MECHANICAL LOCKING AND THREAD SEALING

NYLOK® BLUE™ NYLON PELLET & STRIP

Prevailing Torque Locking Element

NYLOK® blue™ nylon pellet & strip is a self-locking element comprised of nylon permanently imbedded into the threads of a fastener. The pellet is a drilled hole with a plug of oversized nylon wedged into the hole. The strip is a milled slot with a string of oversized nylon wedged into the slot.



When the pellet & strip are engaged it creates a wedge between the fastener and mating part compressing the nylon and creating metal to metal contact opposite the element. This metal to metal contact results in a positive resistance to vibration and loosening. Since nylon has great memory characteristics, this locking element can be reused several times.

Technical Data - Pellet & Strip

- Color blue/red
- Dry Wedge immediate locking
- Temperature Range: -56°C (-70°F) to +121°C (+250°F)
- · Shelf-Life indefinite
- Size from M1.2 (#00-80) to anything larger

Pellet & Strip (Optional) Locking Element Materials

- Nylon
 - -56°C (-70°F) to +121°C (+250°F)
- Kel-F® (optional)[†]
 - -195°C (-320°F) to +177°C (+350°F)
- Teflon® (optional) ⁺⁺
 -68°C (-90°F) to +288°C (+550°F)
- Vespel® (optional)^{††}
- -195°C (-320°F) to +288°C (+500°F)

Typical Performance Results (M10 plain finish - IFI 524)

- Prevailing-On Torque 5.0–10.0 Nm
- First Removal Prevailing-Off Torque (without preload) min. 2.5–5.0 Nm
- Fifth Removal Prevailing-Off Torque min. 1.8–2.8 Nm

 \dagger 3M is a trademark of 3M Company used pursuant to license with Nylok LLC. \dagger Dupont and Teflon are trademarks of E. I. du Pont de Nemours and Company or its affiliates used pursuant to license with Nylok LLC.

INWVATION

Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide $INNYVATION^{TM}$ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.















NYLOK® BLUE™ NYLON PELLET & STRIP

Prevailing Torque Locking Element

Advantages

- · Reusable/adjustable
- Exceptional vibration resistance
- · Resistant to lubricants, fuel, hydraulic fluids and most commercial solvents
- · Can be applied to any size or thread configuration of a fastener
- Complies with or exceeds IFI, DIN and major OEM specifications
- · Parts are ready for assembly
- · Precise thread coverage in every part
- Can be applied on external and internal threaded fasteners
- Is not affected by high humidity conditions
- Environmentally friendly/non-toxic
- Torque can be adjusted to meet specific applications
- Can be applied to any fastener material (steel, plastic, brass, copper, aluminum)

COMPANY NAME	SPECIFICATIONS
FCA	PF 5144
FORD	ES378813-S100
GM	GM6189P
MILITARY	MIL - DTL - 18240F NASM25027
IFI	IFI - 100/107 IFI - 124 IFI - 155 IFI - 524 IFI - 555













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MECHANICAL LOCKING AND THREAD SEALING

NYLOK® BLUE PATCH TORQ-PATCH®

Prevailing Torque Locking Element

NYLOK® blue patch TORQ-PATCH® is a self-locking element comprised of nylon permanently bonded onto the threads of a fastener. When the NYLOK® blue patch TORQ-PATCH® is engaged, it creates a wedge between the fastener and mating part compressing the nylon and creating metal to metal contact opposite the patch. This metal to metal contact results in a positive resistance to vibration and loosening. Since nylon has great memory characteristics, this locking element can be reused several times.



- Color blue/red (special colors available upon request)
- Dry Wedge immediate locking
- Temperature Range -56°C (-70°F) to +121°C (+250°F)
- · Shelf-Life indefinite
- NYLOK® blue patch is also referred to as TUF-LOK®

Typical Performance Results (M10 plain finish – IFI 524)

- Prevailing-On Torque 5.0 –
 10.0 Nm
- First Removal Prevailing-Off Torque (without preload) min. 2.5 – 5.0 Nm
- Fifth Removal Prevailing-Off Torque min. 1.8 2.8 Nm



Advantages

- · Reusable/adjustable
- · Exceptional vibration resistance
- Resistant to lubricants, fuel, hydraulic fluids and most commercial solvents
- Can be applied to any size or thread configuration of a fastener
- Bonds to a broad range of fastener finishes

(continued)

IN VATION **

Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide INNYVATION $^{\text{TM}}$ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.





NYLOK® BLUE PATCH TORQ-PATCH® Prevailing Torque Locking Element

Advantages (continued)

- Complies with or exceeds IFI, DIN and major OEM specifications
- Provides a seal for threads
- Parts are ready for assembly
- Precise thread coverage on every part
- Can be applied on external and internal threaded fasteners
- Is not affected by high humidity conditions
- Environmentally friendly/non-toxic
- 180° (standard) or 360° (optional) radial coverage
- Torque can be adjusted to meet specific applications
- Cost effective
- No metal removal to reduce fastener strength or performance

COMPANY NAME	SPECIFICATIONS
FCA	PF5144
	PF6157
	PF6158
FORD	ES 382101-S101
	ES-N800688-S101
	ES-384103-S-A
	WA970
GM	GM6189P
	GMW16722
MILITARY	MIL - DTL - 18240F
	NASM15981
CATERPILLAR	IE-2511
JOHN DEERE	JDT905F
MACKTRUCK	10ASMI
	3&6AXS5
NAVISTAR	BM - 4.101
IFI	IFI - 100/107
	IFI - 124
	IFI - 524
DIN	DIN 267 PART 28













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MECHANICAL LOCKING AND THREAD SEALING

NYLOK® TORQ-PATCH® LOCKNUT

Prevailing Torque Locking Element

NYLOK® TORQ-PATCH® locknut is a self-locking element comprised of nylon permanently bonded into the threads of a nut. When the NYLOK® TORQ-PATCH® locknut is engaged it creates a wedge between the nut and mating part compressing the nylon and creating metal to metal contact opposite the patch. This metal to metal contact results in a positive resistance to vibration and loosening. Since nylon has great memory characteristics, this locking element can be reused several times.



Technical Data - NYLOK® TORQ-PATCH® Locknut

- Color blue/red (special colors available upon request)
- Dry Wedge immediate locking
- Temperature Range -56°C (-70°F) to +121°C (+250°F)
- · Shelf-Life indefinite
- NYLOK® TORQ-PATCH® locknut is also referred to as TUF-LOK®

Typical Performance Results (M10 plain finish)

- Prevailing-On Torque 5.0 10.0 Nm
- First Removal Prevailing-Off Torque (without preload) min. 2.5 – 5.0 Nm
- Fifth Removal Prevailing-Off Torque min 18 28 Nm

Advantages

- Reusable/adjustable
- · Exceptional vibration resistance
- Resistant to lubricants, fuel, hydraulic fluids and most commercial solvents
- Can be applied to any size or thread configuration larger than a M6/1/4" nut
- Bonds to a broad range of fastener finishes

(continued)

INWVATION"

Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide INNYVATION $^{\text{TM}}$ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.





NYLOK® TORQ-PATCH® LOCKNUT **Prevailing Torque Locking Element**

Advantages (continued)

- · Complies with or exceeds IFI, DIN and major OEM specifications
- Provides a seal for threads
- Parts are ready for assembly
- Precise thread coverage in every part
- Is not affected by high humidity conditions
- Environmentally friendly/non-toxic
- 180° (standard) or 360° (optional) radial coverage
- Torque can be adjusted to meet specific applications
- Cost effective

COMPANY NAME

No metal removal to reduce fastener strength or performance

COMPANY NAME	SPECIFICATIONS
FCA	PF-6180
FORD	WE950
GM	GM6189P
	GMW16722
MILITARY	MIL - DTL - 18240F
	NASM25027
CATERPILLAR	IE-2511
IFI	IFI - 100/107
	IFI - 155
	IFI - 555
	IFI - 560



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SOUTH AMERICA



MECHANICAL LOCKING AND THREAD SEALING

NYTEMP®

Prevailing Torque High Temp Locking Patch

NYTEMP® self-locking patch is comprised of high temperature polymer permanently bonded onto the threads of a fastener. When the NYTEMP® patch is engaged, it creates a wedge between the fastener and mating part, compressing the polymer and creating metal to metal contact opposite the patch. This metal to metal contact results in a positive resistance to vibration and loosening. Since this polymer has great memory characteristics, the locking element can be reused several times.



Technical Data - NYTEMP® Patch

- Color orange (special colors available upon request)
- Dry Wedge immediate locking
- Temperature Range -50°C (-70°F) to +232°C (+450°F)
- Shelf-Life indefinite

Typical Performance Results (M10 plain finish – IFI 524)

- Prevailing-On Torque 5.0 10.0 Nm
- First Removal Prevailing-Off Torque (without preload) min. 2.5 – 5.0 Nm
- Fifth Removal Prevailing-Off Torque min. 1.8 – 2.8 Nm

Advantages

- Reusable/adjustable
- Exceptional vibration resistance;
 Meets MIL-STD 1312-Rev. 7
- Resistant to lubricants, fuel, hydraulic fluids and most commercial solvents
- Can be applied to any size or thread configuration of a fastener
- Bonds to a broad range of fastener finishes

(continued)

IN VATION **

Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide INNYVATION™ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.





NYTEMP®

Prevailing Torque High Temp Locking Patch

Advantages (continued)

- Complies with or exceeds IFI, DIN, Military and major OEM specifications
- Provides a seal for threads
- · Parts are ready for assembly
- · Precise thread coverage in every part
- Can be applied on external and internal threaded fasteners
- · Is not affected by high humidity conditions
- Environmentally friendly/non-toxic
- 180° (standard) or 360° (optional) radial coverage
- Torque can be adjusted to meet specific applications
- Cost effective
- No metal removal to reduce fastener strength or performance
- Meets NASA low out gassing requirements
- Reduces FOD and Creep in aerospace applications

COMPANY NAME	SPECIFICATIONS
GM	GM6189P+High Temp
	GMW16722
DETROIT DIESEL	TES-113
MILITARY	MIL - DTL - 18240F
	NASM25027
NASA	SP - R - 0022A
IFI	IFI - 100/107
	IFI - 124
	IFI - 155
	IFI - 524
	IFI - 555
ANSI	ANSI B.18.16.1M













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MECHANICAL LOCKING AND THREAD SEALING

NylokHD® Patch

NylokHD° Patch is a high performance self-locking nylon retention element permanently bonded onto the threads of a nut via a special application technique. NylokHD° Patch will provide greater reusability, and reduced torque scatter. When the patch is engaged, it creates a wedging action between the nut and mating part, compressing the nylon and promoting tight metal-to-metal contact opposite the patch.



This metal-to-metal contact provides a positive resistance to vibration and loosening. Since nylon has great memory characteristics, this locking element is reusable. NylokHD® Patch can be applied to nuts of any style or plating. A wide range of nut sizes can be processed.

Technical Data — NylokHD® Patch

- Color blue / orange (special colors available upon request)
- Dry Wedge immediate locking (no cure time)
- Standard Temperature Range -56°C (-70°F) to 121°C (250°F)
- NytempHD* High Temperature Range — -56°C (-70°F) to 232°C (450°F)
- · Shelf-Life indefinite

Advantages

- Allows the use of a shorter nut and bolt, providing lighter assemblies
- Can be used with a mid-range of plating and metals, eliminating the need for cadmium
- Usable on any grade or style of nut
- Meets prevailing torque requirements of IFI 100/107, NASM 25027 and unique OEM requirements
- Ideal for aerospace and commercial vehicle industry where weight is critical
- Exceptional vibration resistance
- Highly reusable
- Re-adjustable after original installation
- Wide variety of patch coverages available
- Environmentally friendly, non-toxic
- Torque values can be customized to meet your requirements (continued)

INNVATION

Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide $INNYVATION^{TM}$ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.

















NylokHD° Patch

Advantages (continued)

- Does not damage finish on mating parts
- Resistant to most lubricants, fuels, hydraulic fluids and commercial solvents
- No metal removal to reduce fastener strength or performance

TYPICAL TORQUE PERFORMANCE RESULTS (M16) NM

LOCKING TYPE	PREV. ON	1ST OFF	5TH OFF	CLAMP TORQUE
Nylon Insert	Mean 12.5 (CPK 14.05)	7.4	3.9	122.9
All Metal	Mean 25.6 (CPK 1.16)	12.5	5.3	119.5
NylokHD® Patch	Mean 22.2 (CPK 1.74)	11 .1	6.2	90.8
ASME B18.16M	42 Max	6.0 Min	4.0 Min	56,960 Nm



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CHEMICAL ADHESIVE FOR THREAD LOCKING AND SEALING

PRECOTE® 30

Medium Strength Thread Locker

PRECOTE® 30 varnish-like, solvent free coating systems based on microencapsulated acrylates for sealing and locking of threaded parts. The dried film is tack-free, non sticky and can be used in all kind of assembly procedures, particularly for series production. Its characteristics as a locking and sealing element become effective only when the capsules are ruptured by shear and pressure stress and the adhesive is allowed to cure.



Technical Data — PRECOTE® 30

- Color yellow (special colors available upon request)
- Thread Friction Value > 0.10 0.15
- Curing Time (RT) 8 hours (an additive of "-3" will reduce to 2 hours)
- Temperature Range: 60°C (-76°F) to +150°C (+302°F)
- Shelf-Life 4 years at room temperature
- For small thread crest (less than 1 mm an additive of "-8" can be added to increase performance)

Typical Performance Results (M10 plain finish)

- Prevailing-On Torque 0.5 0.9 Nm
- Breakaway Torque (without preload BAT) min. 10.0 – 15.0 Nm
- Prevailing-Off Torque min.
 2.0 4.0 Nm

Advantages

- Environmental resistance to heat, automotive fluids, thermal and mechanical shock and vibrations
- Bonds to a broad range of fastener finishes
- Penetrates oil coatings
- Complies with or exceeds major OEM specifications
- Seals against pressures up to 250 bar (3600psi)
- Parts are ready for assembly (continued)

PRECOTE® 30 is a trademark of Omnitechnik, Mikroverkapselungs GmbH

IN VATION **

Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide $INNYVATION^{TM}$ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.















PRECOTE[®] 30 Medium Strength Thread Locker

Advantages (continued)

- · Precise thread coverage in every part
- Can be applied on external and internal threaded fasteners
- Is not affected by high humidity conditions
- Dry-to-touch and tack free with good adherence

COMPANY NAME	SPECIFICATIONS
Ford	WX201
Military	MIL - DTL - 18240F
	NASM25027
NASA	SP - R - 0022A
Caterpillar	IE2486A
IFI	IFI - 125
	IFI - 156
	IFI - 160
	IFI - 525
BMW	DIN 267 Part 27
Bobcat	MS119
Burman & Sons	QC/1007
Land Rover	RES.22.FP.01
National NBC	A 2958
Perkins Diesel	PMS 11.02
VW	601 05



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CHEMICAL ADHESIVE FOR THREAD LOCKING AND SEALING

PRECOTE® 80

High Strength / Heat Resistant Thread Locker

PRECOTE® 80 are varnish-like, solvent free coating systems based on micro-encapsulated acrylates for sealing and locking of threaded parts. The dried film is tack-free, non sticky and can be used in all kind of assembly procedures. Its characteristics as a locking and sealing element become effective only when the capsules are ruptured by shear and pressure stress and the adhesive is allowed to cure.



Technical Data — PRECOTE® 80

- Color— pink (special colors available upon request)
- Thread Friction Value > 0.25
- Curing Time (RT) 8 hours (an additive of "-3" will reduce to 2 hours)
- Temperature Range: -60°C (-76°F) to +170°C (+338°F)
- Shelf-Life 4 years at room temperature
- For small thread crest (less than 1 mm an additive of "-8" can be added to increased performance)

Typical Performance Results (M10 plain finish)

- Prevailing-On Torque 1.0 1.8 Nm
- Breakaway Torque (without preload BAT) min. 20.0 – 30.0 Nm
- Prevailing-Off Torque min. 4.0 – 8.0 Nm

Advantages

- Fixtures in about 10 minutes and full cures in 8 hours
- High torque performance
- Environmental resistance to heat, automotive fluids, thermal and mechanical shock and vibrations
- Bonds to a broad range of fastener finishes
- Penetrates oil coatings
- Longest shelf life in the industry
- Complies or exceeds IFI, DIN and major OEM specifications
- Seals against pressures up to 400 bar (5760psi)

(continued)

PRECOTE® 80 is a trademark of Omnitechnik, Mikroverkapselungs GmbH

IN VATION **

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PRECOTE® 80 High Strength / Heat Resistant Thread Locker

Advantages (continued)

- · Parts are ready for assembly
- · Precise thread coverage in every part
- Can be applied on external and internal threaded fasteners
- Is not affected by high humidity conditions
- · Dry-to-touch and tack free with good adherence

COMPANY NAME	SPECIFICATIONS
Audi	DIN 267 Part 27
Bendix	BW - 291 P
BL BLS	22.FP.01
BMW	DIN 267 Part 27
Bosch	N38A SR9.3 and N38A SR9.5
British Leyland	BLS 22. FP.01
DIN	DIN 267 Part 27
FCA	MS-CC76 A+C
FPW.80104	MCSD7 PF-6616 Fiat
Ford	ES 20007- S 100
	WX 200 WSS M11 P45-A1
GM / Opel	GME 00151 and GM 6124M
	GM 6175 M
	GM 6193 M
	GM 6194 M
IFI	IFI 125
	IFI 525
KHD	H 2812
Magneti Marelli	CQ N° 137
MIL - S - 46163	
PSA (Peugeot, Citroen, Talbot)	B14 1235
Renault	39.02.010
Rockwell International	Q - 52
Rover	RES. 22.FP.01
Saab Scania	STD - 1627 (1508446 SB)
Volvo	STD 416 - 0001 material number 391285
VW	DIN 267 Part 27
	601 05











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CHEMICAL ADHESIVE FOR THREAD LOCKING AND SEALING

PRECOTE® 85

High-Strength & Heat-Resistant Thread Coating with Controlled Torque / Tension

PRECOTE® 85 are varnish-like, solvent free coating systems based on microencapsulated acrylates for sealing and locking of threaded parts. The dried film is tack-free, non sticky and can be used in all kind of assembly procedures. Its characteristics as a locking and sealing element become effective only when the capsules are ruptured by shear and pressure stress and the adhesive is allowed to cure.



Technical Data — PRECOTE® 85

- Color turquoise (special colors available upon request)
- Thread Friction Value > 0.10 0.15
- Curing Time (RT) 8 hours (an additive of "-3" will reduce to 2 hours)
- Temperature Range: -50°C (-58°F) to +170°C (+338°F)
- Shelf-Life 4 years at room temperature
- For small thread crest (less than 1 mm an additive of "-8" can be added to increased performance)

Typical Performance Results (M10 plain finish)

- Prevailing-On Torque 0.5 0.9 Nm
- Breakaway Torque (without preload BAT) min. 20.0 – 30.0 Nm
- Prevailing-Off Torque min.
 4.0 8.0 Nm

Advantages

- Curing begins in about 10 minutes with full locking in 8 hours
- Controlled friction to improve joint tension

- Epoxy chemistry for robust structural bonding performance
- High-torque performance
- Environmental resistance to heat, automotive fluids, thermal and mechanical shock and vibrations
- Bonds to a broad range of fastener finishes
- Longest shelf life in the industry
- Complies with or exceeds major OEM specifications
- Seals against pressures up to 400 bar (5760psi)
- Parts are ready for assembly (continued)

 ${\tt PRECOTE} \hbox{\tt @}~85~is~a~trademark~of~Omnite chnik,~Mikroverkap selungs~GmbH}$

INWVATION*

Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide INNYVATION™ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.

As a supply chain partner, Nylok products serve a global network of customers in a diverse range of industries – automotive, aerospace/defense, heavy machinery/truck, electronics, weaponry and specialty applications. Nylok solves fastener problems from NASA applications to the small home appliance industry, processing more than 10 billion parts per year – the global leader in fastener processing.



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PRECOTE® 85

High-Strength & Heat-Resistant Thread Coating with Controlled Torque / Tension

Advantages (continued)

- Precise thread coverage in every part
- Can be applied on external and internal threaded fasteners
- · Is not affected by high humidity conditions
- Dry-to-touch and tack free with good adherence

COMPANY NAME	SPECIFICATIONS
AUDI	DIN 26 PART 27
BENDIX	BW - 621 - M
BMW	DIN 267 PART 27
BOSCH	N38A SR9.5
CATERPILLAR	1E2486
DAF	PROD 9281
DAIMLER	DBL 9460
DIN	DIN 267 PART 27
FCA	MS-CC76 A, B, C
FIAT	DT-M-SFA-SSM
FORD	ES 20007- S 100
GM / OPEL	GME 00151 AND GM 6124M GM 6175 M
	GM 6193 M
	GM 6194 M
	GMW14657 A/B/C
IFI	IFI 125
	IFI 525
MAN	222
MIL - S - 46163	
PORSCHE	1230
PSA (PEUGEOT, CITROEN, TALBOT)	B14 1235
RENAULT	39.02.010 CATEGORY 3 E+LS
VOLVO	STD 416 - 0001
VW	DIN 267 PART 27













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UNDER-THE-HEAD SEALANT

NYSEAL®

Under-the-Head Sealant (Resistant To Automotive Fluids)

NYSEAL® creates a gasket-type seal, preventing leakage of fluids and gases under pressure. The coating is permanently fused on the bearing surface of the fastener. As the screw is seated to its final position against the mating part, the NYSEAL® element compresses slightly and fills the void between the bearing surface of the head and the counter sink/counter bore.



- Color green (special colors available upon request)
- Resistant to most chemicals: alcohol, gasoline, oil, kerosene, diesel fuel and hydraulic fluids
- Temperature Range: -40°C (-40°F) to +66°C (+150°F)
- Can be applied to virtually any headed fastener
- · Shelf-Life indefinite

Typical Performance Results (M10 plain finish)

• Seals up to 500psi



- Eliminates time-consuming, in-house applications of O-rings, gasket seals and sealant compounds
- Permanently bonded to the bearing surface
- Eliminates the leak path
- Prevents galvanic corrosion between dissimilar materials
- Reusable
- Highly durable
- Will not shrink or dry out from age
- · Screw strength is unaffected
- · Assembly ready



Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide $INNYVATION^{TM}$ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.





NYSEAL®

Under-the-Head Sealant (Resistant To Automotive Fluids)

COMPANY NAME

SPECIFICATIONS

FORD

WSS-M21P27-A5



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UNDER-THE-HEAD SEALANT

NYPLAS®

Under-the-Head Sealant (Water, Dust, Air & Noise)

NYPLAS® sealant is a plastisol material, pre-applied coating under the heads of a variety of fasteners to provide sealing against water, moisture, dust, air and noise dampening.



- Color black
- Temperature Range: -40°C (-40°F) to +150°C to (+300°F)
- Can be applied to virtually any headed fastener
- · Shelf-Life indefinite

Typical Performance Results (M10 plain finish)

• Seals up to 500psi



Advantages

- Seals/dampens immediately upon assembly
- · No secondary material required
- Eliminates the need for O-rings, gasket seals and sealant compounds
- Eliminates leak path
- Reusable
- Non-toxic, assembler friendly
- Will not shrink or dry out with age
- Meets major OEM specifications



Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide INNYVATION™ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.





NYPLAS®

Under-the-Head Sealant (Water, Dust, Air & Noise)

COMPANY NAME	SPECIFICATIONS
FCA	MSCD - 43
FORD	ESB-M4G70 A OR B
GM	GM6086M-TYPE 3
	GM1131M-TYPE D



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UNDER-THE-HEAD SEALANT

PRECOTE® 200

Under-the-Head Sealant / High Temp / Non-Crazing

PRECOTE® 200 is a highly resilient under-the-head sealant with good adhesion to seal the mating surfaces of screws, plugs, and rivets. The coating is completely dry and non-tacky. The sealing performance is obtained immediately after assembly.



- Color blue
- Temperature Range: -40°C (-40°F) to +100°C (+212°F)
- Hardness, Shore A 50-65
- Tensile Strength 1.49MPa
- Elongation 210%
- Shelf-Life 4 years at room temperature

Typical Performance Results (M10 plain finish)

• Seals up to 500psi

- Dry and tack free coating
- Can be applied to virtually any headed fastener
- Captive sealing part
- Eliminates the need for O-rings and gasket seals
- Good resistance against water based fluids
- Reusable at room temperature
- Environmentally friendly/non-toxic
- Does not create spider cracks in lens covers

PRECOTE® 200 is a trademark of Omnitechnik, Mikroverkapselungs GmbH

IN VATION **

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PRECOTE® 200

Under-the-Head Sealant / High Temp / Non-Crazing

COMPANY NAME

SPECIFICATIONS

FORD

WSS-M4G365-A/A2



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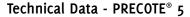




THREAD SEALANT

PRECOTE 5 Coating for Sealing

PRECOTE® 5 is a nonreactive coating used for immediate sealing of cylindrical and conical threads. The coating is dry, tack-free, with good adherence and can be used in all kinds of assembly procedures.



- · Color white
- Instantaneous High Pressure Seal
- Temperature
 - Air: -60° C to $+160^{\circ}$ C (-76° F to $+356^{\circ}$ F)
 - Motor Oil: +150°C (+302°F)
 - Gear Oil: +150°C (+302°F)
 - Glycol / Water 50/50: +120°C (+248°F)
 - Tap water: +100°C (+212°F)
 - Brake Fluid: +150°C (+302°F)
 - Fuel: room temperature
 - Diesel (without RME): room temperature
- Shelf-Life 4 years at room temperature

Typical Performance Results (M10 plain finish)

- Prevailing-On Torque (POT) 2.0 –
 3.5 Nm
- Sealing Properties
 - Straight / Straight: <15 bar (216psi)
 - Taper / Straight: >50 bar (720psi)

Advantages

- Complies with or exceeds major OEM specifications
- Parts are ready for assembly
- Precise thread coverage in every part
- Can be applied on external and internal threaded fasteners
- Is not affected by high humidity conditions
- Dry-to-touch and tack free with good adherence
- Thread friction values are not altered
- Environmentally friendly/non-toxic
- Good thermal and chemical resistance

PRECOTE® 5 is a trademark of Omnitechnik, Mikroverkapselungs GmbH

INWVATION

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PRECOTE 5 Coating for Sealing

COMPANY NAME	SPECIFICATIONS
FIAT	FPW.80104
FORD	ESE M4G208-A2 WX 201 WSS M18 P 12-A
GM / OPEL	9985490
GM	9985473
PERKINS DIESEL	PMS P1. 04
PSA (PEUGEOT, CITROEN, TALBOT)	B14 1235
RENAULT	39.02.010 CATEGORY 1 E
SAAB SCANIA	STD - 518 447 (814282) STD - 1489 (1351 893 SB)
VOLVO	STD 1262,2 MATERIAL NUMBER 96220



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ASSEMBLY RETENTION

NYSTAY®

External Temporary Retention Coating

NYSTAY® customized fastener retention solution allows the fastener to be held in place during production and transport without affecting the end assembly. NYSTAY® retention coating eliminates parts and process steps which allows for faster assembly.



Technical Data - NYSTAY®

- Color green (special colors available upon request)
- Temperature Range -40°C (-40°F) to +66°C (+150°F)
- · Shelf-Life indefinite

Advantages

- Reusable
- Environmentally friendly/non-toxic
- Can be applied to various metals
- Resistant to lubricants, fuels, hydraulic fluids and most commercial solvents
- Durable
- Can be applied to both threaded and unthreaded fasteners
- Temporarily holds fastener in place during fabrication, assembly and transportation

- Soft enough to allow hand assembly
- Provides a solution for robotic riveting type production
- Can be located at any point on fastener length
- Speeds assembly time
- Reduces Inventory
- · Increases quality control
- Requires no additional features

INWVATION"

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NYSTAY® External Temporary Retention Coating

COMPANY NAME SPECIFICATIONS

GM GMW3666



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Mexico













THREAD PROTECTION AND MASKING

NYCOTE® PLUS / NYCOTE®

Thread Masking

NYCOTE® PLUS / NYCOTE® will prevent the adhesion of weld spatter and electrodeposited water-based liquid primers.



Technical Data - NYCOTE® PLUS / NYCOTE®

- · Non-Conductive
- Can be applied to virtually any fastener to add lubricity and reduce torque versus tension scatter.
- Shelf-Life indefinite

Typical Performance Results (M10 plain finish)

- Free Drive Torque 0.1 1.5 Nm
- Seating Torque 40 Nm
- Torque Tension 16 36 kN

Advantages

- Eliminates the need for "slave" bolts
- Eliminates re-tapping which can compromise quality and safety
- Prevents the adhesion of electrodeposited water-based liquid primers and coatings
- Prevents adhesion of weld spatter
- Reduces torque vs. tension scatter
- Improves lubricity and reduces installation drive friction
- Can be coated to external or internal threaded fasteners (continued)

INWVATION"

Every fastening task comes with its own set of challenges – locking, sealing, high temperatures, thread contamination or any combination of these. When these challenges slow product development of the design process, Nylok engineers provide INNYVATION™ services – the knowledge and resources to uncover solutions that balance cost, manufacturability and environmental concerns.















NYCOTE® PLUS / NYCOTE®

Thread Masking

Advantages (continued)

- Achieves known and repeatable clamp load
- Guarantees good electrical grounding
- Reduces manufacturing cost by increasing productivity
- Coating is only on the threads not grip length or faces

NYCOTE® PLUS

COMPANY NAME	SPECIFICATIONS
FCA	PS-8542
	PS.50015
GM	GMW15822
INTERNATIONAL	SPECIFICATIONS
OPEL	ON2018 (GMW15822)

NYCOTE®

COMPANY NAME	SPECIFICATIONS
FCA	PS-8542
	PS.50015
FORD	WSS-M21P27-A3
GM	GM6076M
INTERNATIONAL	SPECIFICATIONS
INTERMATIONAL	SPECIFICATIONS
JAGUAR LAND ROVER	STJLR.51.5392-A3 RES.22.FP.04
	STJLR.51.5392-A3
JAGUAR LAND ROVER	STJLR.51.5392-A3 RES.22.FP.04













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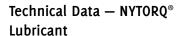
Mexico



NYTORQ[®]

Pre-Applied Thread Lubricant

NYTORQ® lubricant film-forming synthetic wax lubricant coats threaded parts. NYTORQ® lubricant reduces friction and prevents cold welding and can be used in a wide variety of industrial and manufacturing applications. It is also specially designed for self-tapping threads. The film is dry-to-touch. NYTORQ® lubricant prevents torque chattering and galling and enables high clamp loads in a small deviation.



- · Color opaque
- Thread Friction Value 0.06 0.15
- Temperature Range: -70°C (-94°F) to +120°C (+248°F)
- Density 1.0
- Solvent Water
- Shelf-Life 4 years at room temperature

Typical Performance Results (M10 plain finish)

• Prevailing-On Torque < 20 Nm



Advantages

- Forms a dry-to-touch film
- Environmentally friendly/non-toxic
- Optimal friction values with low deviation
- Avoids galling, torque chattering and cold welding
- Can be applied on all threaded materials including plastics
- Outstanding reduction of thread forming torque
- Complies or exceeds industry specifications

NYTORQ is a trademark of Omnitechnik, Mikroverkapselungs GmbH

INWVATION"

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NYTORQ® Pre-Applied Thread Lubricant

COMPANY NAME	SPECIFICATIONS
FCA	MS-9775
FORD	WSS-M21P27-A4
GM	9986167
JAGUAR LAND ROVER	STJLR.51.5392-A4



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Mexico













NYPLATE®

Pre-Applied Thread Anti-Seize

NYPLATE® coating is a film-forming dispersion with mineral solid lubricants for coating threaded parts requiring a high preload on assembly without galling but after exposure to high temperature permit an easy and non-destructive disassembly.



- Color black
- Thread Friction Value 0.10 0.15
- Temperature Range: -60°C (-76°F) to +850°C (1560°F)
- Shelf-Life 4 years at room temperature

Typical Performance Results (M10 plain finish)

Prevailing-On Torque (POT) 1.0 – 2.0
 Nm

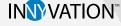
Advantages

- Ideal for preventing galling on stainless steel fasteners
- Forms a dry-to-touch film
- Environmentally friendly/non-toxic
- Best thread friction values in the industry with low deviation
- Very high maximum temperature resistance (850°C /1560°F)
- Avoids galling, torque chattering and cold welding
- Resistant to lubricants, fuels, hydraulic fluids and most commercial solvents

- Avoids corrosion in the threaded
- Can be applied on all threaded materials including plastics

connection

• Outstanding reduction of thread forming installation torque



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EUROPE

EXPANDING OPTIONS FOR FASTENING DISSIMILAR METALS



FOR OVER 70 YEARS, NYLOK® HAS BEEN RECOGNIZED AS A
LEADING GLOBAL SUPPLIER OF VALUE-ADDED FASTENER COATINGS,
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AND WORKABLE SOLUTIONS TO SPECIFIC FASTENER ISSUES HAS
BEEN AND WILL CONTINUE TO BE NYLOK'S PRIMARY MISSION.





COATING FOR GALVANIC CORROSION PREVENTION

OVERVIEW

- NYSHIELD™ PROTECTS STEEL FASTENERS FROM GALVANIC CORROSION IN HIGH RISK MATERIAL COMBINATIONS:
 - CARBON FIBER
 - MAGNESIUM
 - ALUMINUM
 - STAINLESS STEEL
- LOW TENSION LOSS
- COF BETWEEN 0.10 0.16
- UNIFORM THICKNESS
- EXCELLENT ADHESION
- EXCEPTIONAL CHEMICAL RESISTANCE



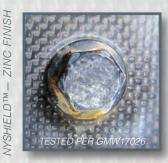
APPLICATION

CORROSION TEST RESULTS

STEEL FASTENERS ON CARBON FIBER - 15 YEAR SIMULATION







STEEL FASTENERS ON MAGNESIUM - 15 YEAR SIMULATION

GMW3359 CONTROL TESTED PER GMW17026





FOR MORE INFORMATION:

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