

KLENZ

Technical Guide

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Klenz Grade Purging Compound

Technical Procedure Guide

Ready to use Purging Compound

Klenz is a specially developed cleaning compound that is delivered in a premixed and ready-to-use pellet form. It is specifically developed for the cleaning of screws, barrels, nozzles, and hot runners to remove burned material, color hang-ups, deposits and black specks during color and/or material changes specifically for the following resins: **PVC, EVA, POM, HDPE, LDPE, PP, Polyolefin resin etc.**

Klenz processing temperature range is from 338° F to 572° F (140° C to 300° C). It removes, at the temperature of the previously processed material any hang ups and deposits.

Klenz purge compound is **not abrasive** and works with a chemical reaction. Since **Klenz** is manufactured with non-abrasive chemical components, colored and burned polymers, incrustations, black specks and also rust are softened, removed and purged from the press. There is “**NO MECHANICAL ACTION**” made on the Machine Parts or Hot Runner System!

Klenz cleans at the processing temperature of the previous production material and no soak time is required. It is recommended for hot runners.

Klenz is not toxic and is odorless. It will not damage your equipment because it does not contain solvents: all components are qualified as GRAS (Generally Recognized as Safe) by FDA.

It may happen that running **Klenz** in older machines, where the equipment is overused, the cleaning process may not remove all of the old deposits of material that ran months ago. In this case, a second application may be required to fully purge the machine.

It is highly recommended to close the container properly after each use. The forming of small balls of sticky substance may occur. ***This will not alter the efficiency of the product.***

The recommended storage time for **Klenz** is 12-18 months.

SAFETY: Safety is always first. Follow your established Company Procedures and Practices for Purging Machines. Purging should be performed with purge guards closed and proper face shield, gloves and long sleeve clothing. Hot Plastic can cause burns! Use Caution!

Use with Injection Molding Machines:

- Increase the cylinder Temperature by 50° to 90° F; this operation is not strictly necessary but you will obtain a better cleaning result.
- Load screw, barrel with neutral grade of plastic resin (possibly suitable material) and run the machine until the material comes out in a lighter color (i.e. from red to pink and from dark blue to light blue).
- Run barrel empty and place screw in full forward position. Adjust the back-pressure of the machine to allow the loading of the **Klenz** (generally 70 to 120 PSI).
- **For larger machines we recommend reducing the shot size by 10-20% of the maximum shot size.**
- Load the **Klenz** (fill the barrel completely) and start injection cycle.
- **PLASTIFICATION TIME:**
 - Approximately for 40 seconds for machines up to 200 tons.
 - Approximately for 60 seconds for larger machines.
- Continue with injection process with short shots until the purged **Klenz** appears visibly clean.
- Load machine with the next production material and run machine (with normal processing values) to eliminate the rest of the **Klenz** within the machine.
- Begin normal production.

Use with Hot Runners:

- Clean first screw and barrel using the **Klenz** grade until the ejected the **Klenz** appears visibly clean.
- Start to make injections through the hot runners with the mold close or open until the molded or ejected **Klenz** appears visibly clean (we suggest to keep the mold open if the molded part is difficult to be ejected from the mold).
- In “hard to clean” situations, we recommend to increase the hot runner temperature of 30-40°F (20-30°C) and to increase the injection molding cycle time.
- Continue molding until the molded parts appear visibly clean (we suggest to perform at least 4 injections).
- Load neutral or production material to eliminate the traces of **Klenz** within the machine.
- Begin normal production.

NOTES:

Use with Extrusion Machines:

- Run the machine with the neutral grade of the plastic resin you are going to process.
- **If a screen-pack or nozzle filter is installed, it must be removed from the machine.**
- Load the **Klenz** and run machine at a 75 to 85°F increased temperature (if possible).
- Adjust screw rotation to low speed to allow the compound to expand inside the machine. The ejected purging compound should have a foamy appearance. If it does not, further reduce the screw rotation speed.
- **For larger extruders, allow the Klenz to stop for 3 minutes once it begins to eject out of the machine.**
- Continue to extrude **Klenz** until it appears visibly clean.
- Load neutral or production material and run machine to eliminate all removed traces of the **Klenz** within the machine.
- Begin normal production.

Use with Blow Molding Machines:

- **If a screen-pack or nozzle filter is installed, it must be removed from the machine.**
- Increase temperature of the barrel by 50 to 85°F and lower screw speed according to necessity.
- Load screw, barrel and head with neutral resin (possibly with suitable material), plastify and purge as long as the material comes out lighter (i.e. from dark blue to light blue, from red to pink etc.).
- Load the **Klenz** mixture by filling completely barrel and screw.
- Tighten as much as possible the nozzles so that the purging compound can create pressure inside the head
- Purge the **Klenz** completely.
- Purge with neutral resin in order to eliminate all traces of the **Klenz** then bring back barrel and head parameters to those suitable for the material to be processed.
- Begin the new production.

NOTES: