

# Ultralloy™ 910-5C

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 900 CLEAR SERIES

A series of Liquid Molding Compounds with Underwriters Laboratory 94V-O Flammability rating. The 900 Series properties are similar to the Ultralloy 800 Series. Tensile strengths from 5900 psi to 11,700 psi and heat distortion temperature up to 118°C (244°F) are available. Like the Ultralloy 800 Series, the 900 Series products are fast, providing a high volume of parts per day.

General Information			
Features	Fast Cure		
	Fast Molding Cycle		
	Flame Retardant		
	Good Toughness		
	High Heat Resistance		
	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/cm <sup>3</sup>	ASTM D4669
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D2566
Weight - per cubic inch	20	g	
Gel Time <sup>1</sup> (25°C)	3.5	min	ASTM D2971
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness (Shore D)	80		ASTM D2240
<b>Mechanical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus	2000	MPa	ASTM D638
Tensile Strength	52.7	MPa	ASTM D638
Tensile Elongation (Break)	3.4	%	ASTM D638
Flexural Modulus	2390	MPa	ASTM D790
Flexural Strength	65.5	MPa	ASTM D790
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Notched Izod Impact	28	J/m	ASTM D256
Unnotched Izod Impact	42	J/m	ASTM D256
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (0.45 MPa, Unannealed)	99.0	°C	ASTM D648
<b>Flammability</b>	<b>Nominal Value</b>		<b>Test Method</b>
Flame Rating	V-0		UL 94
<b>Thermoset</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
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 <sup>2</sup> (25°C)	350	cP	ASTM D4878
Demold Time (21°C)	30 to 60	min	Internal Method
<b>NOTE</b>			
1.	100 g		
2.	Range: 250 to 450		

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