



# GTP Ultra 850

**Description** GTP Ultra 850 is a rigid urethane polymer specifically formulated with long working life to produce prototype parts from low cost tooling. Long working and low exotherm permit large deep section castings to be made. GTP Ultra 850 has the unusual quality of high hardness without “glassy” brittleness. 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 45 minutes to one hour, depending on configuration. GTP Ultra 850 is well suited for hand or machine mixing.

**Application** GTP Ultra 850 is designed for making prototype and limited run production parts. 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.

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

GTP Ultra 850 Part A: **Warning!** Harmful if inhaled when heated to above 200° F. May cause skin and eye irritation. May cause allergic skin and clothing. Avoid breathing vapor or mist (only when heated to above 200° F). Avoid prolonged or repeated contact with skin. Keep container closed. Use part B of GTP Ultra 850 with adequate ventilation. Wash thoroughly after handling.

GTP Ultra 850 Part B: Causes eye irritation. Harmful if swallowed. Do not get into eyes, on skin, or on clothing. Avoid breathing vapor or mist. Keep containers closed. Use part B of GTP Ultra 850 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. The cooler system is allowed to cure, the less shrinkage produced.

**Mix Ratio** Reaction ratio 100 parts A to 82 parts B by weight. 100 parts A to 100 parts B by volume. This system is best suited for hand mixing. The long gel time makes hand mixing ideal.

Simple silicone, urethane or epoxy molds can be used for molding GTP Ultra 850. Mold design and construction allow pressure-free casting.

**Typical Properties**

	Viscosity	Specific Gravity	Weight Per Gallon
Component A	350 cps	1.26	10.53 lb.
Component B	450 cps	1.03	8.60 lb.
Mixed	400 cps	1.15	9.56 lb.
Mixing Ratio	By volume By weight		100 parts A to 100 parts B 100 parts A to 82 parts B
Work life			20 minutes @ 72° F
Demold time			45-60 minutes @ 72° F
	Set time and Demold depend on temperature and relative humidity		

**Physical Properties**

	Test Method	Value
Hardness	ASTM 2240	80 Shore D
Tensile strength	N/A	7500
Elongation	N/A	2 %
Tear resistance (lb/in)	D638 @ 0.2"/min, Type I	1590
Cured density (gram/inch)		18.79
Shrinkage (mass casting of 100lb) (Smaller casting will have less shrinkage)		.0014/inch
Color		Cream Beige

**Shelf Life**

GTP Ultra 850 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 Ultra 850 is available in convenient 2-quart, 2-gallon, 10-gallon, 60-gallon and 100-gallon kits. GTP Ultra 850 has a non-hazardous rating for shipping.