



CESA™
CLEAN ADDITIVES

VALVE-GATED TOOLS IN
INJECTION MOLDING GUIDELINES

KEY FEATURES

Cesa™ Clean Additives

- Cesa Clean is a concentrated purge product, not a purge compound.
- It can be processed through manifolds, valve-gated tools and small sub gates.
- Cesa Clean is 100% recyclable with polyolefin resins and compounds.

GUIDELINES FOR USING CESA CLEAN ADDITIVES

- Cesa Clean works best when molded maintaining normal (injection) pressure/shear
- For best results, Avient recommends a “Running Color Change” which eliminates breaks in the molding cycle
- Since the Cesa Clean concentrate will expand, it is recommended to reduce the shot size by 20%
- It is designed for use at a let-down ratio (LDR) of 3.0% or (33:1); however, use rate can vary depending on the severity of the contamination but typically is 2.0–4.0% (a use rate higher than 6.0% may not have any positive affect on the cleaning performance)
- Using Cesa Clean as a routine part of your color change rotation will allow faster changes and consume a minimal amount of raw material
 - **Note:** If the manifold is not cleaned routinely, this process may be more time consuming and additional material will be required
- It is best to process at your normal polymer processing temperatures
 - For best performance, stock temperature should be at least 400°F
 - If 400°F is achieved during the purging process, no additional activation will occur during the reprocessing of regrind
 - All parts produced during the “Running Purge Cycle” should be captured as regrind, resulting in a scrap-free color change
 - If using sequential gates, open and close all gates at the same time while purging the tool
 - If contamination appears to be coming from one gate, open and close first, and for an extended period of time, to force more material through this location
 - When cleaning in this manner, pay close attention to shot size
 - Parts containing the previous or new color plus any Cesa Clean can be used as regrind



INTRODUCING CESA CLEAN TO YOUR PROCESS

Hand Blend

- Hand weigh enough of the Cesa Clean and natural resin mix to equate to 3–5 times the barrel capacity
- Use rate should be 3.0% or 33:1 for routine cleaning
- For difficult-to-clean tooling, or tooling which is not routinely cleaned, start at 4.0% or 25:1
- **Note:** Do not attempt to vacuum load more than 15 feet from source as stratification/separation may occur

Volumetric Feeder

- Calibrate feeder to dispense 3.0% or 33:1 for routine cleaning
- For difficult-to-clean tooling, or tooling which is not routinely cleaned, start at 4.0% or 25:1
- This style of feeder is highly recommended for at-the-throat metering of Cesa Clean

Blending Units

Most blenders have an extra bin for an additive

- Fill the additive bin with Cesa Clean
- Set blender to introduce the Cesa Clean at 2.0 to 4.0%
- **Note:** Do not air convey any further than 15 feet as Cesa Clean has a high density and may separate from the mix. The preferred approach is with the blender mounted above the feedthroat of the molding machine.

GETTING STARTED

TIMING IS THE KEY TO A RUNNING COLOR CHANGE

Hand Blend

- Have the purge blend ready to load
- If hopper contains a mixture of resin, color and/or regrind, it should be run dry or drained before beginning the color change, keeping the screw full so press cycle continues
- Run the main resin hopper dry or shut off hopper to hand feed at the throat
- Once press is clean, slide hopper in place and proceed with next color-resin blend

- The next color can be added while Cesa Clean is still in the barrel
- When splay is no longer visible in parts, reset shot size, parts should be ready to pack

(Single) Volumetric/Gravimetric Metering Unit at the Throat

- Empty and clean feeder while press continues to run
- Add Cesa Clean to the feeder color hopper and calibrate to a 3.0% use rate
- When press is clean, start next color
- When splay is no longer visible in parts, reset shot size, parts should be ready to pack
- **Note:** If an open/unused secondary feeder is installed, use it for the Cesa Clean concentrate

Central Blending Unit

- Thoroughly clean unit while continuing to mold parts, keeping a resin feed to the press
- Using a clean open hopper or regrind hopper, add the Cesa Clean concentrate
- Set blender for additive/color to 3.0%
- Once press is clean, drain hopper and/or central blending unit while continuing to mold parts
- Begin new color and continue to mold parts
- When splay is no longer visible in parts, reset shot size, parts should be ready to pack

Process Adjustments That Can Help

- Increase back pressure
- Increase screw speed
- Increase injection speed (in some tools maximum injection speed can facilitate cleaning)
- Reduce mold close time (faster cycle)
- Always remember a stock temperature of 400°F is essential

When press and tool are clean, return all settings to standard production process profile.

**These procedures are guidelines
and can be modified as needed.**

**Contact your Avient
representative with questions
or for additional support.**



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