

Product Information – Filled Wax

General Properties

- Filled wax is the most widely used type of wax for the manufacture of high quality complex and thin walled patterns
- It exhibits an excellent range of properties that can be tailored to suit individual customers requirements
- Filled wax can be successfully injected on all types of wax presses

Benefits

- Excellent injection characteristics
- Filled wax imparts an excellent surface finish
- Wide contraction range
- Excellent dimensional accuracy
- The filler imparts greater stability and reduced contraction and cavitation
- Low ash content
- With advanced recycling technology can be reclaimed and reconstituted

Quality Control

- It is essential for the production of high quality castings that wax properties are correctly and tightly controlled
- The strict quality control procedures employed by Blayson ensure consistency and compliance with specifications
- cmf recommended tests and SPC form the basis of the quality regime:
 - melting (drop) point
 - congealing point
 - ash content
 - penetration
 - viscosity



How to use Filled wax

- Wax should be melted in a controlled manner and overheating must be avoided.
- Blayson recommends a 120°C maximum melt temperature. Overheating can damage the wax structure which will affect injection performance
- Wax melting and holding tanks should be maintained at the desired injection temperature and agitated at 10 to 15 rpm in order to keep the filler in suspension
- Agitation also helps maintain uniform temperature distribution
- Filled wax can be injected as liquid, semi liquid or paste (see individual technical data sheets for product specific details)
- The temperature profile from melting, holding tank and nozzle should be balanced and close to the required injection temperature
- Wax is a poor heat conductor and changes in temperature settings can take a long time to take effect, at least 12 hours should be allowed
- Adjustments should be to injection pressure, flow rate and hold time in the first instance
- Once injected, patterns should be handled with care during removal from the die to avoid distortion
- Patterns should be maintained in a stable position for 24 hours after injection in order to become fully set prior to assembly
- Patterns and assemblies should be cleaned with a purpose made pattern wash such as 'Trisol 60 Plus' prior to prime coat application

Recycling

- As the pioneer of recycling wax, Blayson is uniquely qualified to provide quality recycled wax products
- Recycling gives both economic and environmental benefits
- Customer's used autoclave wax is returned to Blayson for reprocessing where it is cleaned & filtered
- Additions are made to adjust properties to the agreed specification, and the wax can be returned to the customer as either:
 - a. Reconstituted wax, allowing a complete range patterns to be produced without sacrificing quality, and with significant cost savings
 - b. Reclaim wax for use for runner production