

GRS

— PREMIUM —

Speciality Injection Waxes



GRS Premium® speciality injection waxes are manufactured in Stoke-on-Trent, England using high quality raw materials to produce a consistent high performance product.

Within the **GRS Premium®** range you will find a wax with the optimum flow, solidification point, hardness, flexibility, memory and shrinkage to meet all of your requirements.

Choose from the range below to determine which of these top quality waxes best suits your needs

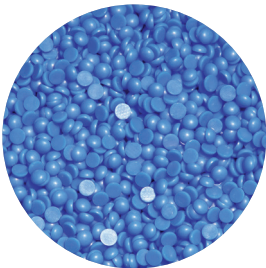
Finest Filigree - R36WF



Injection Temp: 68°C / 155°F

Finest Filigree is specifically designed for injecting detailed patterns and providing a wax that is flexible and strong enough to enable removal from the mould without damage. Finest filigree is also recommended for stone in place setting.

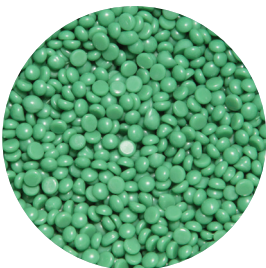
Flexi Blue - R34WF



Injection Temp: 68°C / 155°F

Flexi Blue is the most flexible wax in the GRS Premium® range. This wax has high plasticity giving the wax exceptional memory and durability. Flexi Blue is a very durable wax widely used for stone in place and will withstand rough handling and removal from very complex moulds.

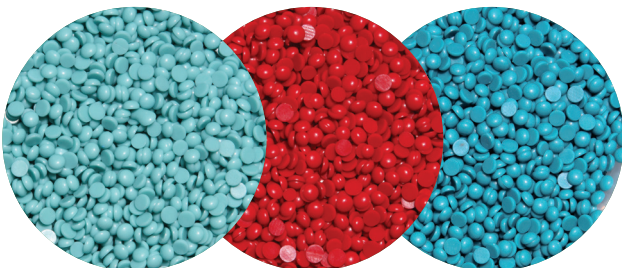
Sturdy Green - R35WF



Injection Temp: 72°C / 160°F

Sturdy Green is the hardest and most durable wax in the range. This wax is perfect for use in metal moulds or where the patterns have sharp detail or where a high degree of accuracy is needed. It has a high flexibility and low shrinkage and is therefore easy to remove and easy to read.

General Purpose - R37WF



Injection Temp: 65°C / 150°F

General Purpose wax is a formulation which is suitable for most jewellery designs. This product has a balanced set of characteristics for the most demanding wax applications, with good flow, low shrinkage and easy to read. This wax is available in aqua, burgundy and turquoise.

Description of Wax Characteristics

Injection Temperature

Wax injection temperature is a very mould specific variable but, as a guide, a wax should be injected at 6°C or 43°F above the Solidification Point for general purpose applications.

For high detail or filigree work it is recommended that the injection temperature should be 8°C or 47°F above the Solidification Point.

All of our recommended injecting temperatures are based on this basic rule.

Injection Pressure

The correct injection pressure is linked to a wax's flow characteristics and the specific mould to be filled. A lower flow wax will enable a higher injection pressure and vice versa.

Solidification Point

The solidification point is the Congealing Point of a wax. The Congealing Point is the temperature at which it ceases to flow; it is at this point that the wax components are starting to set.

For example if the congealing point of a wax is high it will solidify quickly and if it is low it will solidify slowly.



Flow

Flow is a measure of viscosity measured in cPs.

High Flow	=	Thin wax	=	100 cPs Viscosity
Medium Flow	=	Medium Wax	=	400 cPs Viscosity
Low Flow	=	Thick Wax	=	700 cPs Viscosity

Thin waxes have a high flow/low viscosity and are generally injected using lower pressures or poured. Thinner waxes are normally used for large/basic designs.

Thick waxes have a high viscosity and are generally injected using higher pressures. Thicker waxes are normally used for injection of highly detailed or intricate designs; they also offer better dimensional stability when injecting large pieces.

Medium thickness waxes are a hybrid wax that can be used as a general purpose wax for all types of patterns/injection pressures.

Hardness

This is a measurement of force required to penetrate the wax. Harder wax is designed for larger dimensional pieces ie. large badges, thick shanks, miniature figurine type pieces.

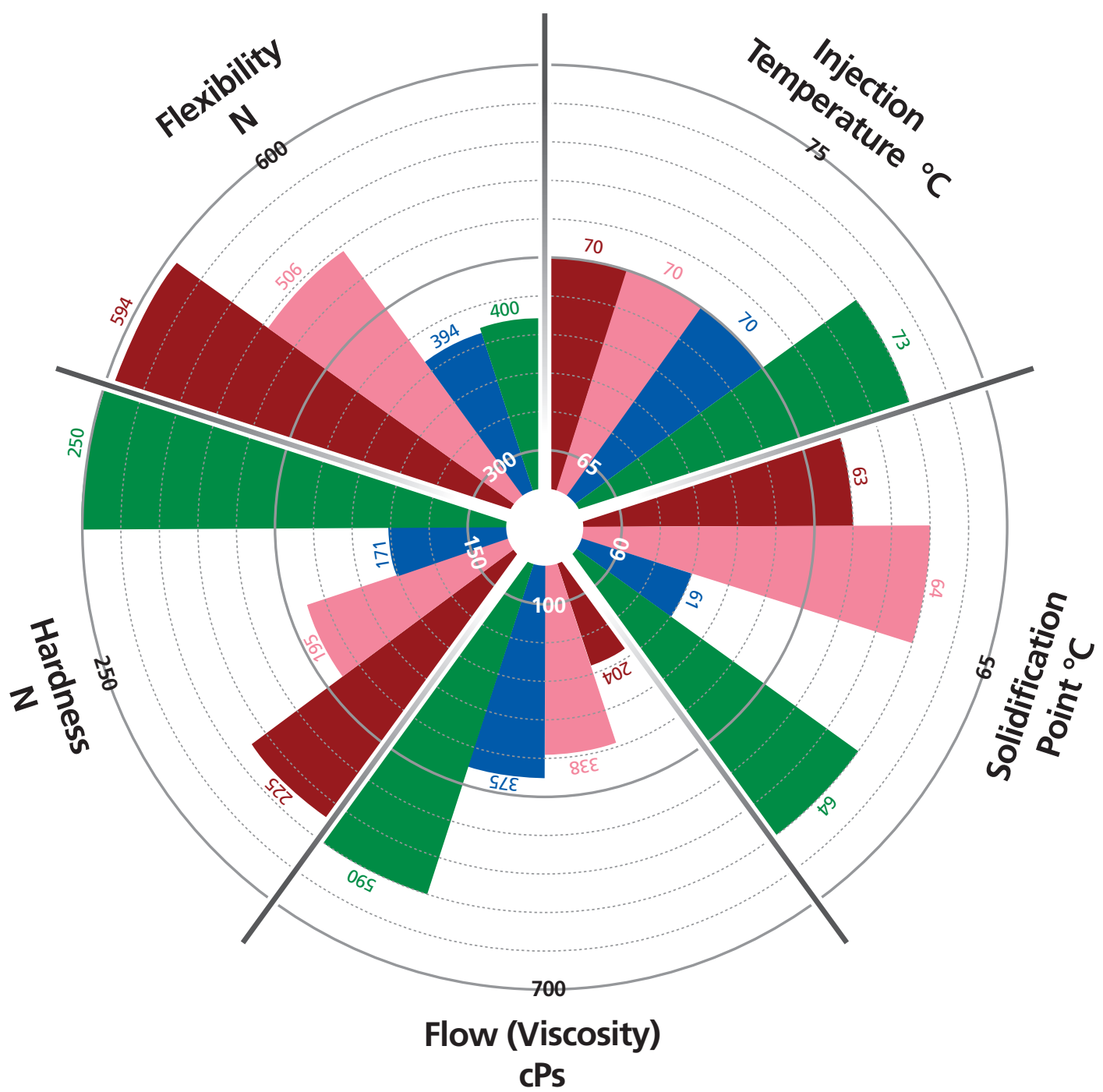
Linear Shrinkage

The measurement of linear shrinkage is taken of injected wax compared to mould dimensions. For applications where dimensions are critical a lower shrinkage wax is advised.

Flexibility

This is a measurement of force required to displace the wax. A more flexible wax will allow rough handling of the wax without the pattern distorting or breaking.

Characteristics of the GRS Premium Range



Wax Technical Data

	Finest Filigree R36WF	Flexi Blue R34WF	Sturdy Green R35WF	General Purpose R37WF
Flow (cPs)	338	375	590	204
Hardness (N)	195	171	250	225
Flexibility (N)	506	394	400	594
Solidification Point (°C)	64	61	64	63
Linear Shrinkage (%)	2.0	1.7	1.7	2.1
Injection Temp (°C)	70	70	73	70

Injection Wax Trouble Shooting

Shrinkage too high

Wax too hot, sprue too narrow, injection pressure too low.

Wax does not fill

Wax too cold, pressure too low, sprue too narrow.

Mould overflow / fill

Wax too hot.
Too much pressure.
Mould not clamped well enough during injection.
Poor cut mould.
Injection dwell time too long.
Lack of vents within the mould.

Rough wax patterns

Excess talc or release agent on the moulds.

Distorted wax patterns

Poor master pieces.
Caused by cleaning flash off with a knife.
Opening mould too soon.

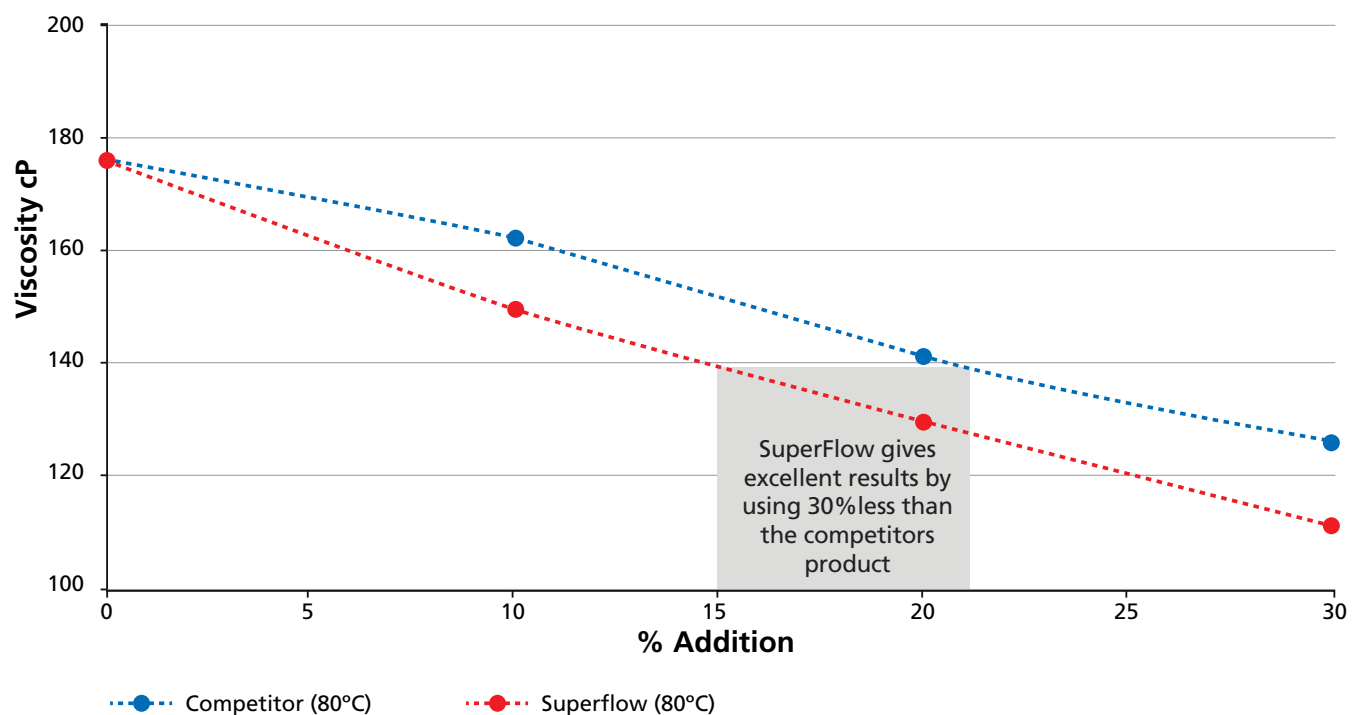
Air bubbles

Wax temperature incorrect (too hot/cold).
Not enough wax in the pot.
Too much injection pressure or pressure too low.
Moisture in the wax or airlines.

Incomplete wax patterns

Wax temperature too low.
Injection pressure too low.
Overheating of the wax.
Low wax level in the wax pot.

Competitor vs Superflow - Viscosity



Superflow Jewellery Wax Additive thins wax, making it more fluid and aids flow to make it inject smoothly into finely detailed moulds.

Simply add up to 30% to your standard wax, directly into the injector unit to reduce the viscosity of your wax.

To return the wax to its original characteristics, simply add more of your standard wax, no need to empty and clean your wax pot.