

# TOMPS Mould Making & Casting Guide 2006

## Using Hot Melt Systems

Vinamold is by far the best and most widely used hot melt system available. There are others on the market but Vinamold gives the most re-melts and has the largest number of hardness grades available.

The biggest benefit of a hot melt is the fact you can re-melt it should the mould be damaged or no longer used and re-pour. The second biggest benefit is the pricing! Vinamold costs less than half that of silicone.

Care must be taken when melting Vinamold as too much heat will burn it and shorten its life (and number of melts!) but also give off noxious fumes like a burning plastic.

It is made from Poly Vinyl Chloride and harmless other than the risk of burns when using it in a molten state. Since its melting point is 150 Celsius or more it must be handled with respect and heat resistant gauntlets are best employed.

It works in a very similar fashion to silicone except that instead of a chemical cure the material loses heat and solidifies. A former needs to be prepared slightly differently however. It should be painted with shellac and dusted with talc. Porous formers must be completely dry or when the hot rubber hits the cold damp surface, the water turns to steam and makes small bubbles. These can be repaired via melting the affected area and reforming, but this is best avoided.

A two part mould is achievable by using shellac and talc as a separation barrier. Don't forget the keyways just as if you were using silicones.

As the Vinamold is flexible you will need a support case. Fibre glass will give the longest life but plaster cases seem to be the tradition, especially within ornate fibrous plastering.

There is not much more to add about Vinamold and hot melts other than to discuss heating methods and melting points. The melting points and pouring temperatures are different and are shown in the table below for the three popular grades red, yellow and blue.

To melt Vinamold and get the best life from it you need a professional melting pot. These are double walled and oil filled to ensure good heat distribution and low risk of burning. Larger units have quick melt and stirring systems too. You can spend £12,000 on this kind of kit, though the smaller units can be bought for well under £1000.

Most people do not wish to spend this money on Vinamold melting systems and opt for a double walled vessel or a very heavy gauge saucepan. Although you can melt Vinamold with direct heat in this fashion we do not recommend it due to risk of fumes and fire. If you must melt Vinamold this way do it outside.

Please review the small table below to get the right melting and pouring temperatures for your Vinamold.

<b>Grade/Hardness/ Colour</b>	<b>Melting Point (Celsius)</b>	<b>Pouring Temp. (Celsius)</b>
Red (soft)	150-170	140-150
Blue (medium)	150-170	140-150
Yellow (hard)	150-170	140-150
White (soft, heat and corrosion resistant)	170	170