GENERAL INFORMATION

WHAT IS HOT MELT ADHESIVE?

Hot melts are 100% solid thermoplastic materials which are heated and applied molten. A strong bond forms upon cooling of the adhesive. Hot melts usually consist of four components: polymers, waxes, tackifiers and anti-oxidants. The many different combinations of these materials result in a wide range of products for different applications.

WHY HOT MELTS?

As the need for greater production speeds grew and with the introduction of newer packaging materials, an alternative to standard water-based adhesives was needed. Because of some distinct advantages of hot melts over other adhesive systems, these needs were met.

ADVANTAGES OF HOT MELTS:

- **Faster production speeds**
- **Wider range of adhesion, will bond difficult surfaces**
- **Better gap-filling properties**
- **Easier inventory control; less space, longer shelf life**
- **Freeze/thaw stable**
- **Environmentally sound, not volatile emissions**

DEFINITIONS

Below are explanations for many of the terms used when discussing hot melt adhesives and their use.

SPEED OF SET: The rate at which the hot melt solidifies to the point where a functional self-supporting bond is obtained.

OPEN TIME: The amount of time after application during which a bond can still be made.

VISCOSITY: A measure of resistance to flow.

HEAT RESISTANCE: The ability of an adhesive bond to withstand elevated temperatures.

COLD RESISTANCE: The ability of an adhesive bond to withstand cold and freezing temperatures.

SUBSTRATES: The two materials to be bonded together.

POT STABILITY: Refers to the thermal stability of an adhesive.

HOT TACK: Refers to the relative amount of tack while in the molten state.