



# Coatings

seal and hold

**BOSSARD**

## Coatings – seal and hold



**Replace O-rings and sealing washers**

**Prevent screw loss**

**Captive component**



Hot lava overflows the the rocky ground and becomes fertile earth. Fused coatings give connecting components new features.

# Great rationalisation potential

## Underhead sealings

Underhead sealing is as an elastic sealant applied to screws and other threaded portions directly under the head or flange before their use. This then forms a captive integrated component of the connecting component.

Other sealing elements such as special washers, O-rings, etc., are no longer required. This makes assembly simpler since fewer individual components need to be managed and there is no possibility of the sealing function going missing.

- Repeatedly reusable
- Prevents contact corrosion under the screw head
- Excellent sealing properties
- No additional washers, O-rings, etc. necessary
- Captive (because integrated) part of the connecting component



## Retaining rings

Screws fitted with a retaining ring can be inserted into the component first, and will be reliably fixed in the hole. The end user gets components fitted with screws so that they don't have to look for and position them during the assembly process.

If a service is necessary the screws will remain in the clearance hole, which is especially useful for overhead assembly (e.g. service opening in a ventilation shaft).

- Can be used several times
- No need to fit retaining washers
- Prevents missing connecting components
- Excellent retention properties thanks to high elasticity
- Captive (because integrated) component of the connecting component
- Suitable for connecting components to protective equipment as defined by Machinery Directive 2006/42/EG



# Nyseal® - the universal underhead sealing



## Description

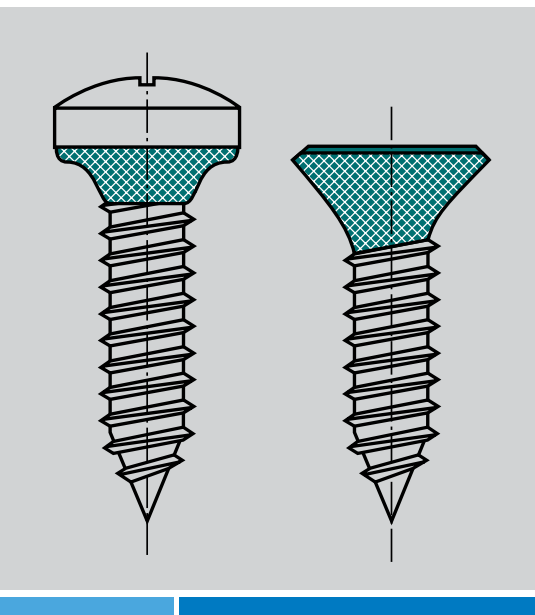
Nyseal® is a plastic coating (polyolefin) for application on screws or other thread pieces directly on the head, the flange or on the run-out of the thread. No manually applied washers, seals or O-rings required.

## Application

Nyseal® offers excellent sealing against liquids and gases. At the same time, this coating serves as protection for sensitive surfaces of the work pieces to be screwed together.

## Features

- Excellent sealing properties
- Prevents contact corrosion under the screw head
- No additional flat washers or seals
- No dirt in work- or assembly areas
- High resistance to chemicals and oils
- Also applicable to counter-sunk head screws



D	M <sub>Amax.</sub>
M 3	3.5
M 4	4.5
M 5	5.5
M 6	6.5
M 8	9
M 10	11
Other dimensions available on request	

D Diameter of screw and/or bolt  
M<sub>Amax.</sub> Maximum tightening torque in Nm

<b>Coatings</b>	on nearly all metal materials
<b>Material</b>	polyolefin
<b>Coat thickness</b>	0.2 - 0.4 mm
<b>Operating temperature</b>	up to +70°C
<b>Maximum temperature</b>	max. +90°C
<b>Reusability</b>	several times, depending on load
<b>Shore hardness A</b>	54
<b>Colour</b>	green
<b>Seal effect</b>	for up to approx. 70 bar (testing by customer required)
<b>Oil-resistant</b>	yes

# Nyplas® - the soft underhead sealing

## Description

Nyplas® is a plastic coating (modified plastisol) for application on screws or other thread pieces directly on the head, the flange or on the run-out of the thread. No manually applied washers, seals or O-rings required.

In comparison to Nyseal® coatings, substantially thicker coating thickness can be achieved with Nyplas®. In principle, we recommend a practical test before serial application to determine the required coating thickness.

## Application

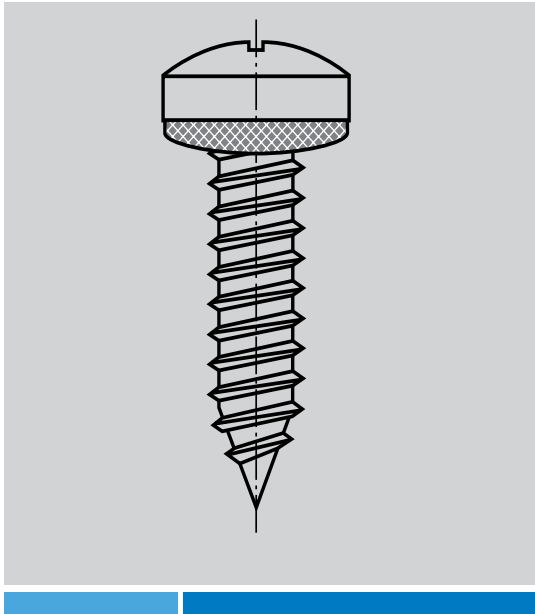
Nyplas® is an excellent sealant against liquids and gases. At the same time, this coating serves as protection for sensitive surfaces of the work pieces to be screwed together.



## Features

- Seal/noise insulation immediately after screwing the parts together
- Use of O-rings, washers, etc. is no longer required
- Reusable
- Very good sealing properties
- Long life  
No shrinking or drying out
- Wide operating temperature range:  
-40°C to +150°C

<b>Sizes</b>	M3 – M10, other sizes on request
<b>Coatings</b>	on nearly all metal materials
<b>Coating thickness</b>	approx. 0.5 mm
<b>Restriction</b>	only applicable to horizontal surfaces (e.g. countersunk screws cannot be coated with Nyplas)
<b>Material</b>	modified plastisol
<b>Operating temperature</b>	-40°C to +150°C
<b>Reusability</b>	several times, depending on stress
<b>Colour</b>	black
<b>Oil resistant</b>	no



# Nystay® - the ring coating for retention

## Description

Nystay® is a plastic precoating (polyolefin-based) which is applied directly to the shaft or the thread of connecting components to protect them during transport or assembly in the respective application or assembly group.

## Application

Nystay® can be used on any connecting components, with or without thread. Nystay® allows preassembly especially with automatic feeders and robot applications. The application range covers not only screws but all connecting components, such as shafts, rivets, bolts, pressed- and milled parts, etc.

## Features

- Fixes connecting components in place during transport and assembly
- Non-toxic and environmentally friendly, since plastic coating is polyolefin-based
- No chemical hardening
- Can be positioned anywhere on the shaft or thread of a connecting component
- Reduces assembly time for final user
- Interesting solution for safety requirements as defined by Machinery Directive 2006/42/EC

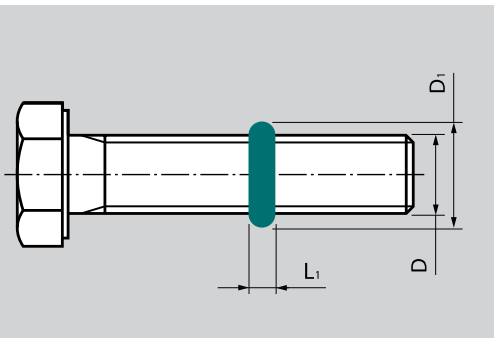


D	D <sub>1 min.</sub>	D <sub>1 max.</sub>	L <sub>1</sub> ca.	D <sub>L</sub> RW <sup>1)</sup>
M 3	3.5	4	1.5 – 2.5	D <sub>1</sub> – 0.2
M 4	4.5	5	2 – 3.5	D <sub>1</sub> – 0.2
M 5	5.5	6	2.5 – 4	D <sub>1</sub> – 0.2
M 6	6.5	7	3 – 5	D <sub>1</sub> – 0.2
M 8	9	10	4 – 7	D <sub>1</sub> – 0.2
M 10	11	12	5 – 8	D <sub>1</sub> – 0.2

All measurements in mm. Other dimensions available on request

D Diameter of screw and/or bolt  
 D<sub>1 min.</sub> minimum diameter of the coating  
 D<sub>1 max.</sub> maximum diameter of the coating  
 L<sub>1</sub> approx. length of the coating

D<sub>L</sub> RW<sup>1)</sup> Recommended value for clearance hole in counter piece  
 Larger clearance hole = lower penetration force  
 Smaller clearance hole = greater penetration force



<b>Coatings</b>	on nearly all metal materials
<b>Material</b>	polyolefin-based
<b>Operating temperature</b>	-40°C to +90°C
<b>Reusability</b>	possible several times
<b>Colour</b>	green
<b>Penetration force</b>	to be determined by testing
<b>Ring position</b>	freely selectable

# Other coating options

## TufLok® coating

TufLok® ist is a reliable and economic system for securing and sealing screwed fastenings.

TufLok® can be also be used as an underhead sealing in highly pre-stressed connections. Preceding tests are recommended.

### General features:

- Can be used several times
- No hardening time - can be stressed immediately
- For nearly all metal base materials
- For almost every type of surface
- Can be stored for an unlimited period of time
- Resistant to attack by many different media
- Screws from M1 to M68
- Lengths up to 220 mm
- Nuts from M5 to M12

### Spot coating:

- High locking effect
- Suitable for adjusting screws

### Round coating:

- Sealed against liquids and gases



## TufLok® - Patch

The threaded parts receive a highly elastic, abrasion-resistant blue polyaminide spot on one part of the thread. The axial play between the screw and the nut is displaced on one side, creating a vibration-proof clamping action.

## TufLok® - Patch 360°

The threaded parts receive a highly elastic, abrasion-resistant blue polyaminide coating around the circumference of one part of the thread. This fills in any axial play between the screw and the internal thread, creating a tight, vibration-proof screw connection.

## Nytemp® (orange)

Nytemp® is used in the same way as TufLok® - coating, but can be used at a constant temperature of up to 200°C.

Further information on TufLok® and Nytemp® can be found in the detailed documentation.

Bossard Group  
Steinhauserstrasse 70  
CH-6301 Zug

Phone +41 41 749 66 11  
Fax +41 41 749 66 22  
[www.bossard.com](http://www.bossard.com)