

# 8 Tips for Plastics Processors to Build a Growth Strategy During Uncertain Times

***ASACLEAN***<sup>™</sup>  
**Purging Compound**

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June 17<sup>th</sup>, 2021

# Asaclean and Asahi Kasei

**ASACLEAN™**  
Purging Compound

- Market leader in purge compounds
- Created in 1990
- Sold in more than 70 countries
- Engineered for different resins & applications
- Manufactured and distributed by **AsahiKASEI**
- Asahi Kasei is a \$20 Billion conglomerate with ISO 9001 and ISO 14001 certification
- Over 37,000 employees worldwide



**AsahiKASEI**

≡ *This too* ≡  
★ **SHALL PASS** ★

# Embrace a Growth Mindset



# Tip #1: Learn New Methods & Be Open-Minded About New Processes



# Use Purging to Gain a Competitive Edge

**ASACLEAN™**  
Purging Compound

- Improves safety
- Increases machine capacity
- Lowers Maintenance costs
- Improves resource usage
- Boosts first pass yield
- Protects the environment/Reduction of plastic waste
- Reduction in overall cost of material purchase



# Tip #2: Train Personnel & Improve Upon Old Habits



## Follow Direction to Maximize Efficiency

- Follow the supplier's instructions to the letter to establish your purging baseline... then experiment
- Grade or type of CPC
- Increase temperatures in areas needing extra cleaning



## Cost of In-House Purge Compounds

- Is your in-house purge resistant to oxidation?
- Can you shut down & seal with an in-house purge & have defect-free product at start-up?
- Is your in-house purge easy to remove with the next resin?
- If not, it's time to make a change



## Easy-to-Use Solution- PLUS Grade

“This stuff was pretty shocking to me because, one, it was just so easy ...and two, it cleans incredibly well....a little goes a long way.”

-Ray D.

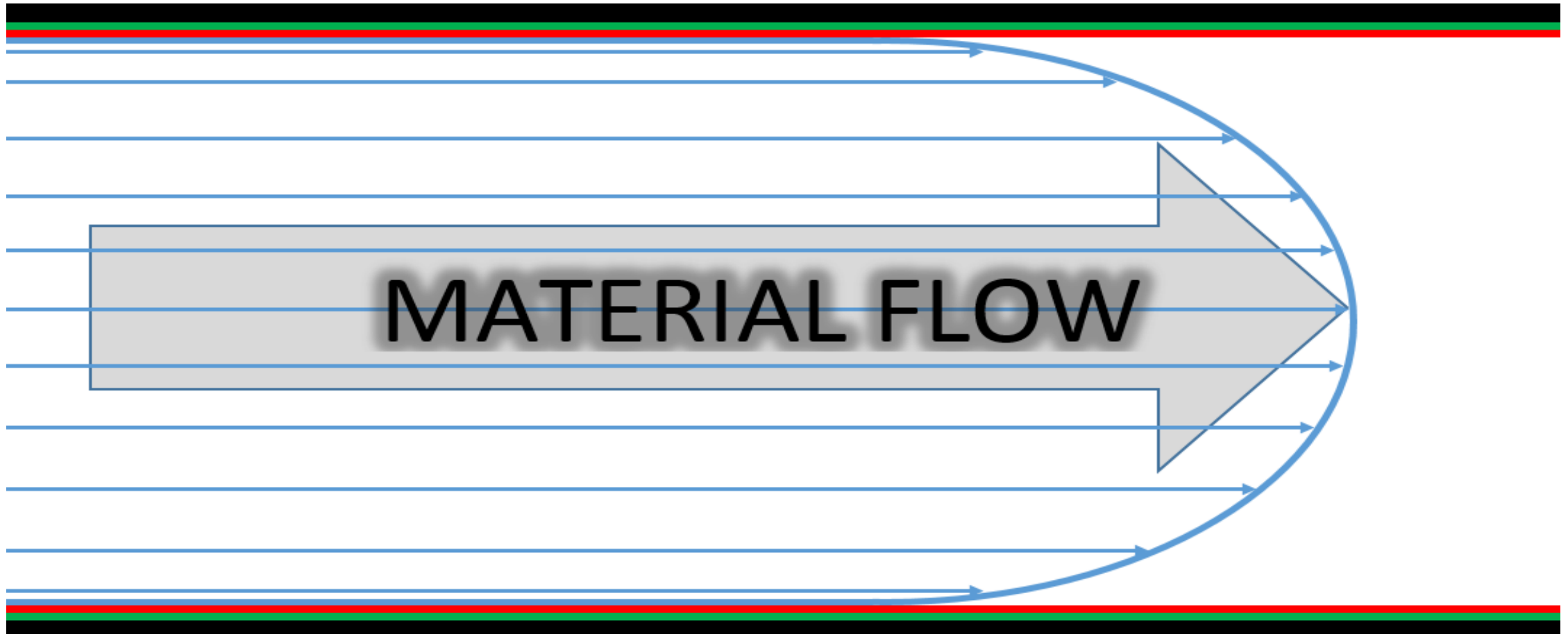
Plant Manager, Custom Molding Shop

# Tip #3: Reinforce Best Practices

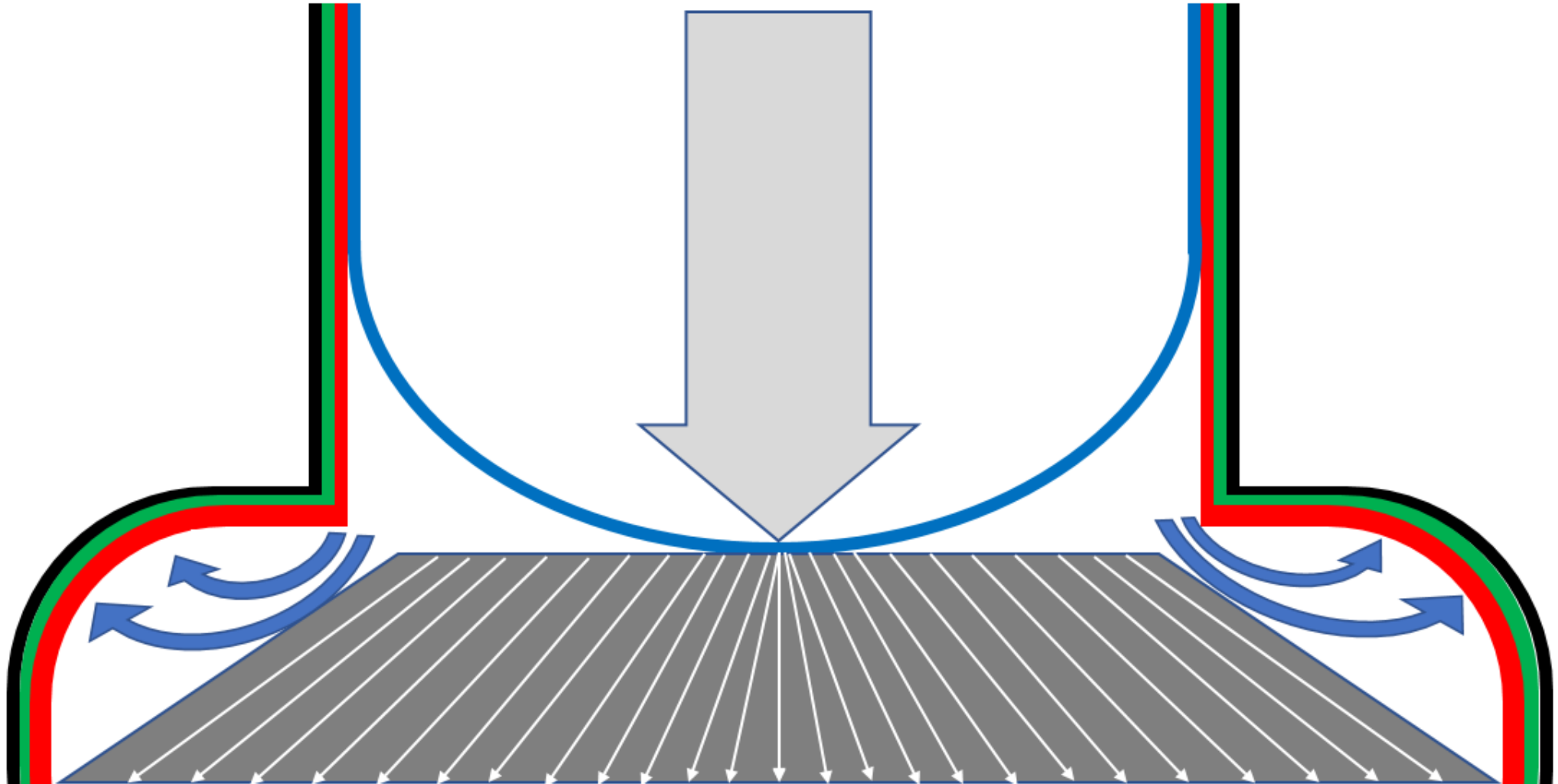


## Path of Least Resistance

- Changeovers-Temperature, Material, & Color

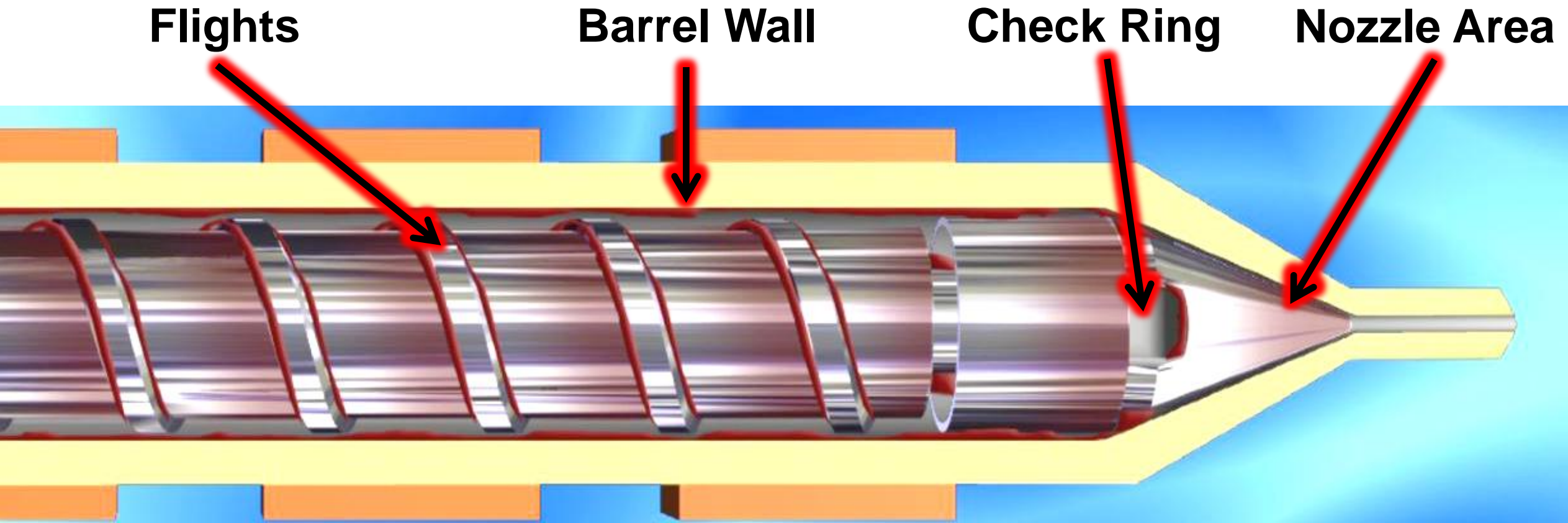


## Path of Least Resistance



## Accumulation of Layers

- Resin cannot effectively remove previous resins or carbon/color deposits

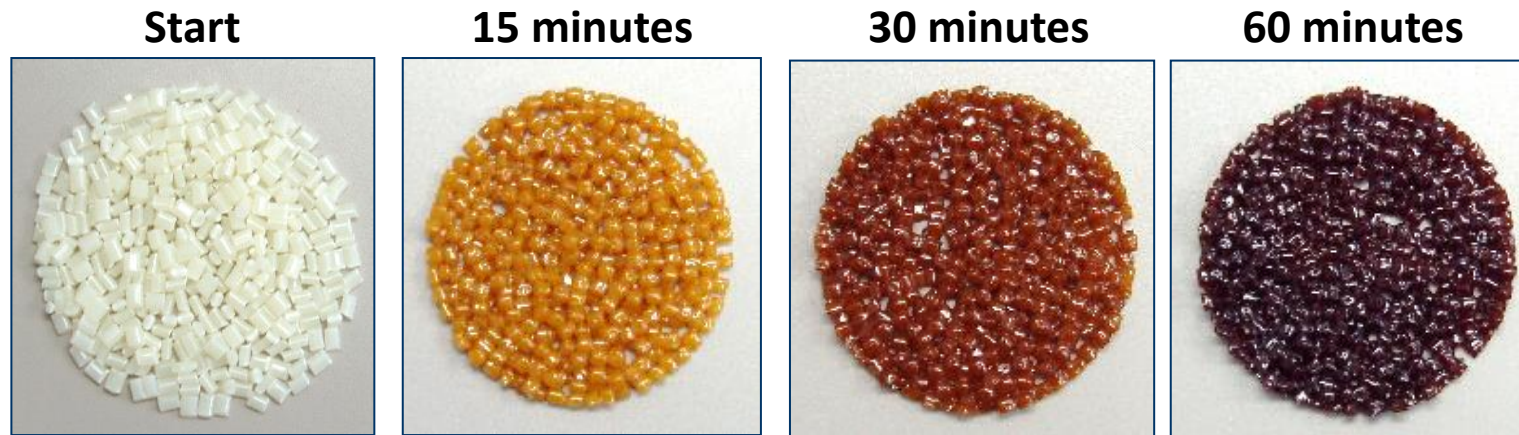


**Tip #4: Maintain Equipment  
Not Currently in Use**



## Shutdown & Sealing – Oxidation of Plastic Over Time

- Natural ABS at 460°F (240°C)



- In a vacuum at 460°F (240°C)





# Shutdown & Sealing

- Sealing during PMs, weekends, holidays

After running ABS at 460°F, the heaters were shut off and the ABS was left in the barrel

After 1 Hour



After 5 Hours



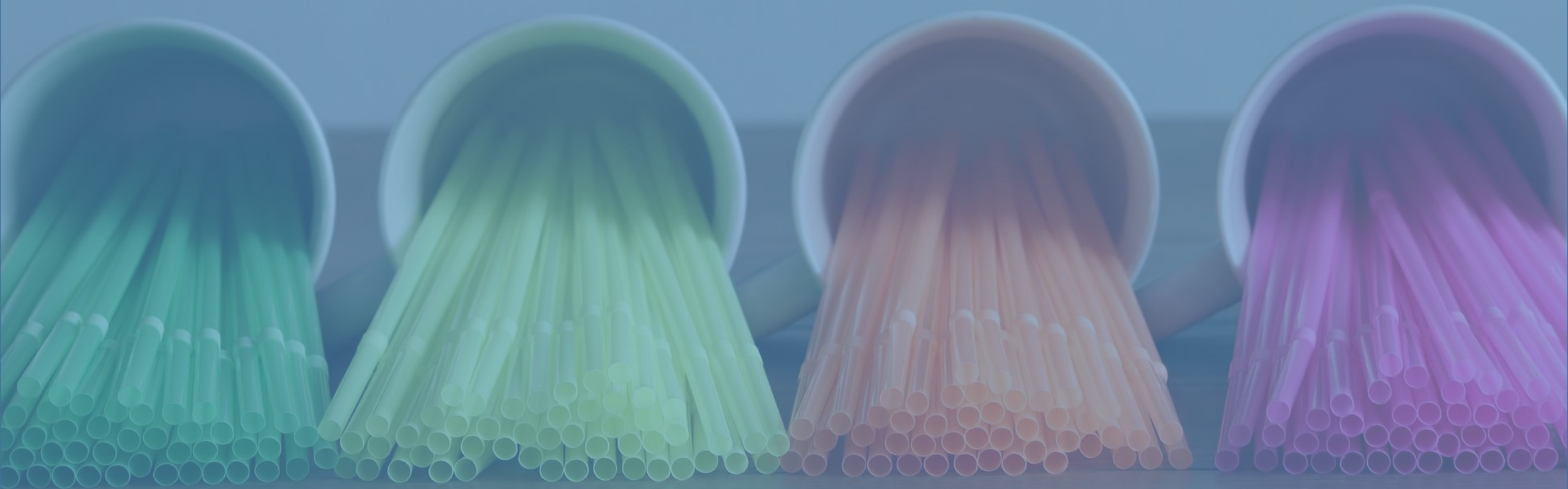
Heaters are turned on and purged with the next resin(PS)



**ASACLEAN™**  
is left in the barrel



# Tip #5: Fix & Restore Your Production Equipment



## Smarter Screw Pulls

- Effective option for difficult changeovers
- Reduces required force
- Minimize manual cleaning
- Decrease overall changeover time





## Customer Case Study: Screw Pull (Injection Molding)

	Virgin Resin	<b>ASACLEAN™</b>
Changeover Time:	12 hr	0.25 hr
Machine Running Cost:	\$85.00/hr	\$85.00/hr
Machine Downtime Cost:	\$1,020.00	\$21.25
Amount of Material Used:	0 lb	3 lb
Price of Material:	N/A	\$7.00/lb
Changeover Material Cost:	\$0.00	\$21.00
Cost per Changeover:	\$1,020.00	\$42.25

Screw pulls/month=1, months/year=12  
 Annual screw pull cost per machine without  
 Asaclean = \$12,240

## Customer Case Study: Injection Molding Screw Pull

### Cost Saving Analysis

Assuming 1 screw pull per month, 12 screw pulls per year

Annualized Screw Pull Savings per Machine: **\$11,733**

Consider a Location with 30 Injection Molding Machines...

Annualized Screw Pull Savings: **\$351,990 or 96%**

# Tip #6: Test EVERYTHING



## Establish a Baseline

- How many good parts do you usually make?
- What is your scrap rate?
- How much material are you using now?
- What are your total costs (including labor)?
- Understand your current results before you start your purge program.



## Consider This...

“You can’t manage what you don’t measure.”

-Peter Drucker

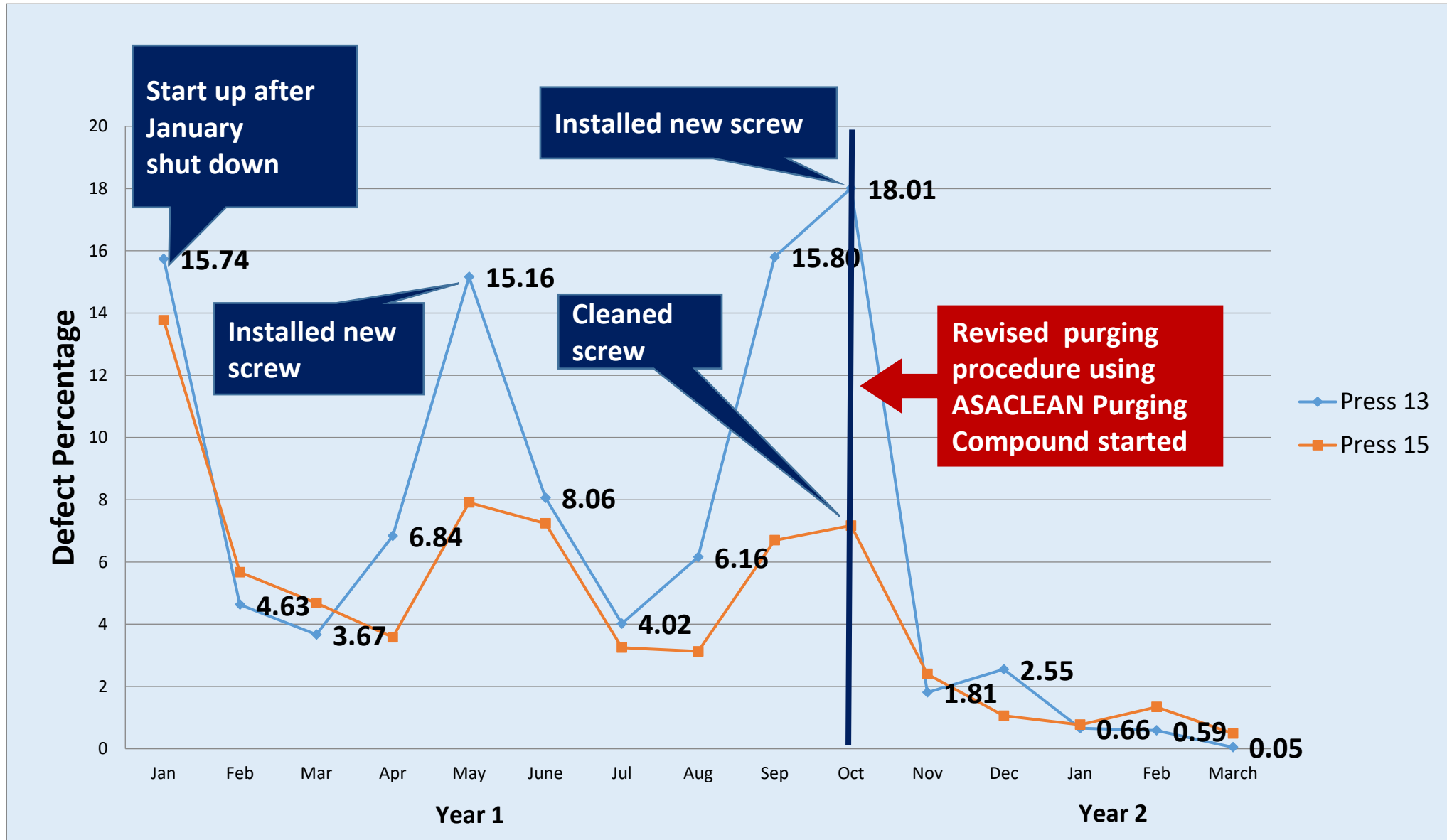
## Analyze Cost Factors

- Cost per purge vs. cost per pound
- Be Consistent
- Keep track of these over time:
  - Changeover time
  - Scrap-rate
  - Production reject rate
  - Lost production due to downtime

# Tip #7: Reconsider Projects Pushed Off for “Later”



# Case Study #2: A Tier-1 Automotive



## Case Study #2: A Tier-1 Automotive Purge Program Results

- Press 13: Reduced Defect Rate from  
**18.01% to 0.05%**
- Press 15: Reduced Defect Rate from  
**7.2% to 0.59%**

# Tip #8: Implement a Purging Program



## Getting Started

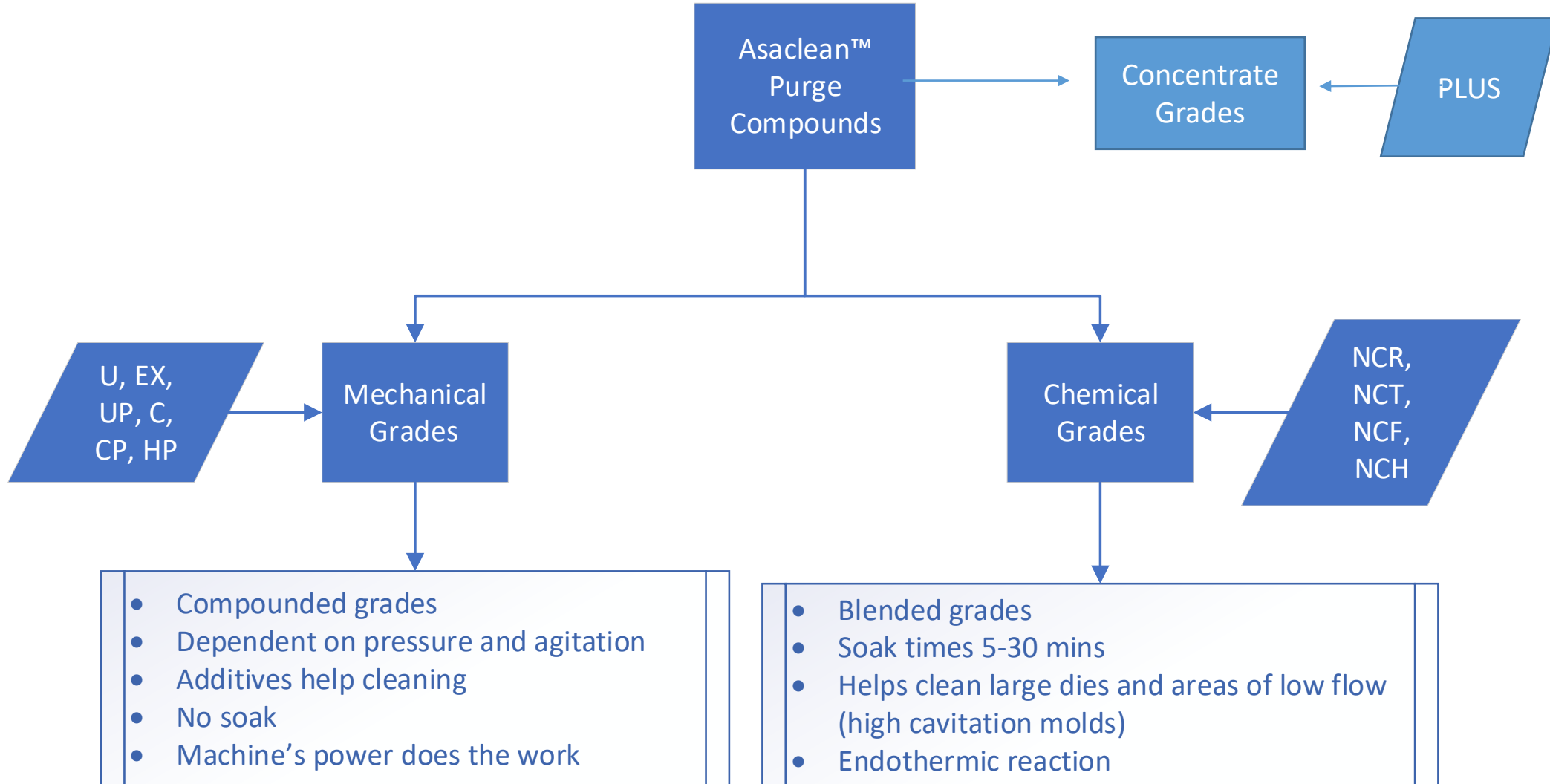
- Consider application
- Machine count/size
- Production/quality issues
- Temperatures and resins
- Choose a compatible purge

# Variables Involved in Purge Selection

- Process
  - Injection/Extrusion
- Application
  - Hot runner cleaning
  - Downstream equipment
  - Screw pull
  - Shutdown + Seal
  - Color change
  - Material change
- Resins
  - Production resin
- Type of purge
  - Mechanical
  - Chemical
  - Concentrates



# Asaclean Product Line



# CASE STUDIES

# Case Study #3: Injection Molding Color Change



	White PP	<b>ASACLEAN™</b>
Changeover Time:	1.75 hr	0.5 hr
Machine Running Cost:	\$300.00/hr	\$300.00/hr
Machine Downtime Cost:	\$525.00	\$150.00
Amount of Material Used:	350lb	80 lb
Price of Purge Material:	\$0.99/lb	\$4.08/lb
Replacement Resin		
Quantity:	N/A	20 lb
Price of Resin:		\$0.99/lb
Changeover Material Cost:	\$346.50	\$346.20
Cost per Changeover	\$871.50	\$496.20

## Case Study #3: Injection Molding Color Change Improved Cost Savings

Assuming 5 changeovers per week, 48 weeks per year, 240  
changeovers per year per machine

Consider a Location with 25 Injection Molding Machines...

Annualized Changeover Savings: **\$2,251,800 = 43%**

## Case Study #4: Profile Extrusion Color Change

	Virgin Resin	<b>ASACLEAN™</b>
Changeover Time:	2 hr	0.33 hr
Machine Running Cost:	\$100.00/hr	\$100.00/hr
Machine Downtime Cost:	\$200.00	\$33.00
Amount of Material Used:	25 lb	5 lb
Price of Material:	\$0.75/lb	\$5.00/lb
Changeover Material Cost:	\$18.75	\$25.00
Cost per changeover:	\$218.75	\$58.00

Changeovers/Day=1, Days/Week=5, Weeks/Year=48

## Case Study #4: Profile Extrusion

### Color Change Improved Cost Savings

Assume 5 changeovers per week, 48 weeks per year, 240 changeovers per year on one machine.

\$52,500.00 using Virgin Resin vs. \$13,920.00 using Asaclean™

Annualized Changeover Savings: **\$38,580.00 = 73%**

## Benefits

- Improves safety
- Increases machine capacity
- Enhances maintenance practices
- Improves resource usage
- Boosts production first pass yield
- Protects the environment
- Makes getting the job done easier
- Helps purchasing staff

# Want to Learn More?

- Take advantage of our teleconferences for diagnosis and training via Skype, FaceTime, or WhatsApp.
- Visit our website- [www.asaclean.com](http://www.asaclean.com) Or call one of our in-house experts at [800.787.4348](tel:800.787.4348) to get a personal one-on-one consultation to find the best fit for your needs.

**For  
More  
Information**