# Ultralloy™ 3310-28

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 3300 SERIES
A series of flame retardant, (UL 94V-0) high strength, systems with excellent physical properties. This series can be pressure or vacuum cast. Underwriter Labs Flame Retardant 94V-0 @ 2.5 mm thickness. This series is available in a 2, 4, 14, and 28 minute gel time.

| General Information | |
|---|---|
| Features | Fast Molding Cycle |
| | Flame Retardant |
| | Good Toughness |
| | 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 | 1.20 | g/cm³ | ASTM D4669 |
| Molding Shrinkage - Flow | 0.11 to 0.30 | % | ASTM D2566 |
| Weight - per cubic inch | 20 | g | |
| Gel Time [1] (25°C) | 28.0 | min | ASTM D2971 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness (Shore D) | 85 | | ASTM D2240 |

| Mechanical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Tensile Modulus | 3180 | MPa | ASTM D638 |
| Tensile Strength | 86.9 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 7.7 | % | ASTM D638 |
| Flexural Modulus | 2170 | MPa | ASTM D790 |
| Flexural Strength | 114 | MPa | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact | 27 | J/m | ASTM D256 |
| Unnotched Izod Impact | 120 | J/m | ASTM D256 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed | 86.0 | °C | |
| 1.8 MPa, Unannealed | 78.0 | °C | |
| **Flammability** | **Nominal Value** | | **Test Method** |
| Flame Rating | V-0 | | UL 94 |
| **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: 95, Mix Ratio by Volume: 100 | | |
| Thermoset Mix Viscosity [2] (25°C) | 300 to 500 | cP | ASTM D4878 |
| Demold Time (21°C) | 360 to 720 | min | Internal Method |
| **NOTE** | | | |
| 1. | 100 g | | |
| 2. | Range: 300 to 500 | | |



## Recommended distributors for this material

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