



Description

GTP 6510 is a rigid urethane polymer specifically formulated to produce prototype parts from low cost tooling. Silicone, polyurethane epoxy molds can be used. Cured parts have the look and feel of thermoplastic. The parts have high impact strength, thermal resistance and good dimensional stability. This system permits de-molding in 15-20 minutes, depending on configuration. GTP 6510 is best suited for use with meter-mix dispensing equipment.

Application

GTP 6510 is designed for making prototype and limited run production parts.

Mix Ratio

Reaction ratio 100 parts A to 100 parts B by weight, 85 parts A to 100 parts B by volume. This highly reactive system is best suited for use with meter-mix dispensing equipment. The short gel time makes hand mixing difficult. Simple silicone, urethane or epoxy molds can be used for molding GTP 6510. Mold design and construction allow pressure-free casting.

Stir well before use. This material will separate. Work in a well-ventilated area and use clean, dry tools for mixing and applying. Combine the resin and hardener according to mix ratio. Mix together thoroughly and use immediately after mixing. Material temperature should not be below 65° F (18° C) when mixing. If heating of product in plastic packaging is necessary, heat in a ventilated oven to 145° F maximum. Before heating, loosen the container lid slightly to relieve any pressure buildup and place container to be heated into a metal bucket of sufficient volume to contain the product, should the container tip over or leak. This product may crystallize upon storage. If crystallized, vent container and heat to 125-145° F until crystals dissolve. Store well after product has liquefied.

Precautions: Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

GTP 6510 Part A: Warning! Harmful if inhaled. Causes skin and eye irritation. Causes allergic skin and respiratory reaction. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mists. Avoid prolonged or repeated contact with skin. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

GTP 6510 Part B: Causes eye irritation. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

Precautionary Note: Thermosetting systems generate heat when curing. The amount of heat and the period of time in which heat is released vary significantly between systems. Additionally, ambient or compound temperature, amount of material mixed, and construction or shape of the mold or container can also be factors in the temperature profile of a mixed system. In some cases, the thermosetting reaction can be vigorous, generating heat sufficient to cause decomposition of the system with subsequent liberation of large volumes of acrid smoke. These facts are especially important when using a rapidly reacting system such as the one described in this literature.

Typical Properties

	Viscosity	Specific Gravity	Weight Per Gallon
Component A	200 cps	1.23	10.25 lb.
Component B	2000 cps	1.05	8.68 lb.
Mixed	1100 cps	1.13	9.40 lb.
Mixing Ratio	By volume	85 parts A to 100 parts B	
	By weight	100 parts A to 100 parts B	
	Work life	60-90 seconds @ 77° F	
	Demold time	15-30 minutes @ 77° F	
	Set time and Demold depend on temperature and relative humidity		

Physical Properties

	Test Method	Value
Hardness	ASTM 2240	81 Shore D
Tensile strength	N/A	7500
Elongation	N/A	7 %
Tear resistance lb/in @ 0.2'/min Type I	D-638	1590
Cured density (gram/inch)		18.47
Heat deflection		190° F
Color	Tan	

Shelf Life

GTP 6510 is shipped from the factory in sealed containers. The containers should be stored in a cool, dry area that is protected from direct sunlight and moisture. Storage temperatures should not exceed 80° F. The shelf life of factory sealed containers stored under these conditions is six months. Containers that have been opened should be resealed immediately after material has been removed in order to prevent solvent evaporation.

Packaging

GTP 6510 is available in convenient 1-quart, 1.7-gallon, 8.5-gallon, 51-gallon and 95-gallon kits. GTP 6510 has a non-hazardous rating for shipping.