

Physical Characteristics

	Minimum	Target	Maximum
FLASH POINT, C, PMCC		115	
LBS PER U.S. GAL @ 15.6 C		8.79	
LBS PER IMP GAL @ 15.6 C		10.56	
POUR POINT, C		-30	
SPECIFIC GRAVITY @ 15.6 C	1.035	1.055	1.075
VISCOSITY @ 100 C, CST		20.0	
VISCOSITY @ 40 C, CST		250	

Chemical Characteristics

	Minimum % Weight	Typical	Maximum % Weight
BORON	0.140	0.170	0.200
CALCIUM	5.40	6.00	6.60
NITROGEN		0.090	
PHOSPHORUS	1.80	2.00	2.20
SULFATED ASH		23.50	
SULFUR		4.8	
ZINC	2.24	2.49	2.74

LUBRIZOL® 9990A Unloading, storage and blending instructions

General handling instructions - In general, The Lubrizol Corporation recommends, as a minimum, the use of neoprene or nitrile rubber gloves and safety glasses or chemical splash goggles. The Material Safety Data Sheet should be consulted for specific information and for information on health and safety when handling this product

Fire and explosion hazard data

Flash Point (method)	Classification
115°C PMCC	N/A

Temperature recommendations

Unloading	Pumping Temperature	25°C	77°F
	Maximum temperature	70°C	158°F

Storage

Maximum temperature for long-term storage	45°C	113°F
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Blending

Maximum base oil temperature for mechanical or in-line mixing	70°C	158°F
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Equipment recommendations

Type of Pump	Positive Displacement
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Type of transfer line	Ball Launched, Insulated, Steam Traced Using 107°C/225°F Steam Max.
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Transfer line size	2-3inch/5-8 cm.
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Heat source

Type	Steam 107°C/225°F Max.
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Storage tank	Suction Heater Recommended
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Viscosity data	cSt	SUS
at 25°C, 77°F	690	3193
at 40°C, 104°F	250	1158
at 100°C, 212°F	20	98

Notes

Pour Point	-30°C, -22°F
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Additional Recommendations

* Holding the material in excess of this temperature may cause chemical degradation. Use steam for heating and tracing only when the material is in motion to avoid localized overheating. Cold Temperature Storage - If product has been stored below its pour point temperature it should be heated to 21°C/70°F before using.

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