



High Performance Mold Maintenance Products

CLEANERS

RUST PREVENTATIVES

MOLD RELEASES

GREASE

COATINGS

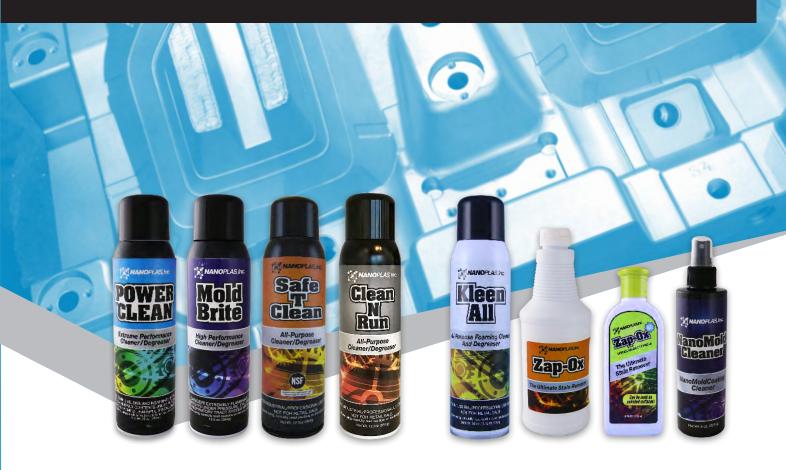
Nanoplas is a fast-growing, innovative developer of products that improve the way customers use maintenance products.

The market of mold maintenance products is mature and slow to change. Most customers have used the same products for years, because no one has brought new technology to them. Well, that time has changed.

Give it a try, we think you'll be convinced!



<u>Cleaners</u>



Cleaners/Degreasers

CLEANERS/DEGREASERS: POWER CLEAN, MOLD BRITE, SAFE-T-CLEAN & CLEAN-N-RUN

The Nanoplas line of mold cleaners and degreasers were designed the way professionals like you need them to clean.......Quickly, Thoroughly, and Without Residue. With superior cleaning agents to cut through build up, a powerful, direct spray pattern to break up stubborn contaminants and quick evaporation to help reduce the chance of grease breakdown or residue, our Power Clean, Mold Brite, Safe-T-Clean and Clean-N-Run are the answer. Even our design allows users to spray at virtually any angle to get to those hard to reach places and doesn't run out of propellant with product still in the can.

SPECIALTY CLEANERS: KLEEN-ALL, ZAP-OX, ZAP-OX NG & NANO MOLD CLEANER

The Nanoplas line of specialty cleaners covers a range of applications from general maintenance to unique applications like gas stain and rust removal. As with all of our products, we listened to our customers' issues and developed solutions that go where others haven't been able to go. Kleen-All Zap-Ox, Zap-Ox NG and Nano Mold Cleaner are designed to make the mold or general cleaning process work faster and more effectively. On the following pages, read how each of these products can help your operation reduce costs and save time.

Power Clean

Power Clean is our strongest cleaner, and one of the strongest cleaners on the market, as it's one of the few remaining cleaners that contain chlorinated solvents. It's a quick evaporating, non-flammable cleaner that cleans down to the bare metal in half the time of a non-chlorinated cleaner. With its powerful spray pattern and superior cleaning agents, Power Clean will save you time and money to help you get your molds back in production.

- **Quick Evaporation**
- Residue free and low odor
- Cleans without wiping
- Safe to use on all metal surfaces



PC-100-12C

16oz cans (case of 12)

PC-100-5

5 gallon pail

PC-100-55

55 gallon drum

Mold Brite

Mold Brite is the next best thing to Power Clean with superior cleaning power when compared to other products in the nonchlorinated category. The chemical makeup and powerful spray pattern help break up tough build up and gives you the ability to clean tough to reach areas of the mold. Mold Brite also contains a citrus fragrance to help mask the smell of solvents.

- No chlorinated solvents
- **Quick Evaporation**
- Residue free and citrus fragrance
- Cleans without wiping
- Safe to use on all metal surfaces



MB-200-12C

12.5oz cans (case of 12)

MB-200-5

5 gallon pail

MB-200-55 55 gallon drum

Safe-T-Clean

Safe-T-Clean is a NSF P-1 listed, high performance cleaner/ degreaser. It has superior cleaning power when compared to other products in the non chlorinated category. The powerful spray pattern helps break up tough build up and gives you the ability to clean hard to reach areas of the mold.

- NSF P-1 listed
- No chlorinated solvents
- Quick evaporation
- Residue free and low odor
- Cleans without wiping
- Safe to use on all metal surfaces





SC-90-12C

12.5oz cans (case of 12)

SC-90-5

5 gallon pail

SC-90-55

55 gallon drum

Clean-N-Run

Clean-N-Run's powerful cleaning formula removes contaminants down to the virgin metal. Superior, non-chlorinated, cleaning agents allow for streak free cleaning on warm molds. Controlled evaporation gives users more cleaning time in the press and in the tool room.

- Powerful cleaning formula removes difficult contaminants
- · Controlled evaporation for extra cleaning time
- Residue free
- Non-chlorinated formula
- · Designed for streak free cleaning of warm molds



CNR-10-12C

12.5oz cans (case of 12)

CNR-10-5 5 gallon pail

CNR-10-55 55 gallon drum

Kleen-All

Kleen All is a water-based, all-purpose foaming cleaner and degreaser. This industrial strength foam cleaner attacks and dissolves grease, oil, and grime on a variety of surfaces ranging from metal to plastic. Kleen All's instant foaming action clings to vertical surfaces without running, allowing time to soak in and work effectively.

- Instant, heavy foaming action
- Clings to surface
- Fast and thorough cleaning action
- Safe on all metal and plastic surfaces
- Won't remove paint
- Residue free

Cleaning Applications

- Metal Surfaces
- Machinery
- Tools
- Spot clean floors and walls
- Plastic parts



KA-20-12C

18oz cans (case of 12)

Zap-Ox & Zap-Ox NG

Zap-Ox provides unmatched stain removing ability. There is no other cleaner that can remove rust, oxidation, build-up, weld discoloration, and other stains like Zap-Ox.

By applying just a thin coat of the cleaner onto the stained surface, Zap-Ox will go to work and pull the stain out of the surface of the metal without etching the surface. Where most cleaners require scrubbing of the surface, Zap-Ox removes most stains without scrubbing.

Zap-Ox NG possesses all the cleaning power of Zap-Ox but is a non-grit formula. It is specifically designed for use on polished and textured surfaces.

- Unmatched stain and oxidation remover
- Brings metal back to its original state
- Works on all materials
- Non-caustic and user friendly
- Safe to use on all metal surfaces



ZO-16

16oz bottle (1 bottle)

ZO-16-12C

16oz bottles (case of 12)



ZO-NG

6.75oz bottle (1 bottle)

ZO-NG-12C

6.75oz bottles (case of 12)

Nano Mold Cleaner

Nano Mold Cleaner formulations use a nano-colloidal surfactant blended technology to penetrate and disperse grease and oils. Once broken apart the grease molecules are encapsulated and lifted away from surfaces, allowing them to be rinsed away easily. Nano Mold Cleaner formula is the only cleaner recommended for use with our NanoMoldCoating® products. It will not remove the coating other cleaners including our Power Clean and Mold Brite could remove the coating.

- Non-toxic
- Non-flammable
- Safe to use on all metal surfaces



NCC08-1 8oz bottle (1 bottle)

NCC08-12

8oz bottles (case of 12)

Rust Preventatives



Rust Preventatives

The Nanoplas family of rust preventatives is one of our truly unique product lines, because it goes on completely "dry". Our reasoning was simple; to reduce scrap and downtime spent cleaning the mold prior to start up. For these reasons we developed our four dry film rust preventatives Mold Guard, Mold Guard Green, The Defender, and Safe-T-Guard to help overcome these problems and allow you to start production immediately without setbacks. From our can design that includes a fan spray nozzle tip to our ingredients you will get just that, a dry rust preventative that dries on contact and will not migrate throughout the mold. It's fan spray nozzle tip allows for a wider coverage and the 3-way valve allows you to control the desired amount by giving you a high, medium, and low volume choices depending on the rust protection needs for each mold.

Mold Guard

Mold Guard's moisture displacing chemistry provides a guard for your mold that will not allow corrosion to penetrate. The formula provides excellent film strength, and since it goes on dry it will not bleed into the mold or cause build-up. Mold Guard also has some release properties which helps with release issues at start up. Its fan spray nozzle tip allows for wider coverage and its 3-way valve allows you to control the desired amount by giving you a high, medium, and low setting.

- Moisture displacing chemistry
- Does not break down grease
- Dry film goes on dry and stays dry
- Can be molded through at start up
- Excellent film strength
- Will not run when applied



MG-50-12C

10.25oz cans (case of 12)

5 gallon pail

MG-50-55

55 gallon drum

Mold Guard Green

Mold Guard Green's moisture displacing chemistry provides a guard for your mold that will not allow corrosion to penetrate. The formula provides excellent film strength, and since it goes on dry it will not bleed into the mold or cause build-up. Mold Guard Green has the same great dry formula with an added green tracer dye to help display coverage. Its fan spray nozzle tip allows for wider coverage and its 3-way valve allows you to control the desired amount by giving you a high, medium, and low setting.

- Moisture displacing chemistry
- Does not break down grease
- The green tint allows for easy visibility of coverage
- Dry film goes on dry and stays dry
- Can be molded through in just a few shots
- Will not run when applied
- Excellent film strength



MG-50-G-12C

10.25oz cans (case of 12)

MG-50-G-5

5 gallon pail

MG-50-G-55

55 gallon drum



We do not develop products based on what we think customers need. We develop products focused on what we have learned from our customers to make their processes more efficient.

Safe-T-Guard

Safe-T-Guard's moisture displacing chemistry provides a guard for your mold that will not allow corrosion to penetrate. The guarding properties provide excellent film strength, and since it goes on dry will not break down grease and other lubricants that are already present on the surface. It also works as an excellent lubricant for moving parts of the machine, and is NSF H-1 listed.

- Moisture displacing chemistry
- · Excellent film strength
- · Will not break down grease
- Easy removal
- NSF H-1 listed





SG-700-12C

10.25oz cans (case of 12)

SG-700-5

5 gallon pail

SG-700-55

55 gallon drum

The Defender

The Defender is a semi-dry, dual purpose rust preventative. Its semi dry properties allow for longer lasting protection without causing bleed through. The acid vapor neutralizer additive protects against PVC and other corrosive materials. Green dye indicator is used to help display your coverage while avoiding over spray on the mold.

- Moisture displacing chemistry
- Does not migrate or cause bleedthrough
- Green tint allows for easy visibility when applied
- Protects when molding PVC or other corrosive materials
- Easy removal
- Semi dry for longer lasting protection



D-400-12C

10.25oz cans (case of 12)

D-400-5

5 gallon pail

D-400-55

55 gallon drum

The Protector

The Protector is a semi dry, dual purpose rust preventative designed to be used on both cold and warm molds. Its semi dry nature allows for longer lasting protection without causing bleed through. The acid vapor neutralizer additive protects against PVC and other corrosive materials.

- Moisture displacing chemistry
- Does not migrate or cause bleed through
- Semi Dry for use on warm or cold molds
- · Protects when molding PVC or other corrosive materials
- Up to 3-year protection
- Easy removal



PT-80-12C

12.5oz cans (case of 12)

Mold Releases



Mold Releases

Our Tuff Kote and Dri Kote are dry film mold release that go on dry. The advantage of having a dry film is it reduces your chances of build up by making it hard to overspray. Less is more when applying our Tuff Kote and Dri Kote! Our dry film properties help eliminate two of the main cost issues in molding - part quality and downtime. Standard mold releases go on wet, which can leave residue and can also cause build up. Tuff Kote and Dri Kote go on dry, minimizing the potential for build up and residue, and reducing or even eliminating cleaning downtime.

Tuff Kote

Tuff Kote is dry film, heavy duty mold release designed for difficult to release parts or where a longer lasting release is needed. Tuff Kote provides a unique, non-stick film that allows for significantly longer part cycles without reapplication. It's composed of PTFE and other proprietary ingredients. This mixture creates the durability and very low coefficient of friction needed to outlast the competition.

- Heavy duty formula lasts longer on the mold
- Fully paintable
- Safe on all plastics
- No build up
- Dry film
- Non-silicone formula
- · Works at all temperatures



TK-150-12C

10.75oz cans (case of 12)

TK-150-5

5 gallon pail

TK-150-55

55 gallon drum

Dri-Kote

Dri-Kote mold release spray is a new, innovative formula designed to reduce the down time of applying mold releases. It's quick drying formula bonds to the surface of the metal, and lasts longer on the mold than traditional mold releases.

- Quick drying chemistry
- Fully paintable
- Safe on all plastics
- No build up
- Dry film
- Non-silicone formula
- Works at all temperatures



DK-300-12C

10.75oz cans (case of 12)

DK-300-5

5 gallon pail

DK-300-55

55 gallon drum



The Nanoplas Guarantee

We work extremely hard to design products that meet the needs of our customers and are of the best workmanship possible in the industry today. We, therefore, guarantee all of our products against defects in workmanship and chemical makeup. We will replace any product proven to be defective with a like product. The users' obligation is to determine the correct use of each product and assumes all the liability and risk in connection with that use. All of our products have up-to-date SDS's posted on our website and provide the necessary safety and chemical information for each customer to manage their use of these products.



Grease

Min-Lube High Performance Grease is designed specifically for lubrication in severe environments as well as food and pharmaceutical related industries. It is a mineral oil base thickened with a proprietary calcium sulfonate complex, and a carefully selected additive package focused on thermal, oxidative, and mechanical stability. It contains Micronox® to provide antimicrobial protection, which is groundbreaking technology that prevents degradation of the lubricant.

Min-Lube was built to be the only grease most shops need. As injection molders use up their existing greases and look to re-order, they can look at Min-Lube, which is suitable for almost all applications. Simply put, Min-Lube is a complete product. It's mechanically stable, nothing will fall out, nothing will separate, and it has an extraordinarily high temperature and pressure rating. With Min-Lube, facilities can keep one grease on hand rather than having to purchase and store multiple greases for specific purposes.

Min-Lube High Performance Grease

Min-Lube Benefits

- Food and Pharmaceutical Safe: Can be used in food-grade (NSF-certified, category code H1) and pharmaceutical applications. Features antimicrobial ingredients to protect grease against degradation from microbial contamination
- Exceptional Protection: Provides superior load and wear protection to help extend machine life and maintain bearings.
- Extensive Temperature Range: Works effectively from -15°F to 550°F, so it's suitable for higher temperature applications.

Min-Lube Features

- Highly resistant to water, steam, acid, and many chemicals
- Excellent thermal and oxidative stability
- Does not contain metals, PTFE, or silicone
- High load bearing properties
- Excellent corrosion protection
- Does not soften or run out
- · Ideal for mold components
- Ideal for bearings, bushings, cams, cables, chains, conveyors, gears, etc.
- Compatible with lithium-based greases



NML-16C

16-ounce net weight cartridge

NML-16J

16-ounce net weight jar

NML-16J-12

16-ounce net weight jar (case of 12)

NML-16C-12

16-ounce net weight cartridge

NML-35

5 gallon (35 lb.) pail

APPLICATION PROCESS

- 1. Clean and remove contaminants off of all components before applying Min-Lube.
- 2. Apply a small amount with a brush or hands. Spread and wipe off all excess with hands.
- 3. Make sure you have a thin film on your wear surfaces.
- 4. Install components and work back and forth. Remove components to wipe off extra grease at the end of travel.

Frequently Asked Questions About Grease

Have you experienced caking or hardening with grease? Here's a few reasons why grease hardens:

- **High temperatures** lead to oil loss from separation and evaporation, causing grease hardening. Excessive temperatures may also cause the oil to oxidize and transform into a thick tar-like substance. Operation past a grease's drop temperature can result in the grease dropping off the lubrication point. Min-Lube's drop point is 600 F and it will hold its integrity for repeated cycles in the 500 - 550 F range.
- Mechanical forces can cause separation in grease between the base oil and thickener. This separation reduces grease operational lifespan and can lead to gradual grease hardening. Min-Lube has outstanding mechanical stability and shows no evidence of shear breakdown even at extended high temperature testing. See Cone Penetration and Roll Stability Test results.
- Grease incompatibility: Mixing incompatible greases will lead to oil separation and grease hardening. Be sure to remove all old grease before applying new grease.
- Oxidation of the grease is caused by exposure to oxygen, light, metals and high temperature cycles. Min-Lube contains Micronox® to prevent organic degradation of the grease and additional additives to achieve excellent thermal and mechanical stability.

Why is Min-lube grease tan/off-white instead of white?

Min-Lube is a mineral oil base in combination with a calcium thickener and does not contain dyes or any additives that add color, therefore, Min-Lube is a natural oil color. Min-Lube is designed with a mineral oil base as it allows for a more uniform blending of the thickener, base oil, and additives in comparison to synthetic base oils and hydrocarbon additives.

Have you experienced any cracking or oil separation when you open a container?

Cracking can occur for several reasons: oxidation, thickener type, poor blending, etc. Oil separation can be a sign of poor blending and incompatible additives.

Min-Lube helps reduce the chances of these situation because of the thickener type and additive package that we have in the product. These carefully chosen materials allow us to achieve the proper blending needed to make this product successful.

Why does Min-Lube feel smooth - not tacky or stringy like other grease?

Traditional greases are thick and stringy to achieve a physical water resistance and a physical ability to hold onto a metal surface.

Min-Lube is engineered using next generation proprietary additives to achieve water resistance and hold onto surfaces even under the highest pressures and temperatures molecularly and chemically. This technology, known as micro filming, allows Min-Lube to be thin and smooth in texture for easy application while guaranteeing maximum water resistance, pressure resistance, and temperature resistance.

I am happy to report that the Nano Mold Coating has performed as advertised. We have been using it for about nine months now and have had success in our applications. I have been in this industry for 25 years and have tried numerous products that make claims which don't hold up; it is a nice change to use a product that actually works as claimed.

> Ray S. V.P. Plas-Tech Engineering, Inc.

Coatings



NanoMoldCoating® or NanoMoldRelease® has been scientifically formulated with the use of nanotechnology to create a semi-permanent barrier on the surface of molds which facilitates extraordinary plastic or rubber part release. The cured coating is a non-toxic, and colorless hardened polymer film that is only 100-200 nanometers in thickness so it has no affect on finished part dimensions.

- · Reduces cycle times, increases productivity and eliminates sticking
- Improves part finish by eliminating dragging and stretching
- Helps reduce molding pressure
- Does not migrate to part surface
- In house / Self applied application
- Can be used with all resins

Please refer to our website www.nanomoldingcoatings.com under coating products for instructional videos regarding our easy step by step application process

HC™ Heat Cure

HC[™] Heat Cure is a scientifically formulated coating that uses nanotechnology to create a semi-permanent barrier on the surface of a mold which is only 100 nanometers in thickness and facilitates extraordinary plastic or rubber part release. HC is applied in the tool room and is the longest lasting of our Nano coatings.

- 3-4 hour cure time
- Can be used with all resins
- Temperatures up to 1000°F
- Applied out of the press
- Can apply multiple coats





NANO5HC - 5 ml kit

NANO15HC - 15 ml kit

NANO25HC - 25 ml kit

NANO50HC - 50 ml kit

HC™ Kits Include:

- · Bottle of NanoMoldCoating
- Bottle of NanoMoldCoating remover
- Microfiber cloths, spray tip, and swabs
- Application Instructions
- Nano Mold Cleaner

HCF™ Heat Cure FDA Compliant

HCF™ Heat Cure FDA Compliant is a scientifically formulated coating that uses nanotechnology to create a semi-permanent barrier on the surface of a mold which is only 100 nanometers in thickness and which facilitates extraordinary plastic or rubber part release. HCF™ is applied in the tool room and is a two part process.

- 3-4 hour cure time
- Can be used with all resins
- Temperatures up to 1000°F
- Applied out of the press
- Can apply multiple coats



NANO10HCF - 10 ml kit

NANO15HCF - 15 ml kit

NANO25HCF - 25 ml kit

NANO50HCF - 50 ml kit

HCF™ Kits Include:

- Bottle of NanoMoldCoating Part A
- Bottle of NanoMoldCoating Part B
- Bottle of NanoMoldCoating Remover
- Microfiber cloths, spray tip, and swabs
- **Application Instructions**
- Nano Mold Cleaner



Phillips Plastics (Precision Decorating) has been using Nanoplas coating since February 2008. Phillips has found benefits to using this technology. Phillips has coated cavity surfaces due to parts not pulling across to coring upon mold opening. Parts now pull across and coating seems to be lasting approx. 50,000 cycles before recoating is necessary.

> Jonathan Rief, Tool Room Manager **Phillips Plastics (Precision Decorating)**

QC™ Quick Cure Plastic Formula

QCTM Quick Cure has been scientifically formulated with the use of nanotechnology to create a semi-permanent barrier on the surface of a mold which is only 100 nanometers in thickness and which facilitates extraordinary plastic part release. QCTM coating is designed to be used on all plastics and is applied in the press.

- 10-15 minute cure time
- Can be applied to a pretreated surface (PTFE, nickel, chrome, boron, etc)
- Standard Resin Application
- Operating Temps up to 500°F
- Can be quickly reapplied
- Applied in the press



NANO2QC - 2 ounce kit

NANO8QC - 8 ounce kit

QC™ Kits Include:

- Bottle of NanoMoldCoating
- Bottle of NanoMoldCoating remover
- Microfiber cloths, spray tip, and swabs
- Application Instructions
- Nano Mold Cleaner

QCRU™ Quick Cure Rubber Formula

QCRU[™] Quick Cure Rubber Formula has been scientifically formulated with the use of nanotechnology to create a semi-permanent barrier on the surface of a mold which is only 100 nanometers in thickness and which facilitates extraordinary rubber part release. QCRU[™] is designed to be used on all rubber parts and is applied in the press.

- 10-15 minute cure time
- Can be applied to a pretreated surface (PTFE, nickel, chrome, boron, etc)
- Standard Rubber Application
- Operating Temps up to 500°F
- Can be quickly reapplied
- Applied in the press



NANO2QCR - 2 ounce kit

NANO8QCR - 8 ounce kit

QCRU™ Kits Include:

- Bottle of NanoMoldCoating
- Bottle of NanoMoldCoating remover
- Microfiber cloths, spray tip, and swabs
- Application Instructions
- Nano Mold Cleaner

QCSI™ Quick Cure Silicone Formula

QCSI™ Quick Cure Silicone Formula has been scientifically formulated with the use of nanotechnology to create a semi-permanent barrier on the surface of a mold which is only 100 nanometers in thickness and which facilitates extraordinary silicone part release. QCSI™ is designed to be used on all silicone parts and is applied in the press.

- 10-15 minute cure time
- Can be applied to a pretreated surface (PTFE, nickel, chrome, boron, etc)
- Standard Silicone Application
- Operating Temps up to 450°F
- Can be quickly reapplied
- Applied in the press

NANO2QCS - 2 ounce kit

NANO8QCS – 8 ounce kit

QCSI™ Kits Include:

- Bottle of NanoMoldCoating
- Bottle of NanoMoldCoating remover
- Microfiber cloths, spray tip, and swabs
- Application Instructions
- · Nano Mold Cleaner





Nanoplas products are the ideal choice for plastics and rubber processors in today's competitive manufacturing environment. They dramatically increases production output, while reducing costs associated with manual part removal, costly mold release agents, part scrap, slow cycle times, and repetitive mold maintenance due to sticking problems.

John B. Hoff, President

ABOUT NANOPLAS

Nanoplas was founded on the basis of bringing innovative mold maintenance products to the plastic injection mold industry. This approach has been the cornerstone of our product development since our inception in 2008. All of our mold maintenance products have been designed with this driving principle to change the way people see the mature market of mold maintenance products. We do not develop products based on what we think customers need. We develop products focused on what we have learned from our customers to make their processes more efficient.



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