

Ultralloy™ 806

Thermoplastic

Hapco Inc.

Message:

The ULTRALLOY series of liquid molding compounds are tough, fast cycling, low cost, and easy to use. ULTRALLOY is designed to be used with Liquid Molding, open casting, pressure casting, or vacuum casting processes. ULTRALLOY can be used with silicone, epoxy, urethane, polyester, or aluminum molds. Low cost molds and fast cycle times are two key attributes of ULTRALLOY.

ULTRALLOY is available in several series. Each series has different products with different physical properties. Properties such as elongation, tensile strength, and modulus of elasticity can be selected to mold parts with the correct physical characteristics. Choose the ULTRALLOY material with the exact properties you need, or that are required to meet specifications.

ULTRALLOY is available in opaque white, clear/transparent, and in fire retardant (UL 94V-0) versions. Custom coloring can be achieved by pigmenting ULTRALLOY with Hapco's easy to mix color dispersions. Both opaque and translucent color dispersions are available.

ULTRALLOY can be molded in inexpensive molds, reducing total part cost, for short run programs.

ULTRALLOY is made for prototypes and short runs of plastic parts. ULTRALLOY fills the need for low cost, high performance parts, in volumes less than 10,000 parts per year.

ULTRALLOY 800 SERIES

A series of high strength, fast curing Liquid Molding Compounds. All systems are 1:1 by volume and have low viscosities for easy processing. Tensile strengths from 6,200 psi to 12,400 psi and heat distortion temperatures up to 129°C (264°F) are available. Ultralloy 800 Series products are fast, providing a high volume of parts per day.

| General Information | | | |
|------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------|-------------|
| Features | Fast Cure Fast Molding Cycle Good Toughness High Heat Resistance High Strength Low Viscosity | | |
| Uses | Agricultural Applications Housings Prototyping Thin-walled Parts Toys | | |
| Appearance | Clear Amber | | |
| Forms | Liquid | | |
| Processing Method | Casting Vacuum Casting | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 1.10 | g/cm ³ | ASTM D4669 |
| Molding Shrinkage - Flow | 0.20 to 0.40 | % | ASTM D2566 |
| Weight - per cubic inch | 18 | g | |
| Gel Time ¹ (25°C) | 1.0 | min | ASTM D2971 |
| Hardness | Nominal Value | Unit | Test Method |

| | | | |
|----------------------------------------------------------|----------------------------------------------------|-------------|--------------------|
| Durometer Hardness (Shore D) | 77 | | ASTM D2240 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 1090 | MPa | ASTM D638 |
| Tensile Strength | 43.9 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 9.5 | % | ASTM D638 |
| Flexural Modulus | 1180 | MPa | ASTM D790 |
| Flexural Strength | 48.3 | MPa | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact | 37 | J/m | ASTM D256 |
| Unnotched Izod Impact | 85 | J/m | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (0.45 MPa, Unannealed) | 113 | °C | ASTM D648 |
| Thermoset | Nominal Value | Unit | Test Method |
| Thermoset Components | | | |
| Part A | Mix Ratio by Weight: 100, Mix Ratio by Volume: 100 | | |
| Part B | Mix Ratio by Weight: 96, Mix Ratio by Volume: 100 | | |
| Thermoset Mix Viscosity (25°C) | 500 | cP | ASTM D4878 |
| Demold Time (21°C) | 12 | min | Internal Method |
| NOTE | | | |
| 1. | 100 g | | |

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