



ASACLEAN™
Purging Compound

Defect Reduction

Time Saving

Total Cost Saving

Over 77 Countries

CO2 Reduction



<English website>

Why Asaclean™ is the preferred for molding sites?



Unparalleled Reliable Purging Performance

Contamination caused by insufficient purging and the resulting re-purging is one of the major factors hindering productivity at molding sites. With the unparalleled purging power of Asaclean™, reliably removes pre-materials and contamination, improving productivity and quality.



Carbonized resin generated by staying PA66-GF at 320°C for 90 minutes.



The same screw completely clean after purging with Asaclean™

Compatible with a wide range of resins and temp.

Molding temperatures from 150°C to 420°C are available from commodity plastics to super engineering plastics. Approximately 20 grades are available according to resin and application.



Reliable free introduction support and after-sales follow-up

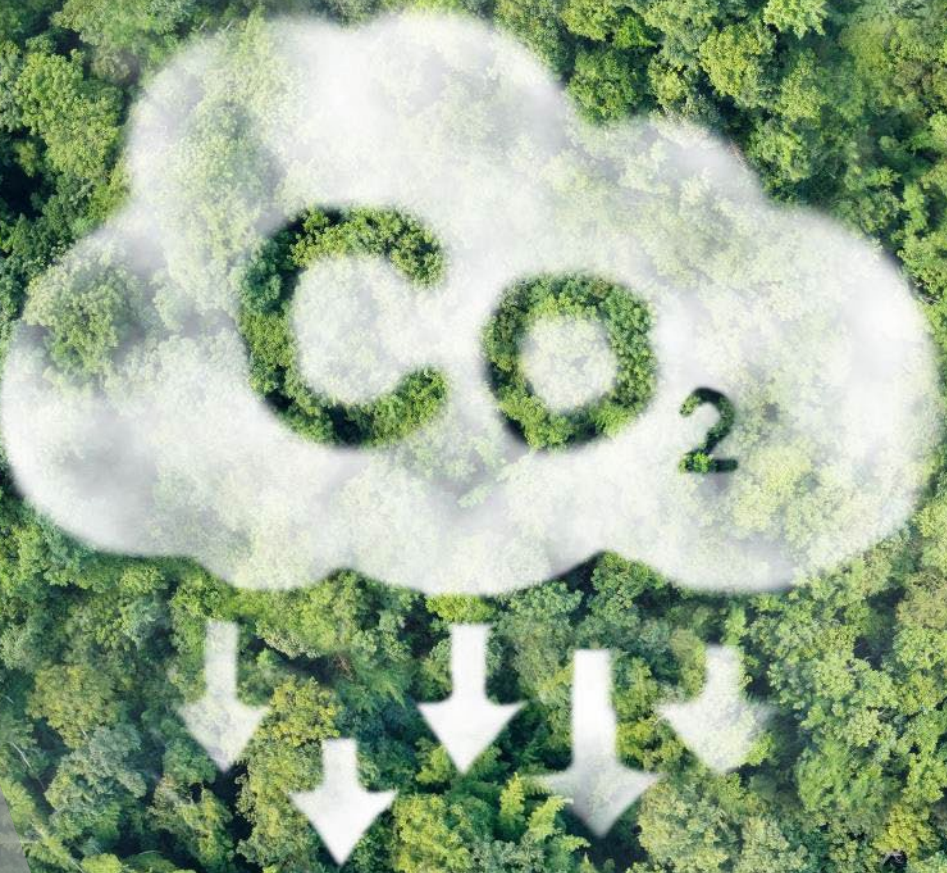
Sales and technical service representatives are stationed throughout Japan. We support our customers by proposing grades and usage methods prior to introduction, cleaning at the time of introduction, and proposals for optimizing usage after introduction. We have a worldwide sales network and support in 32 languages*. We also have a system in place for smooth horizontal deployment to overseas locations.



- Grade suggestion
- Suggestions how to use it
- On site-witness for purge
- Usage optimization proposal

*as of November, 2023
English, Chinese, Korean, Spanish, French, German, Thai, Vietnamese, Indonesian, Tagalog, Malay, Arabic, Italian, Czech, Polish, Slovak, Portuguese, Turkish, Swedish, Norwegian, Finnish, Danish, Greek, Hungarian, Romanian, Russian, Dutch, Croatian, Serbian, Estonia, Lithuania, Latvian

Reduce CO₂ emissions by approx. 75%*



Reduces the usage of resin and the loss of time during material changeover, contributing to reduce CO₂ emissions

Example of material changeover ABS(black)→HIPS(white)

Size of injection molding machine :
plumping force 60t
Preset temp. : 240°C



Scene of purging with Asaclean™

Replace with only HIPS(white) : 3.8kg

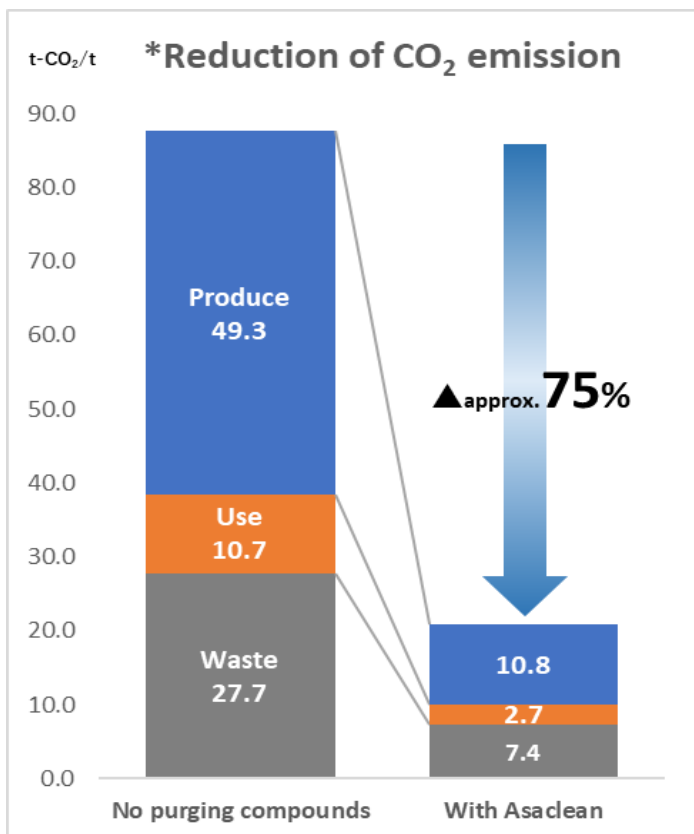


After purging with Asaclean™ U, replace with HIPS(white) : 0.8kg(Asaclean™ U 0.3kg + HIPS 0.5kg)

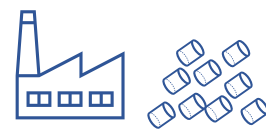


Reduce the total usage of resin by more than 75%

Comparison of CO₂ emission with/ without Asaclean™ (1 ton)

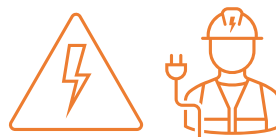


① Produce



CO₂ emissions from producing resins used to purge/ Asaclean™
→Reduce total amount of resin used

② Use



CO₂ emissions from electricity consumption of molding machine consumed during material changeover
→Reduce by shortening changeover time

③ Waste



CO₂ emissions from incineration of waste resin/Asaclean™
→Reduce by decreasing the total amount of resin used

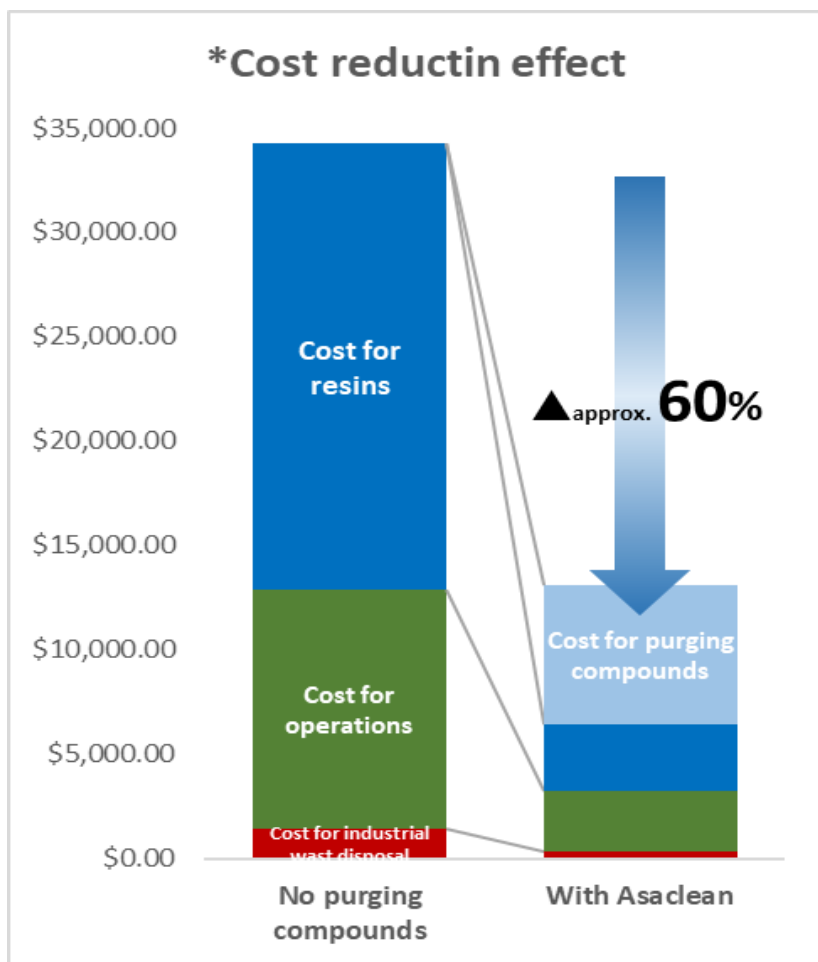
* The CO reduction rate is calculated by MilCA and IDEA (LCA calculation software certified by the Japan Environmental Management Association). It is the difference between purging with or without ASACLEAN using the average value of the producing resin of Asaclean customers. (For your reference.)

Total cost reduction by approx. 60%*

COST

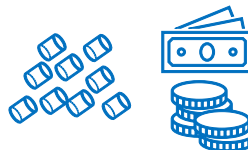
Asaclean™ “breaks the preconception ‘Being sustainable can be expensive.’”

Cost Comparison with/ without Asaclean™ (1 ton)



① Raw materials and Purging

Compound cost



Cost of purchasing resin/Asaclean™ used for purging
 → Reduction by decreasing the total amount of resin used

② Operation cost



Electricity costs for operating the molding machine and labor costs for cleaning workers
 → Reduction of labor costs by shortening working hours

③ Industrial waste disposal cost



Cost of disposing of resin used for purging/Asaclean™
 → Reduction by decreasing the total amount of resin used

Size of machine : plumping force 450t (20kg/hr)
 Electricity consumption : 80kW
 1USD= 140yen
 (This data listed on is calculated based on our evaluation results and is a reference value and not a guaranteed value.)

Further cost reductions other than those listed above are expected.

Cost of sorting defective products



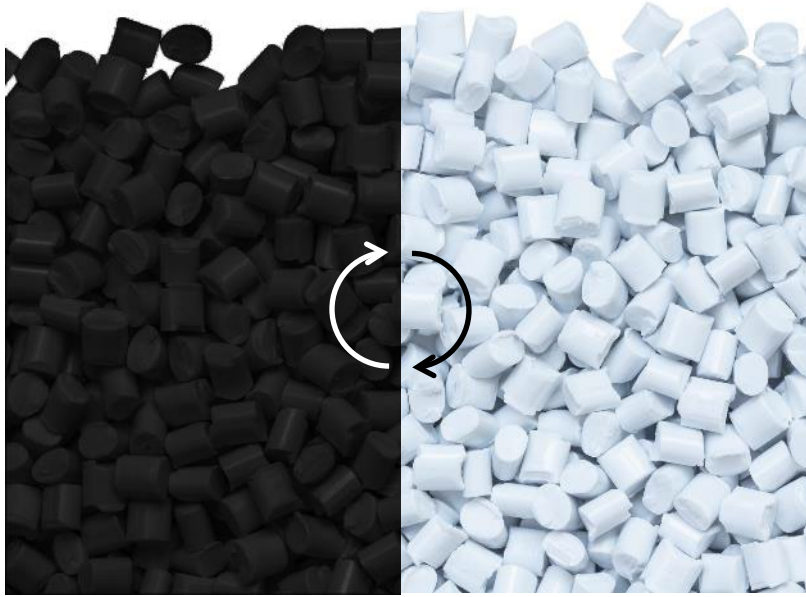
Labor cost for sorting defective products due to contamination of previous resins or black spot
 → Dramatic reduction and elimination of contamination defect rate

lost opportunity



Losses that could have been incurred by manufacturing the original product in the extra time spent in changing materials, manufacturing defective products, etc.
 → Reduction due to shorter working hours and lower defect rates

Case study 1. Color/Material changeover



In the plastic molding sites, switching colors and materials often occurs. In particular, switching from a dark color such as black to a natural color could be a difficult task. Asaclean™ provides the advantage of quickly completing the changeover in small quantities and in a short period of time.

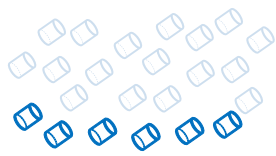
Example of material changeover ABS(black)→HIPS(white)
Size of injection molding machine : plumping force 60t
Preset temp. : 240°C

Replace with only HIPS(white) : 3.8kg



Reduce by more than 75%

With Asaclean™ U, replace with HIPS(white) : 0.8kg(Asaclean™ U 0.3kg + HIPS 0.5kg)



Reduce resins used
more than **75%**



Reduce changeover time
more than **75%**



Reduce plastic waste in changeover
more than **75%**

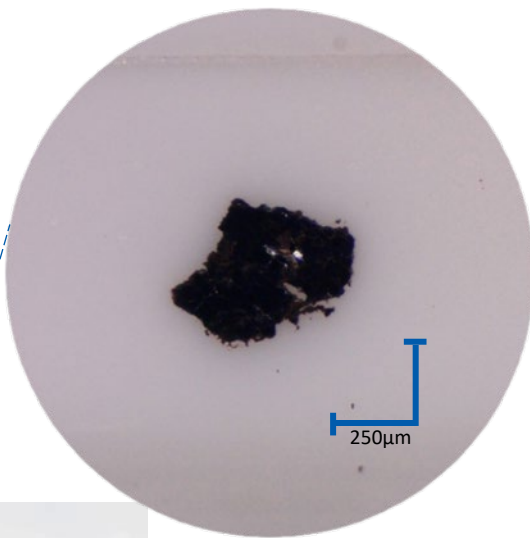


Avoidance of opportunity loss per machine
more than **150** hours per year

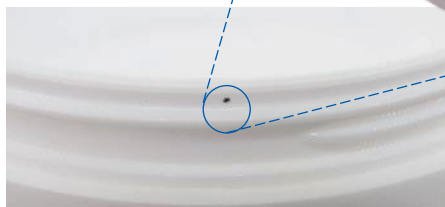
Calculated based on the results of our evaluation, assuming 14 hours of work per day and 240 days of operation per year. These are reference values, not guaranteed values.

Pros to use

Case study 2. Contamination removal



Zoom in contamination



Contamination in products

There are stagnant areas inside the molding machine, and deteriorated contamination from the stagnant resin can get mixed in, causing defects.

Asaclean™ removes contamination with its high purging power and stops contamination into the molding machine.

Carbonized resin generated by staying PA66-GF at 320°C for 90 min.



After purging with Asaclean™



Pros to use



Reduce defect due to contamination
Approx. **80%***



Reduce plastic waste due to contamination
Approx. **80%***



Avoidance of opportunity loss per machine
more than **165** hours per year

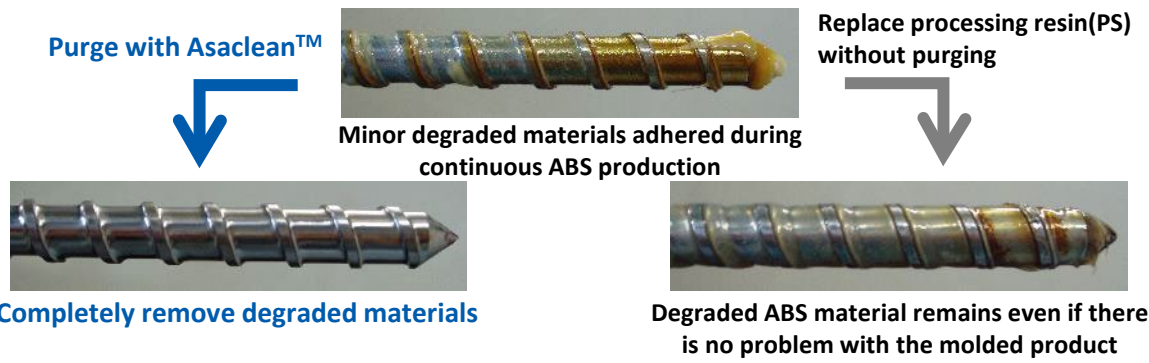
*Average of about 1 week after purging

Calculated based on the results of our evaluation, assuming 14 hours of work per day and 240 days of operation per year. These are reference values, not guaranteed values.

Case study 3. preventative purging



Using Asaclean™ at the appropriate frequency will keep the inside of the molding machine clean and significantly reduce contamination rate. It also reduces the frequency of teardown, thereby improving productivity.



Pros to use



Reduce defect due to contamination more than **99%***

* Combined with case study 4. sealing with purge during shutdown



Reduce plastic waste due to contamination more than **99%***

Calculated based on the results of our evaluation, assuming 14 hours of work per day and 240 days of operation per year. These are reference values, not guaranteed values.



Avoidance of opportunity loss per machine more than **165** hours per year

Case study 4. Sealing with purge during shutdown

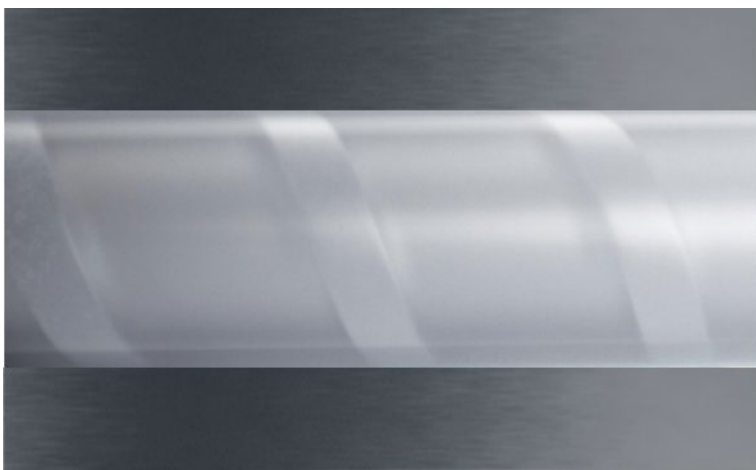
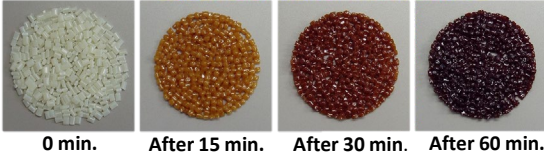
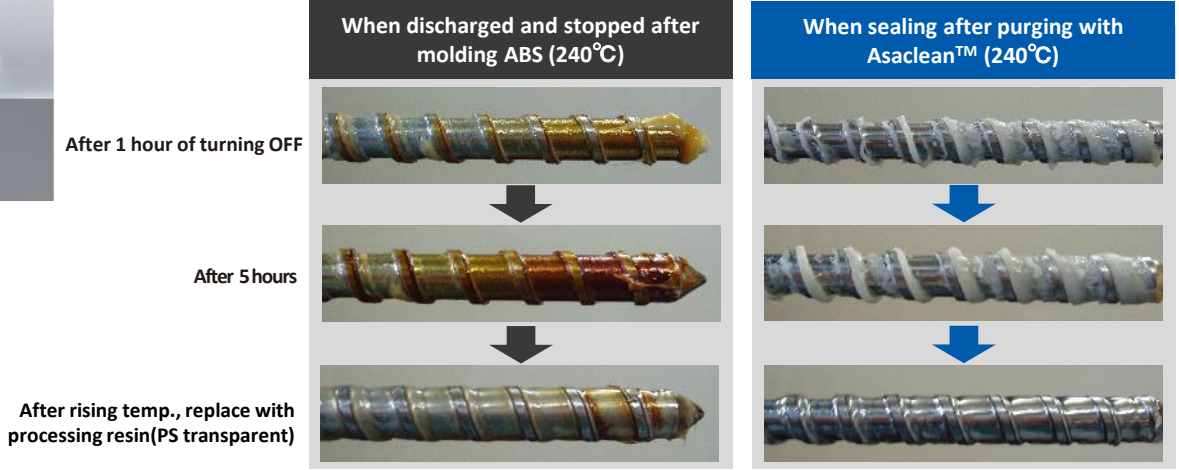


Image of cylinder filled with Asaclean™



Oxidative degradation of ABS at 240°C

Although it is customary to empty the inside of machine during shutdown, residual material that cannot be discharged is oxidized and degraded by residual heat and oxygen that enters from the outside. To avoid this—and the accompanying losses in efficiencies at startup—seal the screw and barrel with Asaclean™ prior to shutting down.



Pros to use



Reduce discharged shots more than **75%***

* Combined with case study 3. preventative purging



Reduce work time at start-up more than **75%***

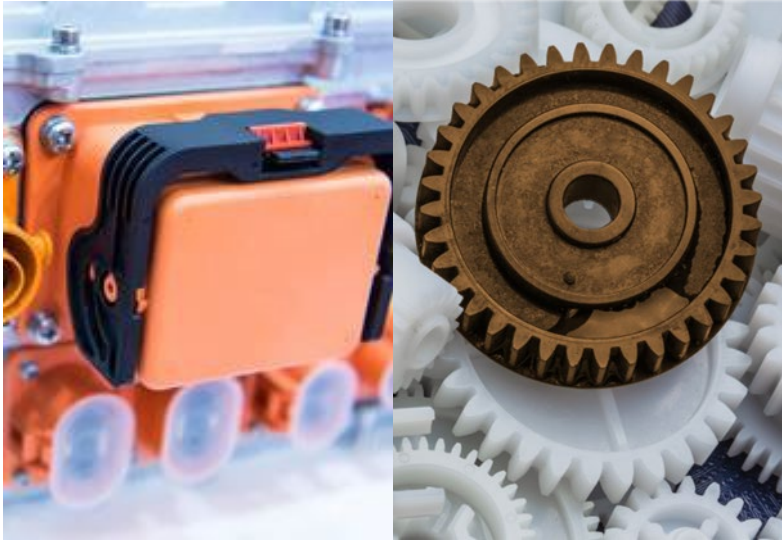
Calculated based on the results of our evaluation, assuming 14 hours of work per day and 240 days of operation per year. These are reference values, not guaranteed values.



Avoidance of opportunity loss per machine more than **150** hours per year



Case study 5. High & Low temperature changeovers



The use of expensive super engineering plastics is increasing for high-voltage connectors and metal-substituting precision parts. Saving expensive raw materials is a challenge for molding sites.

Whether you mold PEEK, LCP, PPS, or other super engineering plastics at high temp., or mold POM, PP, ABS, or other materials at low temp., Asaclean™ is effective in purging deteriorated resins and changing materials. Even in difficult material changeover from high temp. to low temp., Asaclean™ could perform efficiently, reducing waste of expensive super engineering plastics.

e.g. ,material changeover from PEI to POM

Setting Temp.(°C)	PEI	Asaclean PX2		Asaclean U		POM	
	Discharge	Purge	Change the temp.	Displace	Change the temp.	Displace	Start Molding
370							
350							
330							
310							
290							
270							
250							
230							
210							
190							

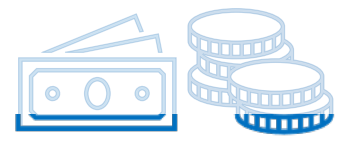


Reduce resins used
more than **67%**

Pros to use



Reduce plastic waste in changeover
more than **67%**



Reduce cost through savings on expensive raw materials
more than **80%**

Calculated based on the results of our evaluation, assuming 14 hours of work per day and 240 days of operation per year. These are reference values, not guaranteed values.

Case study 6. Screw pulls / clean to teardown



When disassembling and purging for regular maintenance, it is difficult to remove screws and clean.

Use of Asaclean™ during teardown makes teardown easier and greatly reduces time and labor.

- Reduce the load of screw pull
- Due to low metal adhesion, Asaclean™ can be easily removed
- Significantly reduce the time required to clean screws and barrels after screw pull



Asaclean™ peeling off easily

Pros to use



Reduce work tome in changeover
more than **75%**



Avoidance of opportunity loss per factory
more than **60** hours per year

Calculated based on the assumption that there are 20 molding machines per factory and that each machine teardowns to clean once per year, based on our customer's case study. These are reference values, not guaranteed values.

Case study 6. Screw pulls / clean to teardown

After molding PP (black) **containing flame retardant**, black spots discharged with another purging compound and had to teardown to clean. **With Asaclean IMX and newEX, it became possible to switch to processing resins without teardown.**



Industrial parts manufacturer, production dept., molding section

The occurrence of black spots, which could not be improved by anything we had done before, **was suppressed after using Asaclean newEX.**



Construction parts manufacturer, injection molding control section

The conventional 4 hour process was completed in 1 hour with Asaclean FX. Both opportunity loss and disposal costs have been reduced.



Packaging materials manufacturer, Director

It is very helpful to have **total support**, including **study sessions** on purging and **analysis of contamination.**



Transportation equipment parts manufacturer, Production Gr. Manager

It was **very helpful in take care of on-site issues**, such as witnessed purging trial.



Transportation equipment parts manufacturer, manager of production section

Regular conversations led to **suggestions for grade changes that better fit the current situation** and resolved the issue.



Transportation equipment parts manufacturer, molding technology dept.

I have tried everything, **but there is no other purging compound that can purge LCP other than Asaclean PX2.**



Precision parts manufacturer, production dept., engineering section

When using **recycled container materials**, the inside of the machine gets dirty and **can only be purged with Asaclean newEX.** It is very useful.



Logistics material manufacturer, production dept., technical section

The material changeover from ABS (black) to PP (black) was purged with raw materials, and the defect rate was approximately 10%. Thorough purging once with Asaclean IMX and newEX, and regular cleaning only with UP once a week, **the defect rate was reduced from approx. 10% to less than 1%.**



Transportation equipment manufacturer, Quality Assurance

Direct contact with the sales allows issues to be resolved in a timely manner. **No need to worry about any problems.**



Transportation equipment parts manufacturer, operation dept.

The **study sessions** helped us understand not only the purging compound itself, but also the background of resin degradation and effective purging methods, **leading to improved on-site capabilities.**



Transportation equipment parts manufacture, production dept.