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Thermoplastic Wax- Melting Point 52ºC AGG3881

Suggested Applications

1. Holding semi-conductor elements to glass or ceramic base plates for dicing, grinding and lapping.

2. Cementing temporarily parts too small for ready handling or clamping to metallic, glass or other assembly plates of larger size which can be clamped or held by magnetic chuck to a machine table for multiple mechanical operations.

3. Temporarily fixing specimens such as ceramics, minerals and semi conductor materials to specimen holders for 'dimple' grinding or ion beam thinning.

Solvent Reaction

Cold Water	-	Insoluble
Warm water (100ºF)	-	Softens - partly soluble
Acetone (cold)	-	Partly soluble
Acetone (warm)	-	Soluble
Alcohol (cold)	-	Insoluble
Alcohol (warm)	-	Partly soluble
Mineral Oils		
Kerosene, gasoline	-	Soluble
Benzene	-	Soluble
Chloroform	-	Soluble
Petroleum benzene	-	Soluble

Most efficient solvent: Perchlorethylene at 50ºC.

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Characteristics:

Appearance and Feel	-	Waxy
Colour	-	Light tan; opaque in bar form; translucent in thin film.
Soluble	-	Rather slowly in mineral oils and warm acetone. Partly soluble in hot water, in warm alcohol and in cold acetone.

Fully thermoplastic

Melts quickly above 52ºC (125ºF)

Melted cement chills quickly to the solid state at room temperature. At that point forms a firm bond with any non-porous surface such as glass or polished metal.

Classed as toxic, no allergic effects.

Requires no catalyst or secondary mixing element.

Cemented elements can be machined dry if excess heat is avoided. Better results are secured with cold water as a coolant.

Plastic Point 52ºC (125ºF)

Flow Point 62ºC (144ºF)

General Procedure

Pre-heat the parts to be joined to about 60ºC to 70ºC. Touch the end of the cement bar to the heated parts. A small quantity will melt and flow. Join the parts and quickly orient to the desired position. Allow the assembly to cool to room temperature under light pressure if possible. Clamping the assembly is not necessary but some pressure is desirable as this produces a thin film of wax and provides tighter adhesion.

Wet machining is preferable. The cement starts to soften at 52ºC.