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# 1. Comparison of our Tamper Proof Sealants

## 1.1 Technical data

	Standard Range	Zero Range  	Fast Dry Range 
<b>Viscosity</b>	15.000 - 20.000 mPas	10.000 - 30.000 mPas	20.000 - 30.000 mPas
<b>VOC content</b>	540 g/L ±20 g/L*	0 g/L	520 g/L ±20 g/L*
<b>Application temperature</b>	+5 - 30° C	+5 - 30° C	+5 - 30° C
<b>Temperature stability</b>	up till 125° C	up till ca. 90° C	up till 125° C
<b>pH value</b>	-	ca. 8 - 9	-
<b>Flashpoint</b>	29° C	-	-4° C
<b>Touch dry after</b>	ca. 5 min**	ca. 10 min**	ca. 30 - 45 s**
<b>Fully hardened after</b>	ca. 24 hours**	ca. 4 hours**	ca. 24 hours**
<b>Density</b>	ca. 1,05 g/cm <sup>3</sup>	ca. 0,98 g/cm <sup>3</sup>	ca. 1,05 g/cm <sup>3</sup>

\* May vary slightly depending on the colour.

\*\* Touch dry and through-drying speed are strongly dependent on the coating thickness and the ambient conditions. Please test for your own application.





## Comparison of our Tamper Proof Sealants

**1.2 Media resistance**

	Standard Range	Zero Range  	Fast Dry Range 
Water	●	●	●
Gasoline	●	●	●
Super 95	●	○	●
White spirit 135/175	●	●	●
Special boiling point product 100/140	●	●	●
Ethanol	○	○	●
Isopropyl alcohol (IPA)	●	○	●
n-Butanol	●	○	●
2-Methoxy-1-Propanol	○	○	○
Butylacetate	✗	○	○
Ethylacetate	✗	○	✗
Acetone	✗	○	✗
Methyl ethyl ketone (MEK)	✗	○	✗
Titanium grease	●	●	●
WD-40	●	●	●
Hydrochloric acid 0,5 mol/l	●	○	●
Hydrofluorether	●	●	●

- Resistant: no or very little impairment
- Limited resistance: weak to moderate attack
- ✗ Unstable: strong attack / paint dissolves in medium





## 2. Standard Range Tamper proof sealant



### Properties

- Fast drying
- Insulating
- Good media resistance

### Colours / Item numbers

				
Transparent #10080	White #11000	Yellow #12000	Orange #12200	Red #13000
				
Pink #13200	Blue #14000	Green #15000	Gray #17000	Black #18000

The SchraubensicherungsLack (tamper proof sealant) of Lackfabrik Bäder GmbH & Co. KG is the reference since 1962 in the market of tamper proof sealants and for years has been used millionfold in small, medium, large and global industrial companies.

Our SchraubensicherungsLack Standard is the essential tool to protect, mark, fill and seal work involving all kinds of screw securing jobs. It is used for quality assurance and to safeguard against manipulation in machine-building, precision-engineering, the automotive industry and electronics.

### Industry specifications

- Airbus-Specification ECS-L 2274
- Boeing-Specification BMS8 45 Type II
- Rolls Royce Specification MSRR1102
- Bosch Norm 2580-1



Standard Range

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## 2.1 Technical data

<b>Viscosity</b>	15.000 - 20.000 mPas
<b>VOC content</b>	540 g/L ±20 g/L*
<b>Application temperature</b>	+5 - 30° C
<b>Temperature stability</b>	up till 125° C
<b>pH value</b>	-
<b>Flashpoint</b>	29° C
<b>Touch dry after</b>	ca. 5 min**
<b>Fully hardened after</b>	ca. 24 hours**
<b>Density</b>	ca. 1,05 g/cm <sup>3</sup>

\* May vary slightly depending on the colour.

\*\* Touch dry and through-drying speed are strongly dependent on the coating thickness and the ambient conditions. Please test for your own application.





## Standard Range

**2.2 Media resistance**

Water	●
Gasoline	●
Super 95	●
White spirit 135/175	●
Special boiling point product 100/140	●
Ethanol	○
Isopropyl alcohol (IPA)	●
n-Butanol	●
2-Methoxy-1-Propanol	○
Butylacetate	×
Ethylacetate	×
Acetone	×
Methyl ethyl ketone (MEK)	×
Titanium grease	●
WD-40	●
Hydrochloric acid 0,5 mol/l	●
Hydrofluorether	●

- Resistant: no or very little impairment
- Limited resistance: weak to moderate attack
- × Unstable: strong attack / paint dissolves in medium





## Standard Range

### 1.3 Security levels

The Standard Range is available in the security levels Basic, Secure and Topsecure (BäderIdent®).

#### Basic

The security level Basic constitutes just the lacquer without the admixture of marking particles.

#### Storage\*

20 ml tube and 1 kg can:

Shelf life at room temperature (ca. 20°C) is 2 years.

30/50 ml cartridge:

Shelf life at room temperature (ca. 20°C) is 6 months.

#### Secure



The security level Secure contains a hidden security feature which can be made visible (fluorescence) with a 300 mV infrared laser pointer (980 nm)

#### Storage\*

20 ml tube and 1 kg can:

Shelf life at room temperature (ca. 20°C) is 1 year.

30/50 ml cartridge:

Shelf life at room temperature (ca. 20°C) is 6 months.

#### Colours / Item numbers

- White #11002;  Yellow #12002;  Orange #12202;  Red #13002;  Pink #13202;
- Transparent #10082;

\* Longer storage times may be possible, please test before use. The product has a longer shelf life when refrigerated.





## Standard Range

**Topsecure  
(BäderIdent®)**

The security level Topsecure (BäderIdent®) offers an unambiguous product identification, making it an effective means against product counterfeiting and manipulation of every kind. The BäderIdent® lacquer system contains an individual code which consists of a specific fluorescent marker particle and a color. By means of a suitable analyser, you can always check on site the authenticity and integrity of your product.

**Colours / Item numbers**

○ White #11001; ● Yellow #12001; ● Orange #12201; ● Red #13001; ● Pink #13201; ● Blue #14001; ● Green #15001;

**Storage**

20 ml tube, 30/50 ml cartridge and 1 kg can:  
Shelf life at room temperature (ca. 20°C) is 6 months.

## 1.4 Further information

**Ordinance on hazardous substances**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**Pretreatment of surfaces**

Surfaces must be cleaned of grease, oil, humidity and rust. Please perform compatibility tests to your application/material demands.

**Processing**

Apply directly to fittings dropwise, use the extension-tip to reach even poorly accessible connections (tube).

**Cleaning**

Product residues and impurities are easily removed with Universal Tamper Proof Sealant Remover.

**Personal protection measures**

Respiratory protection not required in well-ventilated areas; avoid inhalation of fumes; ensure sufficient ventilation!

**Firefighting**

Foam, CO<sub>2</sub>, extinguishing powder or sand, never use full water jet.

**Accidental release measures**

Absorb with binding material (e.g. sand, diatomaceous earth, acid binder, universal binder) and dispose of in accordance with the local regulations.

**Disposal**

Dispose of product residues and packaging in accordance with the local regulations.



## GREENMARK<sup>®</sup>

The sub-brand **Greenmark**<sup>®</sup> comprises all marking systems of Lackfabrik Bäder GmbH & Co. KG, which are free of hazardous substances and have a particularly gentle effect on people and the environment. It is the result of Bäder<sup>®</sup>'s strategic decision to rely largely on high-performance water-based marking systems for new developments and thus to decisively improve the ecological footprint. The Zero range marks the beginning and will be com-

pleted by further high-performance systems this year and in the coming year.

### Properties

- Without organic solvents
- Water-based
- Insulating
- Good media resistance

## 3. Greenmark<sup>®</sup> - Zero Range

### Aqueous tamper proof sealant

The **Zero Range** (aqueous tamper proof sealant) from Lackfabrik Bäder GmbH & Co. KG is the first 100% water-based securing lacquer system that works completely without organic solvents (VOC-free). In addition to its excellent adhesive properties, it has good breaking properties and a drying speed that is phenomenal for water-based systems. Furthermore, it is not a hazardous material, which leads to a significant risk minimization for the user during its processing.

Our Zero Range is the essential tool to protect, mark, fill and seal work involving all kinds of screw securing jobs. It is used for quality assurance and to safeguard against manipulation in machine-building, precision-engineering, the automotive industry and electronics.

### Industry specifications

- Boeing-Specification BMS8 45 Type II
- Rolls Royce Specification MSRR1102
- Bosch Norm 2580-1





Greenmark® - Zero Range

### 3.1 Product overview

#### 3.1.1 Torque sealant



#### Key Feature

- **Food safe\***

#### Colours / Item numbers

				
White	Yellow	Neon Orange	Red	Blue
#11000w	#12000w	#12200w	#13000w	#14000w
				
Green	Gray	Black		
#15000w	#17000w	#18000w		

#### 3.1.2 Brush Marker\*\*



#### Key Features

- **Ideal for sealing bolts, nuts and adjustable parts**
- Provides good anti-fungal properties and resists mold growth
- Fluoresces under black light

#### Colours / Item numbers


Neon Red
#13050w

\* according to Regulation (EC) No. 1935/2004 and complies with the regulations of the German Food and Feed Code LFGB).  
 \*\* Brush Marker and High Precision Marker are only available in Basic security level.





Greenmark® - Zero Range

### 3.1.3 High Precision Marker\*



#### Key Features

- Enables highly precise and clean work on smallest parts
- Perfectly suited for labeling/marketing a wide variety of workpieces
- Fluoresces under black light

#### Colours / Item numbers

Neon Red  
#13060w

## 3.2 Technical data

<b>Viscosity</b>	10.000 - 30.000 mPas
<b>VOC content</b>	0 g/L
<b>Application temperature</b>	+5 - 30° C
<b>Temperature stability</b>	up till ca. 90° C
<b>pH value</b>	Ca. 8 - 9
<b>Flashpoint</b>	-
<b>Touch dry after</b>	ca. 10 min*
<b>Fully hardened after</b>	ca. 4 hours*
<b>Density</b>	ca. 0,98 g/cm <sup>3</sup>

\* Brush Marker and High Precision Marker are only available in Basic security level.

\*\* Touch dry and through-drying speed are strongly dependent on the coating thickness and the ambient conditions. Please test for your own application.



Greenmark® - Zero Range

### 3.3 Media resistance

Water	●
Gasoline	●
Super 95	○
White spirit 135/175	●
Special boiling point product 100/140	●
Ethanol	○
Isopropyl alcohol (IPA)	○
n-Butanol	○
2-Methoxy-1-Propanol	○
Butylacetate	○
Ethylacetate	○
Acetone	○
Methyl ethyl ketone (MEK)	○
Titanium grease	●
WD-40	●
Hydrochloric acid 0,5 mol/l	○
Hydrofluorether	●

- Resistant: no or very little impairment
- Limited resistance: weak to moderate attack
- ✘ Unstable: strong attack / paint dissolves in medium





Greenmark<sup>®</sup> - Zero Range

### 3.4 Security levels

The Zero Range is available in the security levels Basic, Secure and Topsecure (BäderIdent<sup>®</sup>)\*.

#### Basic

The security level Basic constitutes just the lacquer without the admixture of marking particles.

#### Storage\*\*

15 ml brush bottle, 20 ml tube, 20 ml dropping bottle:

Store between 10 - 18° C. Shelf life: one year.

30/50 ml cartridge and 1 kg can:

Store between 10 - 18° C. Shelf life: 6 months.

#### Secure



The security level Secure contains a hidden security feature which can be made visible (fluorescence) with a 300 mV infrared laser pointer (980 nm).

#### Colours / Item numbers

○ White #11002w; ● Yellow #12002w; ● Orange #12202w; ● Red #13002w;

#### Storage\*\*

20 ml tube:

Store between 10 - 18° C. Shelf life: one year.

30/50 ml cartridge and 1 kg can:

Store between 10 - 18° C. Shelf life: 6 months.

\* Brush Marker and High Precision Marker are only available in Basic security level.

\*\* Longer storage times may be possible, please test before use. The product has a longer shelf life when refrigerated.



Greenmark<sup>®</sup> - Zero Range

## Topsecure (BäderIdent<sup>®</sup>)



The security level Topsecure (BäderIdent<sup>®</sup>) offers an unambiguous product identification, making it an effective means against product counterfeiting and manipulation of every kind. The BäderIdent<sup>®</sup> lacquer system contains an individual code which consists of a specific fluorescent marker particle and a color. By means of a suitable analyser, you can always check on site the authenticity and integrity of your product.

### Colours / Item numbers

○ White #11001f; ● Yellow #12001f; ● Orange #12201f; ● Red #13001f; ● Blue #14001f; ● Green #15001f;

### Storage

20 ml tube:

Store between 10 - 18° C. Shelf life: one year.

30/50 ml cartridge and 1 kg can:

Store between 10 - 18° C. Shelf life: 6 months.

## 3.5 Further information

### Ordinance on hazardous substances

This mixture is not classified as hazardous according to Regulation (EC) 1272/2008 [GHS].

### Pretreatment of surfaces

Surfaces must be cleaned of grease, oil, humidity and rust. Please perform compatibility tests to your application/material demands.

### Processing

Apply directly to fittings dropwise, use the extension-tip to reach even poorly accessible connections (tube).

### Cleaning

Product residues and impurities are easily removed with Universal Tamper Proof Sealant Remover.

### Personal protective measures

Avoid contact with eyes.

### Accidental release measures

Absorb with binding material (e.g. sand, diatomaceous earth, acid binder, universal binder) and dispose of in accordance with the local regulations.

### Disposal

Dispose of product residues and packaging in accordance with the local regulations.



# 4. Fast Dry Range

## Fast drying tamper proof sealant



### Properties

- Extremely fast drying
- Excellent anti-flow behaviour
- Insulating
- Good media resistance

### Colours / Item numbers

				
White #11000f	Yellow #12000f	Orange #12200f	Red #13000f	Pink #13200f
				
Blue #14000f	Green #15000f	Gray #17000f	Black #18000f	

The Schraubensicherungslack Fast Dry from Lackfabrik Bäder GmbH & Co. KG is an extremely fast drying tamper proof sealant (torque seal), which is characterized by an excellent anti-flow behavior and good adhesion properties.

Our Schraubensicherungslack Fast Dry is the essential tool to protect, mark, fill and seal work involving all kinds of screw securing jobs. It is used for quality assurance and to safeguard against manipulation in machine-building, precision-engineering, the automotive industry and electronics.

### Industry specifications

- Airbus-Specification ECS-L 2274
- Boeing-Specification BMS8 45 Type II
- Rolls Royce Specification MSRR1102
- Bosch Norm 2580-1





## Fast Dry Range

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### 4.1 Technical data

<b>Viscosity</b>	20.000 - 30.000 mPas
<b>VOC content</b>	520 g/L ±20 g/L*
<b>Application temperature</b>	+5 - 30° C
<b>Temperature stability</b>	up till 125° C
<b>pH value</b>	-
<b>Flashpoint</b>	-4° C
<b>Touch dry after</b>	ca. 30 - 45 s**
<b>Fully hardened after</b>	ca. 24 hours**
<b>Density</b>	ca. 1,05 g/cm <sup>3</sup>

\* Kann in Abhängigkeit der jeweiligen Farbe geringfügig abweichen.

\*\* Antrocknungs- und Durchtrocknungsgeschwindigkeit sind stark abhängig von der Schichtdicke und den Umgebungsbedingungen. Bitte für eigene Anwendung selbst testen.





## Fast Dry Range

**4.2 Media resistance**

Water	●
Gasoline	●
Super 95	●
White spirit 135/175	●
Special boiling point product 100/140	●
Ethanol	●
Isopropyl alcohol (IPA)	●
n-Butanol	●
2-Methoxy-1-Propanol	○
Butylacetate	○
Ethylacetate	×
Acetone	×
Methyl ethyl ketone (MEK)	×
Titanium grease	●
WD-40	●
Hydrochloric acid 0,5 mol/l	●
Hydrofluorether	●

- Beständig: keine oder sehr geringe Beeinträchtigung
- Bedingt beständig: schwacher bis mäßiger Angriff
- × Unbeständig: starker Angriff / Lack löst sich in Medium





## Fast Dry Range

### 4.3 Security levels

The Fast Dry Range is available in the security levels Basic, Secure and Topsecure (BäderIdent<sup>®</sup>).

#### Basic

The security level Basic constitutes just the lacquer without the admixture of marking particles.

#### Storage\*

20 ml Tube und 1 kg can:

Shelf life at room temperature (ca. 20°C) is 6 months.

30/50 ml cartridge:

Shelf life at cooled temperature (ca. 10°C) is 3 months.

#### Secure



The security level Secure contains a hidden security feature which can be made visible (fluorescence) with a 300 mV infrared laser pointer (980 nm).

#### Storage\*

20 ml Tube und 1 kg can:

Shelf life at room temperature (ca. 20°C) is 6 months.

30/50 ml cartridge:

Shelf life at cooled temperature (ca. 10°C) is 3 months.

#### Colours / Item numbers

○ White #11002f; ● Yellow #12002f; ● Orange #12202f; ● Red #13002f; ● Pink #13202f;

\* Longer storage times may be possible, please test before use. The product has a longer shelf life when refrigerated.





## Fast Dry Range

### Topsecure (BäderIdent®)



The security level Topsecure (BäderIdent®) offers an unambiguous product identification, making it an effective means against product counterfeiting and manipulation of every kind. The BäderIdent® lacquer system contains an individual code which consists of a specific fluorescent marker particle and a color. By means of a suitable analyser, you can always check on site the authenticity and integrity of your product.

#### Colours / Item numbers

○ White #11001f; ● Yellow #12001f; ● Orange #12201f; ● Red #13001f; ● Pink #13201f; ● Blue #14001f; ● Green #15001f;

#### Storage

20 ml Tube und 1 kg can:

Shelf life at room temperature (ca. 20°C) is 6 months.

30/50 ml cartridge:

Shelf life at cooled temperature (ca. 10°C) is 3 months.

## 4.4 Further information

### Ordinance on hazardous substances

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

### Pretreatment of surfaces

Surfaces must be cleaned of grease, oil, humidity and rust. Please perform compatibility tests to your application/material demands.

### Processing

Apply directly to fittings dropwise, use the extension-tip to reach even poorly accessible connections (tube).

### Cleaning

Product residues and impurities are easily removed with Universal Tamper Proof Sealant Remover.

### Personal protection measures

Respiratory protection not required in well-ventilated areas; avoid inhalation of fumes; ensure sufficient ventilation!

### Firefighting

Foam, CO<sub>2</sub>, extinguishing powder or sand, never use full water jet.

### Accidental release measures

Absorb with binding material (e.g. sand, diatomaceous earth, acid binder, universal binder) and dispose of in accordance with the local regulations.

### Disposal

Dispose of product residues and packaging in accordance with the local regulations.



# 5. Universal Tamper Proof Sealant Remover



## Properties

- Easy handling
- Solvent saving
- Universally applicable

## Fully hardened after:

#10091

The Universal Tamper Proof Sealant Remover from Lackfabrik Bäder GmbH & Co. KG is the first tamper proof sealant remover available on the market. It is ideally suited for quickly removing tamper pro-

of sealants. This is particularly relevant in areas where frequent opening of the secured screw, plug or housing connection is necessary.

## 5.1 Technical data

<b>Viscosity</b>	ca. 7.500 mPas
<b>VOC content</b>	847 g/L
<b>Application temperature</b>	+5 - 30° C
<b>Temperature stability</b>	up till 125° C
<b>Flashpoint</b>	-20° C
<b>Density</b>	ca. 0,86 g/cm <sup>3</sup>





## Universal Tamper Proof Sealant Remover

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### 5.2 Further information

#### Ordinance on hazardous substances

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

#### Processing

Apply dropwise and remove by washing with a suitable solvent (e.g. acetone or butyl acetate) or with the Bäder Universal-Diluent after 30 min. of exposure.

If the tamper proof sealant has run into the thread, a second application of the remover may be necessary after removing the upper lacquer layer at the affected area.

#### Cleaning

Product residues and impurities are easily removed with Universal Tamper Proof Sealant Remover.

#### Personal protective measures

Respiratory protection not required in well-ventilated areas; avoid inhalation of fumes; ensure sufficient ventilation!

#### Firefighting

Foam, CO<sub>2</sub>, extinguishing powder or sand, never use full water jet.

#### Accidental release measures

Absorb with binding material (e.g. sand, diatomaceous earth, acid binder, universal binder) and dispose of in accordance with the local regulations.

#### Disposal

Dispose of product residues and packaging in accordance with the local regulations





## 6. Disclaimer

The above information in this technical data sheet (TDS), in particular suggestions for the processing and application of our products, is based on our current knowledge and experience. Due to the various possible applications and due to the fact that the application and working conditions of our customers are beyond our control, we do not accept any liability for the suitability of our products for the relevant production processes under the specific working conditions and the intended processing purposes and results. In order to ensure such suitability, we recommend in any case sufficient previous own trials and tests.

Any liability resulting from the information given in this technical data sheet and any other written or oral advice given for the present product is expressly excluded, unless otherwise agreed in individual contracts, unless there is a case of injury to life, limb or health, unless we have acted with intent or gross negligence or unless liability exists under mandatory product liability law.

The data contained herein is for information purposes only and is considered reliable to the best of our knowledge. However, we cannot accept liability for results obtained by others over whose methods we have no control. It is the responsibility of the user to determine the suitability of production methods mentioned herein for his own purposes and to take such precautions as would be advisable

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