



Issue	Common Cause	Product	Solution / Case Study
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Bleeding

Higher Temperatures

At higher temps, grease can break down and liquify, then migrate and turn tacky. This leads to build-up in troublesome areas or contaminated parts.



MIN-LUBE

High Performance Grease

Min-Lube withstands high temperatures to 550°F so it won't break down and bleed out.

Over Applying Rust Preventative

Over applied, a rust preventative can cause grease to break down and bleed. If it's bleeding around ejector pins, your parts will likely be contaminated. If it breaks down on the slides and lifters, it could become tacky, causing them to seize. If it bleeds out completely, you'll run metal-on-metal.



MOLD GUARD

As a truly dry rust preventative, **Mold Guard** won't break down grease. It can also be molded through at startup, so you can get your mold up and running faster.

Over Applying Grease

Over applying grease, especially on ejectors pins, can lead to part contamination. This can create scrap or buildup in troublesome areas of the mold.



MIN-LUBE

High Performance Grease

A very thin application of **Min-Lube** is enough lubrication for traditional molding operations, because this product remains on the surface longer, so there's no need to over-apply.

Min-Lube Provides superior load and wear protection to help extend machine life.

Sticking

Material & Other Variables

If you're applying ample amounts of mold release and still experience sticking, it could be due to the material combined with other variables, such as the temperature, tooling, etc. To get through your run or extend production time, apply a semi-permanent coating.



NANOPLAS COATINGS

Especially ideal for plastic or rubber part release, **Nanoplas coatings** use nanotechnology to create a semipermanent barrier on the mold's surface. They have no impact on finished part dimension, don't migrate to the part surface, and are non-toxic. Additionally, you apply them in-house and they cure in just a few hours.

Parts released more efficiently and pin stress eliminated. See Phillips Plastics's [Case Study](#)

Over Applying Mold Release

Over applying mold release to avoid sticking during a product run can lead to more sticking, either because of buildup in the cavity or the creation of a chemical reaction. In either scenario, it's time to look at an alternative mold release or turn to a coating.



TUFF-KOTE

Quick drying, **Tuff-Kote** mold release offers a longer-lasting release and uses an innovative spray pattern to lay down a thin coat. This helps prevent mold release buildup, especially in the problem areas of a mold.

Polymics saw a dramatic 3900% increase in production capacity, going from 5 shots to over 200 shots in a run. See [Case Study](#)

Nanoplas coatings create a semi-permanent barrier on the surface of molds, facilitating extraordinary part release. They have no impact on finished part dimension, don't migrate to the part surface, and are non-toxic.

Run Capacity Improves 700x with HC Heat Cure at River Valley Plastics. See [Case Study](#)



NANOPLAS COATINGS

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Gas Build-up

Over Applying Mold Release

Over applying mold release to avoid sticking during a full production run can cause the mold release to build up and clog the vents.



DRI-KOTE

Quick drying **Dri-Kote** mold release spray is a dry mold release, which has the advantage of being difficult to over apply. This helps prevent mold release buildup, especially in the problem areas of a mold, which in turn mitigates gas build up. Dri-Kote works for most injection molding needs



TUFF-KOTE

Made for difficult-to-release parts, **Tuff-Kote** mold release spray provides a longer lasting release. Also a dry mold release, it minimizes the potential for build up and residue to reduce the risk of gas build up.



**NANOPLAS
COATINGS**

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Over Applying Rust Preventative

The rust preventative may be building up and clogging vents, is over applied or thick nature; or is too wet (as in not drying fast enough), creating a tacky residue on hot molds.



MOLD-GUARD

Mold Guard is a truly dry rust preventative, so it won't migrate or buildup when applied as directed. An adjustable fan tip gives better control over the volume dispensed. Plus, it can be molded through at start-up and creates little to no scrap.



**MOLD-GUARD
GREEN**

Mold Guard Green provides excellent film strength, and since it goes on dry it will not bleed into the mold or cause build-up. Tinted green, you can see where it's been applied so you're less likely to over apply.

Poor Venting/Tool Design

Truly resolving this issue requires the tool or mold itself to be examined for proper vent depths, and addressed as needed. That being said, you'll still need a cleaner to remove the excess gas buildup.

Molding Material

The type of material used in producing the product combined with poor venting within the tool can trap gasses, creating buildup. The long-term solution is pairing the material with the right mold/tool. To address the immediate issue of gas buildup, use a mold cleaner.



ZAP-OX

Zap-Ox removes gas build up quickly and efficiently without distorting textured surfaces or parting lines. No other cleaner removes rust, oxidation, buildup, weld discoloration, and other stains as effectively as Zap-Ox.

Zap-Ox Saves Hours of Tool Maintenance. Zap-Ox removed gassing from the texture, eliminating the need to pull the tool and stone polish or bead blast it. See [Case Study](#)



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Rust

Incomplete Coverage of Rust Preventative

One sign of spotty coverage is that the rust only appears on certain areas of the mold. Simply put, this may be an issue of not seeing where the rust preventative has been applied.



THE DEFENDER

The Defender is a semi-dry rust preventative intended for long-term storage. It's properties were formulated to ensure that it will not migrate throughout the mold. It contains a green tracer dye that shows where it's been applied, providing visual proof and reassurance that your mold is properly coated.

Ineffective Rust Preventative

If you've properly applied a preventative and rust is still an issue, it's time to consider an alternative rust preventative.



MOLD-GUARD GREEN

The Defender Eliminates Rust & Reduces Scrap. *Ess-Tec solved their humidity-related rust issue with The Defender and also cut their scrap at startup.* [See Case Study](#)

Mold Guard Green provides excellent film strength, and since it goes on dry it will not bleed into the mold or cause build-up. Tinted green, you can see where it's been applied so you're less likely to over apply.

Unknown

Sometimes rust has gone undetected or is just unavoidable. Either way, you need a product that can quickly remove the rust to avoid unexpected and costly downtime.



ZAP-OX

Zap-Ox removes gas build up quickly and efficiently without distorting textured surfaces or parting lines. No other cleaner removes rust, oxidation, buildup, weld discoloration, and other stains as effectively as Zap-Ox.

Zap-Ox Cuts Cleaning Time by 4 Hours/Week. *An industry veteran with 24+ years of experience was excited that Zap-Ox exceeded his expectations for reducing cleaning times compared to other cleaners he's used.* [See Case Study](#)

Better Together

When used in tandem, Nanoplas products can help you significantly reduce costs, downtime, scrap, and more. Scientifically formulated, each product is individually effective, so when used together, they enhance mold performance significantly.