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 CESÁ 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 CESCA CLEAN TO YOUR PROCESS

**Hand Blend**
- Hand weigh enough of the Cesca 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
- **Note:** This style of feeder is highly recommended for at-the-throat metering of Cesca Clean

**Blending Units**
Most blenders have an extra bin for an additive
- Fill the additive bin with Cesca Clean
- Set blender to introduce the Cesca Clean at 2.0 to 4.0%
- **Note:** Do not air convey any further than 15 feet as Cesca 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

**GET YOUR 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 Cesca 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 Cesca 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 Cesca 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 Cesca 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.