

## RIGIDAX®

Having trouble fixturing those thin-wall or hard-to-hold parts? This pour-on thermoplastic tooling compound may be the solution.

### *OVERVIEW:*

Rigidax® tooling compound is designed for stabilizing, supporting or holding parts that are normally hard to fixture in close-tolerance machining applications. It is also a great solution when you need to support thin wall or odd shaped parts that need to be stabilized during a machining process. Rigidax® is a castable, thermoplastic compound. Unlike most wax compounds, it has a low shrink factor when going from its melted state to a solid/cooled state. It is melted and poured in or around the part. After machining, the Rigidax® is melted out and the parts are cleaned. Rigidax can be reused multiple times by adding new material.

In addition to metals, Rigidax® has also been used successfully with glass, plastic, ceramics, quartz, fiberglass, etc. During milling or grinding, feeds and speeds normally required for the material being machined are used. There will be cases where feed and speed rates can be increased due to higher rigidity of the parts. When used in grinding applications, this compound does not “load” the grinding wheels. The added stabilization of the supported parts may tangibly increase tool or wheel life because of the reduction of vibration and chatter.

### *USING RIGIDAX®:*

Preheating the part to 120-180°F will allow Rigidax® to “wet” the surface of the part and provide even greater holding power. One pound of Rigidax® will fill approximately 20 cubic inches. There are about 11 pounds of Rigidax® to the gallon.

Rigidax® (Green, Blue & Red) should be heated to 275°F to pour (not beyond). The WS (Water Soluble) version should be heated no higher than 200°F.

Rigidax® has several fillers which must be kept in suspension for proper performance. The material should be agitated when melted at about 30 revolutions per minute. Treat it much like you would a bucket of paint.

The proper melt-out temperature for all versions of Rigidax® is 250°F.

Rigidax® Versions:

Type	Uses	Ring & Ball Softening Point	Penetration At 77°F, 454g (DMM)	Specific Gravity	Drop Melt Point
Green 24-12	General purpose and most popular form of Rigidax®. Strong and more viscous than Blue versions at pouring. Great holding ability.	168° - 178° F 75.8° - 81.4° C	2.0 - 8.0	1.300 - 1.500	181° F 83° C
Green 23-8	Higher viscosity than 24-12 when melted. Easier to get into small crevices and multiple interrupt parts such as blades and vanes. More adhesive and viscous than 24-12.	167° - 173° F 75.0° - 78.3° C	2.5 – 8.5	1.300 - 1.500	180° F 82° C
Blue 24-12	Same as Green 24-12 but without the micro fiber glass component that is in the Green version therefore matrix is not as strong. Blue is designed for use where possibility of fiberglass residue may cause problems. Blue is less viscous than Green.	169° - 179° F 76.1° - 81.7° C	3.0 – 9.0	1.260 - 1.460	179° F 81.7° C
Blue 23-8	Same as Blue 24-12 but more viscous. Easier to get into small crevices and multiple interrupt parts. Great for multi-vane impellers, blades, turbine wheels.	173.0°F (Typical) 78.3°C (Typical)	6.0 (Typical)	1.360 Typical	178.8° F 81.6° C
Red NMF	High fiber content Rigidax. Extremely strong matrix. Fastest setting. Lowest pouring temperature. Excellent holding properties but cleaning from hollow parts, especially blades, is more difficult due to its high fiber content.	168° - 178° F 75.6° - 81.1° C	2.5 - 8.5	1.290 - 1.390	174.2° F 79.0° C
WS Water Soluble	WS is the easiest Rigidax® to clean up however; it is not as adhesive or strong as the other Rigidax grades. Cannot use coolants when machining.	152.5° - 162.5° F 66.9° - 72.5° C	1.5 – 5.0	1.360 - 1.480	181° F 83° C