

Product Information – Emulsified Wax

General Properties

- Emulsified wax offers special properties for pattern production
- Utilises water as the filler to reduce sinkage/cavitation
- Easy die release makes it suitable for complex die geometries
- Exhibits an excellent range of properties
- Suitable for injection across a wide temperature range
- Suitable for use on a wide range of injection equipment

Benefits

- Excellent injection characteristics
- Imparts a glassy smooth surface finish
- Wide contraction range
- Excellent dimensional stability, the water acting partially as a filler imparts greater stability and less cavitation
- Low ash content
- Advanced reclaim technology means that emulsified wax can usually 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 Emulsified wax

- Wax should be melted in a controlled manner - overheating must be avoided as it will cause evaporation of water from the wax which will affect injection performance
- Blayson recommends a 95°C maximum melt temperature
- 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 and should be covered to prevent evaporation of water from the wax
- Agitation maintains the homogeneity of emulsified wax and also helps maintain uniform temperature distribution
- Emulsified wax can be injected in the liquid or semi-liquid states (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 and 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