

## HyGold P220N

### Paraffinic Base Oil Marketing Specification

This severely hydrotreated paraffinic base oil provides excellent color and consistency. It passes the IP 346 labeling requirement.

TEST DESCRIPTION	TEST METHOD	SPECIFICATIONS		TYPICAL VALUES
		MIN	MAX	
<b>Physical Properties</b>				
Viscosity, SUS at 100°F (37.8°C)	ASTM D2161	205	235	223
Viscosity, SUS at 210°F (98.9°C)	ASTM D2161			48.5
Viscosity, cSt at 40°C (104°F)	ASTM D445	39.8	45.6	43.3
Viscosity, cSt at 100°C (212°F)	ASTM D445			6.7
API Gravity, 60°F (15.6°C)	ASTM D1250			32.8
Specific Gravity, 60°F (15.6°C)	ASTM D4052			0.8610
Viscosity Index	ASTM D2270	95		107
Viscosity-Gravity Constant	ASTM D2501			0.797
Density, lbs/gal at 60°F	ASTM D1250			7.177
Density at 15.6°C, g/cm <sup>3</sup>	ASTM D1250			0.8604
Molecular Weight	ASTM D2502			444
Flash Point, COC, °F (°C)	ASTM D92	400 (204)		455 (235)
Flash Point, PMCC, °F (°C)	ASTM D93			428 (220)
Color, ASTM	ASTM D6045		2.0	L0.5
Pour Point, °F (°C)	ASTM D5949			2 (-17)
Cloud Point, °F (°C)	ASTM D5773			4 (-16)
Noack Volatility, wt%	ASTM D5800			9.1
Water Content	ASTM D7546M		PASS	PASS
Appearance	ASTM D4176M		PASS	PASS
<b>Chemical Properties</b>				
Acid Number, mg KOH/g	ASTM D664			0.01
Aniline Point, °F (°C)	ASTM D611	225 (107)	245 (118)	240 (116)
Sulfur, ppm	ASTM D7220			7
<b>Health and Safety Properties</b>				
Polycyclic Aromatic Compounds, wt%	IP 346		3	<3
Modified Ames Assay, MI	ASTM E1687		1	<1
FDA Regulation	21 CFR 178.3620 (C)		PASS	PASS