 |
| **AN 302-60** | Threadlocking for passive materials | high strengh, medium viscosity | green | M 20 R ¾“ |
| **AN 302-80** | Sealing of threaded pipes and fittings for passive materials | high strengh, higher viscosity | green | M 36 |
| **AN 305-78** | Sealing of threaded pipes and fittings for passive materials DVGW[1] - approval | medium strength, high viscosity | yellow | M 80 R 3“ |
| **AN 306-10** | Retaining cylindrical assemblies for passive materials | high strengh, medium viscosity | green | M 20 R ¾“ |
| **AN 306-30** | Retaining cylindrical assemblies for passive materials, BAM[2] approval | high strengh, higher viscosity | green | M 36 |

1 DVGW Certificate for use in gas supply and hot water systems
2 BAM Approval (Bundesanstalt für Materialforschung und -prüfung BAM)

Adhesives and Sealants

# For high-alloyed steels and other passive materials

## Active and passive materials
### Surfaces & materials

Surfaces to be bonded can be divided into active and passive materials. Active materials are basically metals with a high content of iron or copper. Examples are iron, steel, copper or brass.

Active materials are capable of emitting many metal particles and allow the fast curing of the anaerobic adhesives while deprived of air.

The curing process is started by the effect of metal particles on the surface of the material under exclusion of the atmospheric oxygen.

| **Passive materials:** (slow curing) | **Active materials:** (fast curing) |
|---|---|
| high-alloyed steel | bronze |
| aluminium, nickel, zinc, gold | iron |
| oxide layers | copper |
| chromate layers | brass |
| anodic coatings | steel |
| plastics and ceramics | |

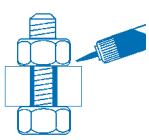
By contrast, passive materials like high-alloyed steel (stainless steel), zinc, aluminium or plastics, can emit only a small number of metal ions or none at all. For this reason, anaerobic adhesives usually cure only very slowly on these materials or only with the help of an activator.

## Quick and high strength joints
### even without activator

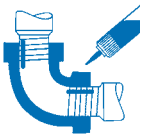
Especially for use on passive materials we have developed particular types which are capable of curing on these problematic materials and of joining the components quickly and with high strength - and this without the use of an activator = no loss of strength!

The positive properties, like the resistance to vibration or the high temperature resistance, are completely maintained even during use on passive materials.

The values in the subsequent table illustrate the curing of these types which is up to 30% faster compared to the standard types, e.g. Types AN 302-70, AN 306-38.



locking


retaining


gasketing

| Viscosity in mPa.s at +25°C (+77°F) Brookfield | Gap filling capacity in mm max. | Breakaway strength N/m (Thread*) | Prevailing strength N/m (Thread*) | Shear-strength** N/mm² (DIN 54452) | Handling strength at room temp. (minute) | Final strength at room temperature (hours) | Temperature resistance |
|---|---|---|---|---|---|---|---|
| 2.000 - 7.000 mt | 0,25 | 17 - 22 | 8 - 12 | 9 - 13 *(1.305 - 1.885 psi)* | 10 - 20 | 1 - 3 | -60°C to +200°C *(-76°F to +392°F)* |
| 3.000 - 8.000 mt | 0,25 | 8 - 12*² | 5 - 8*² | 9 - 13 *(1.305 - 1.885 psi)* | 20 - 40*² | 4 - 8*² | -60°C to +200°C *(-76°F to +392°F)* |
| 700 - 1.000 nt | 0,15 | 30 - 35 | 55 - 70 | 25 - 35 *(3.625 - 5.075 psi)* | 2 - 5 | 2 - 4 | -60°C to +180°C *(-76°F to +356°F)* |
| 3.000 - 6.000 mt | 0,20 | 35 - 45 | 50 - 70 | 20 - 30 *(2.900 - 4.350 psi)* | 2 - 5 | 2 - 4 | -60°C to +180°C *(-76°F to +356°F)* |
| 50.000 - 80.000 ht | 0,50 | 11 - 16*² | 4 - 7*² | 6 - 13 *(870 - 1.885 psi)* | 25 - 50*² | 4 - 8*² | -60°C to +150°C *(-76°F to +302°F)* |
| 700 - 1.000 nt | 0,15 | 30 - 35 | 55 - 70 | 25 - 35 *(3.625 - 5.075 psi)* | 2 - 5 | 2 - 4 | -60°C to +180°C *(-76°F to +356°F)* |
| 3.000 - 6.000 mt | 0,20 | 35 - 45 | 50 - 70 | 20 - 30 *(2.900 - 4.350 psi)* | 2 - 5 | 2 - 4 | -60°C to +180°C *(-76°F to +356°F)* |

*¹ Strength values based on M 10 screws, 8.8 grade, thickness of nut 0,8 • d

** Static shear strength based on cylindrical parts of abt. Ø 13 mm, tolerance (D-d) = 0,05 mm, l/d = 0,88

*² Strength measured on V4A stainless steel screws


**WEICON GmbH & Co. KG (Headquarters)**

Königsberger Str. 255 · DE-48157 Münster
P.O. Box 84 60 · DE-48045 Münster
Germany

phone +49 (0) 251 9322 0
info@weicon.de

**WEICON Middle East L.L.C.**

Jebel Ali Ind Area 3
P.O. Box 118 216 · Dubai
United Arab Emirates

phone +971 4 880 25 05
info@weicon.ae

**WEICON Inc.**

20 Steckle Place · Unit 20
Kitchener · Ontario N2E 2C3 · Canada

phone +1 877 620 8889
info@weicon.ca

**WEICON Kimya Sanayi Tic. Ltd. Şti.**

Orhan Gazi Mahallesi 16. Yol Sokak No: 6
34517 Hadımköy-Esenyurt · Istanbul
Turkey

phone +90 (0) 212 465 33 65
info@weicon.com.tr

**WEICON Romania SRL**

Str. Podului Nr. 1
547176 Budiu Mic (Targu Mures) · Romania

phone +40 (0) 3 65 730 763
office@weicon.com

**WEICON SA (Pty) Ltd**

Unit No. D1 · Enterprise Village
Capricorn Drive · Capricorn Park
Muizenberg 7945 (Cape Town) · South Africa

phone +27 (0) 21 709 0088
info@weicon.co.za

**WEICON South East Asia Pte Ltd**

5 Soon Lee Street
Pioneer Point #03-56 · Singapore 627607

phone (+65) 6710 7671
info@weicon.com.sg

**WEICON Czech Republic s.r.o.**

Teplická 305
CZ-417 61 Teplice-Bystřany
Česká republika

phone +42 (0) 417 533 013
info@weiconcz.cz

**WEICON Ibérica S.L.**

Av. de Somosierra 18, Nave 6
San Sebastián de los Reyes
28703 Madrid

phone +34 (0) 914 7997 34
info@weicon.es

**WEICON Italia S.r.L.**

phone +39 (0) 329 235 9592
info@weicon.it

**www.weicon.com**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