Thread locking and sealing

Insulating coating

TufLok®/Nytemp®  
Nyseal®  
Nystay®  
Nyplas®  
precote/3M  
Nycote®

... technologies for a reliable hold

Technical publication No.60
Fastening technology from KerbKonus is in successful application in a wide variety of different industrial sectors around the world.

State-of-the-art production facilities provide our customers with the assurance of quality and reliable delivery, and sophisticated fastening solutions for every conceivable field of application are implemented by our own Research and Development Department.

Close cooperation and exchange of experience and expertise on an international level ensure that our company stays at the cutting edge of technological development.

With independent branches and agencies operating in a number of countries around the world, we are a truly reliable partner when it comes to secure fastening technology you can rely on.

Alongside its renowned threaded inserts, the name KerbKonus also stands for comprehensive products and services in the field of connecting technology. KerbKonus offers its services as a reliable contract coater to prepare threads for a wide range of different requirements:

- Thread locking
- Thread sealing
- Insulating plastic coating

Threaded inserts from KerbKonus have been thoroughly tried and tested over the years and used in a wide variety of applications to create connections you can rely on. Depending on the method of anchoring in the material, KerbKonus offers a variety of different threaded insert versions:

- Self-tapping threaded inserts for metal, wood and plastics,
- Threaded inserts for cold embedding
- Threaded inserts for hot or ultrasound embedding
- Threaded inserts for screwing into an internal thread
- Threaded inserts for riveting

For the reliable, cost-effective connection of thin mouldings and parts made of aluminium and magnesium, KerbKonus offers the:

- Tuk-Rivet, the complete punched rivet system for thin mouldings

If you have a specific problem related to the field of fastening technology – with its rich fund of expertise and comprehensive product range, KerbKonus has the solution for you.

Technical details on KerbKonus products are also provided on our homepage: www.kerbkonus.com
### Thread coating from KerbKonus ...

Tested quality and reliability
Coatings in application and on the test stand

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<thead>
<tr>
<th>Dimensions</th>
<th>Sealing method</th>
<th>Screw-in torque</th>
<th>Specifications</th>
<th>Further description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Works standard</td>
<td>Page 2 and 3</td>
</tr>
</tbody>
</table>

#### TufLok®, "der blaue Fleck"® (the blue patch)

- **Screws:** M1 to M68
- **Nuts:** M5 to M12
- **Up to 120°C, short term up to 150°C,** nylon spot coating, Colour: Blue

<table>
<thead>
<tr>
<th>Screws:</th>
<th>M1 to M68</th>
<th>Up to 120°C, short term up to 150°C, nylon spot coating, Colour: Blue</th>
<th>360°-coating</th>
<th>Medium coating</th>
<th>Works standard</th>
<th>Page 6 and 7 900/945</th>
</tr>
</thead>
</table>

#### Nytemp®

- **Screws:** M1 to M68
- **Nuts:** M5 to M12
- **Up to 200°C,** plastic spot coating, Colour: Orange

<table>
<thead>
<tr>
<th>Screws:</th>
<th>M1 to M68</th>
<th>Up to 200°C, plastic spot coating, Colour: Orange</th>
<th>360°-coating</th>
<th>Medium</th>
<th>Works standard</th>
<th>Page 8 and 9</th>
</tr>
</thead>
</table>

#### Nyseal®

- **M3 to M10**
- **ISO 4 to ISO 10**
- **Colour:** Green or transparent
- **360°-plastic**
- **Unchanged**
- **Works standard 903 2**

<table>
<thead>
<tr>
<th>M3 to M10</th>
<th>ISO 4 to ISO 10</th>
<th>Colour: Green or transparent</th>
<th>360°-plastic</th>
<th>Unchanged</th>
<th>Works standard</th>
<th>Page 10 and 11</th>
</tr>
</thead>
</table>

#### Nystay®

- **Screws, bolts from Ø 1 mm**
- **Pins from Ø 3 mm**
- **Colour:** Green, fixing, Polyolefin foam

<table>
<thead>
<tr>
<th>Screws, bolts from Ø 1 mm</th>
<th>Colour: Green, fixing, Polyolefin foam</th>
<th>360°-coating</th>
<th>Unchanged</th>
<th>Works standard 903 4</th>
<th>Page 12 and 13</th>
</tr>
</thead>
</table>

#### Nyplas®

- **Screws from M3**
- **Colour:** Black PVC/Plastisol-coating

<table>
<thead>
<tr>
<th>Screws from M3</th>
<th>Colour: Black PVC/Plastisol-coating</th>
<th>360°-coating</th>
<th>Unchanged</th>
<th>Works standard 903 3</th>
<th>Page 14 and 15</th>
</tr>
</thead>
</table>

#### precote 30/80/83/85

- **From M3**
- **Up to 170°C (with precote 80/83), plastic adhesive in microcapsules**
- **Colour:** Yellow, red, turquoise, white

<table>
<thead>
<tr>
<th>From M3</th>
<th>Up to 170°C (with precote 80/83), plastic adhesive in microcapsules, Colour: Yellow, red, turquoise, white</th>
<th>360°-coating</th>
<th>Low</th>
<th>Works standard 924/926/927</th>
<th>Page 16 to 19</th>
</tr>
</thead>
</table>

#### 3M 2353/3M 2510

- **From M3**
- **Short term up to 150°C (with 3M 2510), plastic adhesive in microcapsules**
- **Colour:** Blue, white, orange

<table>
<thead>
<tr>
<th>From M3</th>
<th>Short term up to 150°C (with 3M 2510), plastic adhesive in microcapsules, Colour: Blue, white, orange</th>
<th>360°-coating</th>
<th>Low</th>
<th>Works standard 924 to 929</th>
<th>Page 16 to 19</th>
</tr>
</thead>
</table>

#### precote 5 • 3M 4291

- **From M3**
- **Film-forming dispersion**
- **Colour:** turquoise, white

<table>
<thead>
<tr>
<th>From M3</th>
<th>Film-forming dispersion, Colour: turquoise, white</th>
<th>360°-coating</th>
<th>Low</th>
<th>Works standard 924 to 929</th>
<th>Page 20 to 23</th>
</tr>
</thead>
</table>

#### Nycote®

- **M5 to M16**
- **Insulating coating**

| M5 to M16 | Insulating coating | No | Low | Works standard 911/912/913 | Page 24 to 27 |
At our parent plant in Amberg, we produce threaded inserts using efficient production methods. A team of qualified and highly motivated staff guarantees a consistent, high standard of production.

The number of products manufactured over the company’s history reaches into the billions. State-of-the-art automation lines manufacture around the clock in a precise and high standard of quality. The efficient and low-cost production of large-scale product series is one of the strengths on which we have based our success.

But our high-volume production output in no way compromises flexibility. We are able to quickly and efficiently produce even small batches of non-standard items.

Our well assorted inventory permits the reliable, prompt delivery of standard products, keeping your production running to schedule at all times and helping to minimize your warehousing costs.

We are particularly proud of a cost-to-performance ratio which ensures satisfied customers the world over. This has made KerbKonus a reputable and respected partner to industry in the global marketplace.

Quality is a top priority issue at KerbKonus. Quality consciousness is a continuous thread running through every aspect of the company’s work and all its products and services. Quality is lived and breathed at KerbKonus.

All the most important certifications and approvals are always kept consistently up to date, and our company is audited regularly for compliance with the most important international standards.
A secure connection for our customers ...

KerbKonus has enjoyed an excellent reputation as a surface treatment company over a period of many years.

Thread coating is something we view as a comprehensive service. Subject areas such as reliable delivery dates and flexibility mean more to KerbKonus than mere watchwords; they form the basis for maximum customer satisfaction.

We carry out surface treatment at a number of locations (two of them in Germany), meaning that we are always within reaching distance for our customers. Short distances and production flexibility guarantee our customers the degree of delivery reliability they need to succeed.

Our flexibility is evidenced particularly by our ability to respond quickly to customer requests. We take charge of the entire logistical organization. And when the situation so requires, we act quickly and reliably to maintain the delivery capability of our customers – no matter how tight the bottleneck.

Our many years of experience as a supplier to the automotive industry have clearly highlighted the need for all-embracing solutions to connection problems which cut across conventional thematic boundaries.

With its know-how and its comprehensive range of products and services, KerbKonus is a truly dependable partner when it comes to „fastening technology you can rely on“. 
Coatings in application …

Thread coating types Tuf-Lok, Nytemp, Nyseal, precote, 3M and Nycote have been proven in practical application the world over.

KerbKonus offers a contract surface treatment service using these coating methods on supplied screws and nuts.

Product characteristics

- Security against working loose or unscrewing
- Provision of a fluid or gas-tight seal
- Use in materials of any optional strength or surface hardness
- No damage to surfaces as is possible with many washer elements or with toothed-head screws
- No notching effect under the head, eliminating the risk of permanent fractures in thin-walled mouldings
- No metering problems of the type encountered with fluid screw locking media
- No components becoming stuck on assembly belts

TufLok® – „der blaue Fleck“® (the blue patch) or as an all-round coating

A reliable economic system for locking and sealing screw connections. A highly elastic, wear-resistant blue nylon coating is applied to part of the thread on screws and other threaded components.

The TufLok spot creates a high frictional engagement during the installation process, firmly pressing together the flanks between the screw and nut thread.

At the same time, it fills the axial backlash between the screw and nut thread, creating a connection which prevents the screw from working loose under dynamic loads.

Nytemp®

High-temperature screw locking and sealing system for use at continuous temperature stress of up to 200°C (higher temperature stress also possible for short periods).

Due to the high coating temperature, this product can only be used on bright or phosphated threaded components. Short term corrosion protection may be applied subsequently.

Nyseal®

Nyseal is a new concept, involving the application of elastic seals on screws and other threaded components prior to application, either directly under the head, flange or on the thread run-out. This eliminates the need for the use of manually applied washers, seals or O-rings.

Nycote®

Nycote is a patent-protected coating method involving the application of insulating (non-conductive) Teflon powder on the heated threaded component.

Result: A protective layer which prevents unwanted deposits from primers, paints and other surfaces during the electrodeposition process.

precote/3M®

The principle goes by the name of microencapsulation: Minute fluid droplets trapped in a thin-walled capsule. This method allows fluid adhesive locking systems to be „packaged“ in powder form.

The powder-form microcapsules are worked into a reactive binder system and applied in this form to the thread surfaces. The threaded components are coated by mechanical droplet wetting using special coating plants.

During installation of the threaded components, the microcapsules break open, releasing the fluid adhesive locking medium, which dries quickly.

A screw connection is created which not only has sealing properties but is also secured against vibration and loss of pre-stress.
A company’s success depends primarily on its productivity and innovative drive as well as on the quality of its services.

A high standard of quality is fundamental to any company’s long-term success in the marketplace.

Quality improvement and enhanced productivity are not self-contradictory. Quite the contrary: Where an efficient, functioning Quality System is in place, they serve to complement each other.

For this reason, KerbKonus has invested heavily also in developing and expanding a system of internal production surveillance in its thread coating producing division.

Since as long ago as June 16, 1994, our company has been certified to DIN ISO 9001, passing the repeat and surveillance audits with flying colours.

Certification to QS-9000/VDA 6.1 was successfully completed in February 1999.

Threaded inserts from KerbKonus are manufactured in large piece numbers. Human lives and safety can often depend upon these tiny components, for instance in the case of airbag retaining fasteners.

Because we bear this heavy responsibility, our products are tested and monitored in line with the most stringent directives. In the case of particularly critical applications, each and every part is exhaustively tested on state-of-the-art test equipment before it is delivered to you.
TufLok®/Nytemp® for self-locking external threads

TufLok® — „der blaue Fleck”® (the blue patch) has proven highly successful in practical applications around the globe: In the automotive engineering industry, in heavy-duty machinery, fittings and appliance construction, in hydraulic systems, electrical and precision mechanics and in optical applications.

The TufLok spot is also suitable for use wherever other systems are unable to meet requirements for technical or economic reasons:
- For extremely small screws – from M 0,8
- For screws made of hard materials
- For screws whose cross-section must not be weakened
- For threaded bolts

Field of application

- **TufLok®**: Temperature resistant from -56° to +120°C. Following prior practical testing, applications up to +150°C are possible.
- **Nytemp®**: For high-temperature screw locking for continuous thermal stress of up to 200°C (higher thermal stress also possible for short periods).
- **TufLok®**: Does not dry out, shrink or decompose, has a practically unlimited storage life. Resistant to alcohol, oil, petrol and most thinners.

The TufLok coating is also suitable for use in the food industry.

„der blaue Fleck” (the blue patch) is a Trademark of Kerb-Konus-Vertriebs-GmbH

The 3-D-brands DE 395 07 392 and EU 000 694 026 — a screw with a blue patch — are Trademarks of Kerb-Konus-Vertriebs-GmbH

Product features

- Excellent locking effect compared to other methods; even if screws are not correctly tightened.
- Vibration-resistant in every screw-in position. This makes the TufLok screw ideally suited as an adjusting screw.
- Fluid and gas-tight seal. The nylon layer presses firmly into the flanks of the thread, so preventing the ingress of media. All-round coating is recommended for these applications.
- Replaces positive locking elements which are often forgotten and lost during assembly. The blue TufLok dot is an integral part of the screw and cannot be lost.
- Multiple use. The highly elastic blue TufLok spot always endeavours to regain its original shape. Its system-typical spray edge area safeguards the contact surface from shearing off.
- No drying time whatsoever required – immediately capable of withstand- ing stress. No problems also when tightening the TufLok screw during final installation.
- Suitable for all metallic materials, also for threaded components made of stainless steels, light alloys and brass, as well as for almost all surface-treated parts.

Installation

TufLok screws are mounted either mechanically or manually using conventional tools. The TufLok screw enhances productivity due to its capacity for fully automatic feed and installation. The female thread does not need to be free of oil or grease, so allowing torque levels to be decreased.

Coating

Coating takes place in accordance with works standard 900.1.

It is also possible for galvanized screws to be chromated after TufLok coating. The concentration of nitric acid for activation of the zinc coat may not exceed five percent, it should always be kept as low as possible.

Optimum results are achieved with a clean, smooth and chip-free nut thread in the medium tolerance category. We generally recommend countersinking the female thread.

The TufLok system can be used without problems in running production series without any need for tool modification.

Most special requirements relating to the position of the coating and the degree of torque can be accommodated.

Testing

Testing generally takes place in accordance with WN 900.1.

Other test methods must always be specified, and can include:
- DIN 267, part 28
- DIN 267, part 15
- Customer test specimen with torque specification
application

For the manufacture of ready-to-assemble, self-locking and sealing screws and threaded parts from M 0,8 to M 68, length up to 220 mm.

normal coating

Coating angle \( \alpha \) in the screw body area \( \approx 90^\circ \), edge zone (spray transition) up to \( \approx 180^\circ \). Coating length \( B_1 \approx 4 \) to 6 thread turns. Around 2 to 3 thread turns remain uncoated to ensure flawless installation (\( B_2 \)).

Torque levels

<table>
<thead>
<tr>
<th>Screws ISO 6g</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>screwing in</td>
<td>unscrewing</td>
</tr>
<tr>
<td></td>
<td>max. Nm</td>
<td>min. Nm</td>
<td>min. Nm</td>
</tr>
<tr>
<td>to M 2</td>
<td>0,2</td>
<td>0,04</td>
<td>0,02</td>
</tr>
<tr>
<td>M 3</td>
<td>0,45</td>
<td>0,1</td>
<td>0,05</td>
</tr>
<tr>
<td>M 3,5</td>
<td>0,7</td>
<td>0,2</td>
<td>0,1</td>
</tr>
<tr>
<td>M 4</td>
<td>0,9</td>
<td>0,28</td>
<td>0,17</td>
</tr>
<tr>
<td>M 5</td>
<td>1,6</td>
<td>0,4</td>
<td>0,23</td>
</tr>
<tr>
<td>M 6</td>
<td>3,0</td>
<td>0,8</td>
<td>0,4</td>
</tr>
<tr>
<td>M 8</td>
<td>6,0</td>
<td>1,5</td>
<td>0,8</td>
</tr>
<tr>
<td>M 10</td>
<td>9,5</td>
<td>2,3</td>
<td>1,2</td>
</tr>
<tr>
<td>M 12</td>
<td>13,0</td>
<td>3,4</td>
<td>1,7</td>
</tr>
<tr>
<td>M 14</td>
<td>19,0</td>
<td>4,5</td>
<td>2,3</td>
</tr>
<tr>
<td>M 16</td>
<td>28,0</td>
<td>7,0</td>
<td>3,5</td>
</tr>
<tr>
<td>M 18</td>
<td>36,0</td>
<td>9,0</td>
<td>4,0</td>
</tr>
<tr>
<td>M 20</td>
<td>44,0</td>
<td>11,0</td>
<td>5,5</td>
</tr>
<tr>
<td>M 22</td>
<td>60,0</td>
<td>15,0</td>
<td>7,5</td>
</tr>
<tr>
<td>M 24</td>
<td>80,0</td>
<td>20,0</td>
<td>10,0</td>
</tr>
</tbody>
</table>

Torque testing

1. Torque testing should be carried out using properly calibrated gauges
2. Turn the screw into the test nut until the coating is positioned within the nut, measuring the maximum screw-in torque (max. values, see table, column I).
3. Back the screw out 90°, then measure the greatest torque during the following 360° (for target value, see table, column II).
4. Back the screw out completely from the test nut four times and then screw back in again. During the fifth unscrewing process, once again measure the greatest torque level during the first 360° (for target value, see table, column III).

The values specified in the table assume the use of screws whose material and surface quality are homogenous. Tightening torque levels during testing under pretension: see specifications of the screw manufacturer.

Special versions

Deviating coating lengths, spot or all-round coating and/or other coating positions. Deviating torque levels and values for different test methods (e.g. with test nut corresponding to DIN 267, part 28, point 5.1.2) or other screw tolerances: Test coating required.

Alongside the standard colours blue for TufLok and orange for Nytemp, other colours can be supplied on request for purposes of differentiation (e.g. inch/metric, different strength classes and for identifying small dimensions, for example M1/M1.2).
TufLok®/Nytemp® for self locking internal threads

Self-locking internal threads are coated with a highly elastic nylon layer, TufLok® — „der blaue Fleck”® (the blue patch).

When screwing on the internal thread, this blue TufLok spot brings about a high level of surface pressure against the flanks of the mating thread.

The nylon layer also fills out the axial backlash between the threads of the screw and nut, producing a vibration-proof connection which prevents the thread from working loose under dynamic stress, but can be released at any time.

Product features
- The TufLok internal thread coating brings about a high degree of locking safety.
- The self-locking TufLok nut can be quickly and simply installed, either manually or using fully automatic screwing devices. It is ideal for precise setting work.
- In contrast to lock nuts with deformed threads or toothing, the TufLok nut prevents any surface damage to the workpiece, thread erosion, as well as abrasion or damage to the screw thread.
- Additional locking elements can be dispensed with, meaning cost savings due to lower outlay for storage, scheduling and inventory management.
- The „built-in locking effect” can never be left out accidentally during installation or be lost during repairs — meaning added security.
- The TufLok internal thread is reusable.
- TufLok®: Temperature resistant from -56°C to 150°C.
- Nytemp®: For higher continuous thermal stress of up to 200°C (higher stress levels possible for short periods).

Field of application
Self-locking TufLok internal threads have proven highly successful throughout every branch of industry, for example in automotive engineering, and in all types of constructions and appliances — particularly where there is a danger of parts working loose from machines or vehicles in operation.

„der blaue Fleck” (the blue patch) is a Trademark of Kerb-Konus-Vertriebs-GmbH

The 3-D-brand EU 002 616 746 — a screw with a blue patch — is a Trademark of Kerb-Konus-Vertriebs-GmbH

®
Thread coating with nylon
Clamping coating
in accordance with DIN 267, Part 15

**TufLok®/Nytemp®**
Works Standard 945

**Application**

For screw fastenings which are both vibration-resistant and capable of release at any time.

**Standard coating**

**Patch coating**

Around 2 to 3 thread turns on each side remain uncoated to ease the screwing action.

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### Dimensions in mm

<table>
<thead>
<tr>
<th>Thread nut</th>
<th>First screwing on max. (mm)</th>
<th>First unscrewing min. (mm)</th>
<th>Fifth unscrewing min. (mm)</th>
<th>Clamping torque</th>
<th>strength class 5 and 8</th>
<th>strength class 10 and 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>M 5</td>
<td>1,6</td>
<td>0,29</td>
<td>0,2</td>
<td>2,1</td>
<td>0,35</td>
<td>0,24</td>
</tr>
<tr>
<td>M 6</td>
<td>3,0</td>
<td>0,45</td>
<td>0,3</td>
<td>4,0</td>
<td>0,55</td>
<td>0,4</td>
</tr>
<tr>
<td>M 8</td>
<td>6,0</td>
<td>0,85</td>
<td>0,6</td>
<td>8,0</td>
<td>1,15</td>
<td>0,8</td>
</tr>
<tr>
<td>M10</td>
<td>10,5</td>
<td>1,5</td>
<td>1,0</td>
<td>14,0</td>
<td>2,0</td>
<td>1,4</td>
</tr>
<tr>
<td>M12</td>
<td>15,5</td>
<td>2,3</td>
<td>1,6</td>
<td>21,0</td>
<td>3,1</td>
<td>2,1</td>
</tr>
</tbody>
</table>

Suitable for all metallic materials, also for threaded parts made of stainless steel, light alloys and brass as well as for almost all surface-treated parts.

**Thread**

as per DIN 13

**Resistance**

See TufLok works standard 900.1

**Locking**

In accordance with DIN 267, sheet 5 (determine by practical trial for special applications).

Other dimensions and special coatings (torque levels) on request.

Contract coating of supplied nuts.

Alongside the standard colours blue for TufLok and orange for Nytemp, other colours can be supplied on request for purposes of differentiation (e.g. inch/metric, different strength classes and for identifying small dimensions, for example M1/M1.2).
Nyseal® is a new concept permitting elastic seals to be applied under the head, flange or at the thread run-out of screws or other threaded components – already prior to installation. This eliminates the need to use manually mounted washers, seals or O-rings.

Nyseal is a green, optionally transparent plastic coating which is melted directly onto the underneath of the screw head. This achieves an excellent sealing effect against fluids and gases. At the same time, the coating acts as a buffer for sensitive surfaces of the workpieces to be joined.

Field of application
Nyseal is a green, optionally transparent plastic coating which is melted directly onto the underneath of the screw head. This achieves an excellent sealing effect against fluids and gases. At the same time, the coating acts as a buffer for sensitive surfaces of the workpieces to be joined.

Product features
- Low-cost pre-coating
- Prevention of corrosion under the screw head
- Excellent sealing properties
- No additional washers or seals needed
- Workplaces and assembly workstations are kept clean
- No waste
Nyseal®
Sealing coat

Works Standard
903 2

Application
Melted directly onto the surface of a metal component, Nyseal forms a reusable seal, eliminating the need for costly hand mounted products.

On self-tapping or thread-tapping screws, the coating forms an additional sealing feature resistant to vibrations.

Inserts for subsequently moulded plastic components can be coated, doing away with the need for costly O-rings.

Example of a Nyseal coating to WN 903 2

Dimensions in mm

<table>
<thead>
<tr>
<th>Article number</th>
<th>Suitable for screws</th>
<th>Max. tightening torque 1) in Nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>903 200 030.000</td>
<td>M 3</td>
<td>0,6</td>
</tr>
<tr>
<td>903 200 040.000</td>
<td>M 4</td>
<td>1,4</td>
</tr>
<tr>
<td>903 200 050.000</td>
<td>M 5</td>
<td>2,6</td>
</tr>
<tr>
<td>903 200 060.000</td>
<td>M 6</td>
<td>4,5</td>
</tr>
<tr>
<td>903 200 080.000</td>
<td>M 8</td>
<td>11,0</td>
</tr>
<tr>
<td>903 200 100.000</td>
<td>M 10</td>
<td>22,0</td>
</tr>
</tbody>
</table>

1) Guideline values

For special applications, a practical trial is recommended. Higher tightening torque levels are possible, although this reduces the reusability of the screws.

Example for finding the article number:
Nyseal coating in accordance with WN 903 2 on an M10 screw:
903 200 100.000

Product profile
Material: Polyolefin
Operating temperature: 70°C
Reusability: Up to 10 times, depending on load
Shore hardness: 54
Colour: Green or transparent
Maximum temperature: 90°C
Sealing effect: up to 70 bar

Other dimensions and shapes, e.g. flange nuts, shaft screws and other connecting elements on request.
Nystay® - the precoating intended to keep fasteners “in their place” during transportation and assembly ...

Nystay® is a plastic precoating which is applied directly to the shank of fasteners in order to secure them during transportation or assembly in their relevant application/assembly group.

Field of application

Nystay® can be used for all fasteners – whether threaded or not. It facilitates preassembly, especially in case of automatic feeders and robot applications. The range of applications is, of course, not restricted to screws, but encompasses all fasteners such as shafts, rivets, studs, pressed and turned parts etc.

Product features:

- holds fasteners in place during transport, assembly or installation
- non-toxic and environmentally friendly – plastic coating on polyolefin basis
- no chemical hardening
- may be positioned at any optional location on the shank of a fastener
- shortens assembly times for end user

User benefits:

Screws coated with Nystay in the thread area can be pre-inserted into the component. The coating fixes the screw reliably in the borehole. The end user will therefore receive a subassembly already preassembled with screws, eliminating the need for tedious selection and insertion of appropriate screws. At the same time, fastener stocks can so be reduced and simplified. Operating and cycle times during final assembly can be drastically shortened when using pre-assembled components.
Application

Nystay is welded directly onto the fastener shank. This creates a flexible, annular layer providing reliable protection against loss for pre-assembled components during transportation or storage.

<table>
<thead>
<tr>
<th>Article number</th>
<th>suitable for screws/bolts from Ø</th>
</tr>
</thead>
<tbody>
<tr>
<td>903 400 030.000</td>
<td>3</td>
</tr>
<tr>
<td>903 400 040.000</td>
<td>4</td>
</tr>
<tr>
<td>903 400 050.000</td>
<td>5</td>
</tr>
<tr>
<td>903 400 060.000</td>
<td>6</td>
</tr>
<tr>
<td>903 400 080.000</td>
<td>8</td>
</tr>
<tr>
<td>903 400 100.000</td>
<td>10</td>
</tr>
</tbody>
</table>

Example of how to find the article number

Nystay coating according to WN 903 4 on M10 screw: 903 400 100.000

Product profile

Material: Base material polyolefin
Operating temperature: -40°C to +90°C
Colour: Green

Other dimensions and shapes, e.g. flange nuts, headless screws and other fasteners, on request.
Nyplas® – the coating which seals

Nyplas® is an innovative concept which allows Plastisol/PVC sealing material to be applied to screws and other thread elements directly underneath the head, flange or at the thread runout, using the precoating method.

The use of washers, sealing rings etc. to be applied manually is no longer required.

Product features:

- Sealing/Soundproofing immediately after screw-fastening
- No need for O-rings, washers etc.
- Reusable
- Very good sealing properties
- Long life.
- No shrinkage or drying out.
- Temperature application range: -40°C to +150°C.

The following automotive specifications are met:

- GM 6086M Type 3
- GM 1131M Type D
- Ford ESN800688-S100
- Ford WSK M4G70C
- Daimler Chrysler M4CD43

Nyplas® is an innovative concept which allows Plastisol/PVC sealing material to be applied to screws and other thread elements directly underneath the head, flange or at the thread runout, using the precoating method.

Nyplas® is a black PVC/Plastisol coating which is applied directly to the underneath of the screw head. This ensures an excellent seal against liquids and gases. At the same time, this coating acts as a buffer for sensitive surfaces of the workpieces to be screw-fastened. Compared to our Nyseal coatings, much higher layer thicknesses are achieved using Nyplas. On principle, a practical test is recommended before use in production, in order to determine the required layer thicknesses.
Application

Nyplas is an innovative concept which allows Plastisol/PVC sealing material to be applied to screws and other thread elements directly underneath the head, flange or at the thread runout, using the precoating method.

The use of washers, sealing rings etc. to be applied manually is no longer required.

<table>
<thead>
<tr>
<th>Article number</th>
<th>suitable for screws</th>
</tr>
</thead>
<tbody>
<tr>
<td>903 300 030.000</td>
<td>M3</td>
</tr>
<tr>
<td>903 300 040.000</td>
<td>M4</td>
</tr>
<tr>
<td>903 300 050.000</td>
<td>M5</td>
</tr>
<tr>
<td>903 300 060.000</td>
<td>M6</td>
</tr>
<tr>
<td>903 300 080.000</td>
<td>M8</td>
</tr>
<tr>
<td>903 300 100.000</td>
<td>M10</td>
</tr>
</tbody>
</table>

Example of how to find the article number

Nyplas coating according to WN 903 3 on an M10 screw:
903 300 100.000

Product profile

Material: Plastisol/PVC
Operating temperature: -40°C to +150°C
Colour: Black

Surface quality

The coating can be applied to all metal materials. Threads should be free of oil and grease. For bright phosphated parts, suitable corrosion preventives are permitted.

Storage stability

At least 3 years. Nyplas does not demonstrate any shrinkage or drying out over the storage period.

Re-usability

As the re-usability depends to a high degree on the tightening torques, surface qualities and other screw-fastening parameters, a practical test is always recommended.
precote 30/80/83/85 • 3M 2353/2510
locking coat for internal threads ...

**Field of application:**
A variety of standard products are offered to address different practical requirements.

**precote 30:**
For thread sealing and medium-strength thread locking. Easy dismantling, no subsequent hardening.

**precote 80:**
Universal screw locking system, high-strength, temperature resistant to 170°C.

**precote 83:**
Particularly fast drying variant of precote 80.

**precote 85:**
Universal screw locking system, high strength with low thread friction value; temperature resistant to 170°C.

**3M:**
Gluing and sealing function, insensitive to oil and grease, reliable, self-locking effect in response to vibration forces transversely to the screw axis.

(Vibration testing in accordance with DIN 65151)

**Product features**
- Extremely good thread locking action against dynamic stress and absolutely reliable seal.
- High temperature resistance from -80°C to +170°C (with precote 80).
- The nut and locking element are inseparably joined, meaning that the locking element can never get lost or be forgotten.
- Replaces conventional and in some cases unreliable mechanical locking elements such as circlips, castellated nuts, plain washers, wire locking elements, locking plates etc.
- Good resistance to chemicals such as fuels, hydraulic oils, coolants etc., corrosion-inhibiting.
- Economical due to large-series coating and use of customary installation tools.
- Saves costs for inventory management, storage and assembly of locking materials.
Application

For the manufacture of ready-to-install self-locking screws and threaded components from M3.

Standard coating

81 = A, 360° all round. Around 2 to 3 thread turns remain uncoated to ease the screwing action (B₂). Minimum length (B): 10 mm

Application

For the manufacture of ready-to-install self-locking screws and threaded components from M3.

Surface properties

The coating can be applied to all metal screw materials.

The thread should be grease and oil-free. For bright, phosphated parts, suitable anti-corrosion agents are admissible.

Hardening properties

Hardening begins shortly after installation of the screw. Adjustment and tightening processes should therefore have been completed within 5 minutes. Sufficient functional strength is generally achieved after around 30 minutes; faster hardening with precote 83, precote 85 hardens at temperatures as low as -20°C, but at a lower hardening speed.

Storage life

of coated screws: 3 years at room temperature. precote 30 and precote 80 still offer particularly good storage properties under humid conditions.

Reusability

Screws with coating 3M 2353 and 3M 2510 can be used several times provided the framework conditions (thread free of oil and grease) are adhered to. However, as undefinable conditions can occur, we do not advise the reuse of threaded parts which have broken loose.

Further technical details should be clarified depending on the case in question.
precote 30/80/83/85•3M 2353/2510
locking coat for external threads ...

**Field of application:**
A variety of standard products are offered to address different practical requirements.

**precote 30:**
For thread sealing and medium-strength thread locking. Easy dismantling, no subsequent hardening.

**precote 80:**
Universal screw locking system, high-strength, temperature resistant to 170°C.

**precote 83:**
Particularly fast drying variant of precote 80.

**precote 85:**
Universal screw locking system, high strength with low thread friction value; temperature resistant to 150°C.

**3M:**
Gluing and sealing function, insensitive to oil and grease, reliable, self-locking effect in response to vibration forces transversely to the screw axis.

(Vibration testing in accordance with DIN 65151)

**Product features**

- Extremely good thread locking action against dynamic stress and absolutely reliable seal.

- High temperature resistance from -80°C to +150°C.

- The screw and locking element are inseparably joined, meaning that the locking element can never get lost or be forgotten.

- Replaces conventional and in some cases unreliable mechanical locking elements such as circlips, castellated nuts, plain washers, wire locking elements, locking plates etc.

- Good resistance to chemicals such as fuels, hydraulic oils, coolants etc., corrosion-inhibiting.

- Economical due to large-series coating and use of customary installation tools.

- Saves costs for inventory management, storage and assembly of locking materials.
**Application**
For the manufacture of ready-to-install self-locking screws and threaded components from M3.

**Standard coating**
- Precote 30/80/83/85
- 3M 2353/2510

Works standard 924 to 925.

---

### Internal Thread Coating with Plastic Adhesive (Microcapsules)

<table>
<thead>
<tr>
<th>Article no.</th>
<th>Precote 30</th>
<th>Precote 80/83</th>
<th>Precote 85</th>
<th>3M 2353</th>
<th>3M 2510</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nut internal thread</td>
<td>924 ... 300</td>
<td>924 ... 800</td>
<td>924 ... 900</td>
<td>925 ... 000</td>
<td>925 ... 900</td>
</tr>
<tr>
<td>Coating colour</td>
<td>yellow</td>
<td>red</td>
<td>turquoise</td>
<td>blue</td>
<td>orange</td>
</tr>
<tr>
<td>Breakaway torque: Installed under pretension</td>
<td>≤ 0,9 Mₘ</td>
<td>≥ 0,9 Mₘ</td>
<td>≥ 0,9 Mₘ</td>
<td>0,9 Mₘ</td>
<td>≥ 0,9 Mₘ</td>
</tr>
<tr>
<td>Not installed under pretension</td>
<td>min 8 Nm</td>
<td>min 20 Nm</td>
<td>min 15 Nm</td>
<td>min 9 Nm</td>
<td></td>
</tr>
<tr>
<td>Temperature range</td>
<td>-50°C to +120°C</td>
<td>-50°C to +170°C</td>
<td>-50°C to +150°C</td>
<td>-80°C to +90°C</td>
<td>Continuous temperature -30°C to +150°C</td>
</tr>
<tr>
<td>Coefficient of thread friction μ (guideline values)</td>
<td>0,12 to 0,14</td>
<td>0,25 to 0,28</td>
<td>0,10 to 0,15</td>
<td>0,18 to 0,22</td>
<td>0,20 to 0,25</td>
</tr>
<tr>
<td>Hardening time (room temperature)</td>
<td>24h</td>
<td>24h</td>
<td>24h</td>
<td>24h</td>
<td>72h</td>
</tr>
</tbody>
</table>

Mₘ = tightening torque

<table>
<thead>
<tr>
<th>Surface properties</th>
<th>Internal thread coating with plastic adhesive (microcapsules) adhesive coating in line with DIN 267, part 27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reusability</td>
<td>Screws with coating 3M 2353 and 3M 2510 can be used several times provided the framework conditions (thread free of oil and grease) are adhered to. However, as undefinable conditions can occur, we do not advise the reuse of threaded parts which have broken loose. Further technical details should be clarified depending on the case in question.</td>
</tr>
</tbody>
</table>

---

The coating can be applied to all metal screw materials. **The thread should be grease and oil-free.** For bright, phosphated parts, suitable anti-corrosion agents are admissible.

Hardening begins shortly after installation of the screw. Adjustment and tightening processes should therefore have been completed within 5 minutes. Sufficient functional strength is generally achieved after around 30 minutes; faster hardening with precote 83. Precote 80 hardens at temperatures as low as -20°C, but at a lower hardening speed.

Storage life of coated screws: 3 years at room temperature. Precote 30 and precote 80 still offer particularly good storage properties under humid conditions.
Precote 5 • 3M 4291
Sealing Coat for External Threads ...

**Field of application**

These sealing agents, which are composed largely of mineral filling agents and lubricants on a dispersion basis, are used for precoating processes in many applications in the automotive, appliance and mechanical engineering industries for sealing screw unions.

The coatings, which are dried after application, react neither with the coated thread nor the mating thread. This makes later releasing and retightening of the screw joint unproblematical. Furthermore, the base material of the thread is not restricted to metallic materials.

The dried surface is stable and non-sticky, meaning that longer storage periods at room temperature prior to final use for installation are possible without the need for any additional precautions.

The good resistance level of the layers to a large number of gases, aqueous and non-aqueous fluids as well as high pressure levels also at temperatures up to +180°C results in an extremely wide range of application for users of this type of pre-coated threaded component.

**Product features**

- Maximum sealing action against gases and most aqueous and non-aqueous fluids.

- Depending on the material and configuration of the thread coupling, connections offer a reliable seal even up to pressure levels as high as 50 bar.

- The threaded component and sealing element are inseparably connected, excluding the possibility of costly secondary installation operations due to forgotten or lost seals.

- Economical due to large-series coating and capacity for the use of automatic installation equipment.

- Saves on inventory management, storage and installation of additional sealing elements.
Application
For the manufacture of ready-to-install, sealing screws and threaded components from M3.

Standard coating
B1 = A, 360° all round.
Around 2 to 3 thread turns remain uncoated to ease the screwing action (B₂).
Minimum length (B): 10 mm

<table>
<thead>
<tr>
<th>Article no.</th>
<th>precote 5</th>
<th>3M 4291</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headed screws</td>
<td>926 ... ... 500</td>
<td>928 ... ... 500</td>
</tr>
<tr>
<td>Studs</td>
<td>927 ... ... 500</td>
<td>929 ... ... 500</td>
</tr>
<tr>
<td>Coating colour</td>
<td>yellowish-white</td>
<td>white</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-50°C to +180°C</td>
<td>-25°C to +180°C</td>
</tr>
<tr>
<td>Pressure resistance</td>
<td>15 bar</td>
<td>15 bar</td>
</tr>
<tr>
<td></td>
<td>50 bar</td>
<td>50 bar</td>
</tr>
<tr>
<td>Storage life / RT</td>
<td>at least 3 years</td>
<td>at least 3 years</td>
</tr>
</tbody>
</table>

Applications
The sealants can be applied to all metal and non-metal threaded components such as screws, studs, set screws, fittings etc. both in cylindrical/cylindrical and also cylindrical/conical couplings from thread diameter 4 mm.

Characteristics
Sealing action against gases, aqueous and non-aqueous fluids under high pressure levels and temperatures up to max. +180°C.

Preliminary treatments
If the coated threads are to be used more than once, the surfaces must be dry, free of dirt, oil, separating agents and other contamination prior to coating.
precote 5 • 3M 4291
sealing coat for internal threads ...

Field of application
These sealing agents, which are composed largely of mineral filling agents and lubricants on a dispersion basis, are used for precoating processes in many applications in the automotive, appliance and mechanical engineering industries for sealing screw unions.

The coatings, which are dried after application, react neither with the coated thread nor the mating thread. This makes later releasing and retightening of the screw joint unproblematical. Furthermore, the base material of the thread is not restricted to metallic materials.

The dried surface is stable and non-sticky, meaning that longer storage periods at room temperature prior to final use for installation are possible without the need for any additional precautions.

The good resistance level of the layers to a large number of gases, aqueous and non-aqueous fluids as well as high pressure levels also at temperatures up to +180°C results in an extremely wide range of application for users of this type of pre-coated threaded component.

Product features
- Maximum sealing action against gases and most aqueous and non-aqueous fluids.
- Depending on the material and configuration of the thread coupling, connections offer a reliable seal even up to pressure levels as high as 50 bar.
- The threaded component and sealing element are inseparably connected, excluding the possibility of costly secondary installation operations due to forgotten or lost seals.
- Economical due to large-series coating and capacity for the use of automatic installation equipment.
- Saves on inventory management, storage and installation of additional sealing elements.
Internal thread coating with dispersion layer
Thread seal

precote 5
3M 4291
Works standard 924. to 925.

Application
For the manufacture of ready-to-install, sealing screws and threaded components from M3.

Standard coating
360° all round.
Around 2 to 3 thread turns remain uncoated to ease the screwing action.

<table>
<thead>
<tr>
<th>Article no.</th>
<th>precote 5</th>
<th>3M 4291</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nut internal thread</td>
<td>924 ... ... 500</td>
<td>925 ... ... 500</td>
</tr>
<tr>
<td>Coating colour</td>
<td>yellowish-white</td>
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<tr>
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<td>-50°C to +180°C</td>
<td>-25°C to +180°C</td>
</tr>
<tr>
<td>Pressure resistance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- cyl./cyl.</td>
<td>15 bar</td>
<td>15 bar</td>
</tr>
<tr>
<td>- cyl./con.</td>
<td>50 bar</td>
<td>50 bar</td>
</tr>
<tr>
<td>Storage life / RT</td>
<td>at least 3 years</td>
<td>at least 3 years</td>
</tr>
</tbody>
</table>

Applications
The sealants can be applied to all metal and non-metal threaded components such as screws, studs, set screws, fittings etc. both in cylindrical/cylindrical and also cylindrical/conical couplings from thread diameter 4 mm.

Characteristics
Sealing action against gases, aqueous and non-aqueous fluids under high pressure levels and temperatures up to max. +180°C.

Preliminary treatments
If the coated threads are to be used more than once, the surfaces must be dry, free of dirt, oil, separating agents and other contamination prior to coating.
Nycote® – the insulating coating ...

Where thick deposits impair the easy running properties of screws, Nycote offers the ideal protection: from galvanic deposits, as well as cataphoretic primers and paints applied during electrodeposition, particularly when using the cathodic principle.

The Nylok Fasteners Corporation in the USA, Licensor to KerbKonus, developed this special coating process. A special powder blend – based on Teflon – is applied by means of heat to the screws as a closed layer which completely covers the thread.

As a consequence, protective layers and primers applied during the electrodeposition process do not adhere to the threads, and so do not impair subsequent installation.

In the case of parts coated with Nycote, the coefficient of friction is reduced when tightening the screws. This characteristic makes it easier for the prescribed installation conditions to be complied with.

The solution: Nycote®

Exhaustive testing has shown that Nycote has characteristics which prevent cataphoretic primers or paints from adhering to threads.

Wherever the Nycote protective layer covers the thread, it is not possible for primers or paints to adhere to the surface.

Threaded components – both internal and external threads – are pre-coated using a special technique. They then go on to be processed in the accustomed way without problems on the production line, for example using welding machines.

Another benefit: This processing method also prevents the often troublesome adhesion of welding beads.

Wherever electrodeposition or galvanic treatments are used and threaded areas have to be covered over, it makes sense to use parts pre-coated with Nycote.

When using this method, the application of Nycote on the coupling elements serves to cover the required threaded area: This effectively prevents paint deposits on the threads which would impair installation.

Another benefit of Nycote: Improved screw sliding properties. Nycote reduces the coefficient of friction during installation and guarantees a defined clamping force.

The process is ideally suited for the fast installation processes demanded by many branches of industry today.

Nycote replaces the coats of wax or lubricant which are often applied to improve sliding properties.

Fields of application
Benefits of applying an insulating coat ...

How the Nycote coating works

Nycote is a patent-protected coating method involving the application of insulating (non-conductive) Teflon powder on a heated threaded component. This forms a protective layer against unwanted deposits of primers, paints and other surfaces during electrodeposition.

The Nycote thread coating is the low-cost alternative to most customary coverings. It generates a certain lubrication effect at the threads, reduces unwanted noises created during installation and prevents welding splashes from adhering to the surface.

When installing the threaded component, the Nycote layer is rubbed off the supporting thread flanks, creating bright, metallic contact surfaces for outstanding electrical conductivity and defined screw connection strength.

The abraded material is pressed into the cavities of the thread coupling, particularly in the root area of the nut thread and at the crest of the screw thread.

Due to a chemical process, Nycote does not adhere to the thread surfaces of the fastening element.

During coating, the Teflon powder is melted into the pores and cracks in the surface, so creating a mechanical bond: Strong enough to hold the coating on the surface of the threaded element and weak enough to guarantee its abrasion during the installation process.

The benefits at a glance

- Nycote reduces the coefficient of friction, so allowing weld nuts and bolts to be more quickly installed and eliminating the need for subsequent oiling or greasing.
- The special sliding properties of Nycote reduce the „chattering“ noise produced by the screwing process, thus preventing the unpleasant high frequencies created when screwing metal on metal.
- Nycote is made of Teflon, and is therefore completely unharmful both to health and to the environment.
- Nycote protects against unwanted deposits during electrodeposition, priming and coating.
- Nycote has an insulating effect.
- Nycote prevents paint deposits during painting operations. During subsequent installation of the threaded components, the coating is designed to rub off and so ensure a conductive screw connection.
- Nycote reduces variance in the coefficient of friction, in order to maintain the correct pretension force during installation.
- Nycote prevents the often troublesome adhesion of welding beads during the welding process both on the surface of welded bolts and also in the internal thread of welded nuts. Laborious and costly reworking operations are no longer required.

Application in the automotive engineering industry

All car manufacturers offer long warranty periods today as a purchase incentive. Good corrosion resistance is of instrumental importance here, which the automotive industry has addressed by developing new primers and paints.

These new primers present a number of problems. During electrodeposition, the pre-assembled body in white with all the necessary fastening elements passes through an immersion tank containing the primer, which adheres to each component by means of a cataphoretic process, including the fastening elements of any existing threads.

This coating is difficult to remove, and this process often involves costly reworking. However, clean threads are essential to correct and troublefree assembly.

... technologies for a reliable hold
Coating with Nycote reduces variance in the coefficient of friction, achieving a defined degree of pretension.

Variance in the coefficient of friction today plays a co-determining role in the dimensioning of a screw connection in all currently used methods of screw tightening.

As in most cases a torque-controlled method of screw connection tightening is used, the required pretension force \( F_V \) is determined by the tightening torque \( M_A \).

This means that the pretension force \( F_V \) cannot be measured directly. It is calculated indirectly as a function of the tightening torque.

To simplify, a minimum pretension force \( F_{V\text{ min}} \) is required to ensure the reliable function of a screw connection. This \( F_{V\text{ min}} \) must be achieved even under adverse installation conditions, i.e. at maximum thread friction levels.

The diagrams indicate that with the same tightening torque but reduced coefficient of friction, the achieved pretension force \( F_V \) rises. This can lead to excess stress and failure of the screw connection.

Due to the relatively large variance in the coefficients of friction occurring with uncoated surfaces, it was formerly frequently necessary to resort to overdimensioned screw connections.

The use of Nycote prevents variance in the coefficient of friction and so reduces the need for overdimensioning. The result: benefits in terms of both weight and costs. At the same time, the use of Nycote reduces the coefficient of friction in the thread.

Diagram (1) illustrates the results of a comparative test of ten screws coated with Nycote and ten identical screws, oiled, with a bright steel finish.

With a tightening torque of \( M_A = 20 \), the Nycote-coated screws demonstrate a variance in the pre-tension force \( F_V \) of 1.5 kN (bandwidth of the blue diagram at a torque of 20 Nm). In the case of the uncoated screws, a variance of 11 kN results – in other words a value almost eight times higher.

The same test, performed using corresponding nuts - diagram (2) - indicates a variance in pretension force of only 2.6 kN at a tightening torque of \( M_A = 22 \) Nm, while the bright nuts demonstrate a variance of 10.4 kN.

Diagram (1) ... saves rework and costs...
Application

For protection against cathodically applied electrodeposition coatings (cataphoretic primers and paints) using the KTL technique. This involves high layer thicknesses which can impair the easy running properties of threads.

At the same time, coating with Nycote exerts a favourable influence on the coefficient of friction occurring in threaded components and prevents the frequently occurring adhesion of weld splashes.

Using Nycote, previously essential cover-up or reworking operations are now eliminated.

Coating of bolt thread WN 911/912:
The head remains free of coating.

Coating of nut thread WN 913:
The thread chamfer remains free of coating to ensure troublefree welding.

Tests

1. Prior to coating, the easy running properties of the nut or bolt are tested using a 6H gauge plug or a 6g gauge ring by means of random testing.

3. During the coating process, a test of the easy-running properties is performed using KKV test bolts / KKV test nuts at defined intervals and in defined piece numbers. KKV test bolts / nuts mean that the core diameter has been produced to mean tolerance.

3. Final testing is performed using a standard commercially available true-to-gauge screw or nut.

4. In addition, parts can be cathodically immersion painted in order to test that no paint adheres to the coated nut or to the bolt.

Surface treatment of the parts prior to Nycote coating is not necessary. Parts should be delivered in a bright/oiled condition. After coating they are returned again bright or with a temporary corrosion protection (oil). Connecting elements with electroplating surface treatment (copper plated, zinc plated or similar) or painted surfaces call for the execution of special measures. If, for example, parts have to be electroplated after Nycote coating, prior to coating a light pre-copper plating process is required. Only in this way is it possible to guarantee adhesion of the Nycote layer following the electroplating process. For this reason, it is advisable for the user to clarify all details prior to placement of order.

The coating itself can be stored for an unlimited period. However, the corrosion resistance of the overall component (effect of the corrosion protection agent) must be taken into consideration. Mechanical stress on the coating can lead to spot damage to the closed layer, in particular it the case of bolt threads, where paint can be deposited in isolated areas during electrodeposition coating.
KerbKonus –
Close to its customers.
Around the world. Across
every sector of industry.

First and foremost, for you customer proximity means a rapid response to your requirements and the fast, efficient realization of the right fastening solution for you.

For us, customer proximity is far more than just another watchword – it is an important strategic instrument. Our technical sales consultants are available locally to talk to you around the world, ready to offer sound advice when it comes to the reliable, economical application of modern fastening technology. Advisory activities are coordinated through the headquarters in Amberg. Why not simply call us to arrange an appointment?