

## HyGold 60

### Naphthenic Base Oil Marketing Specification

This severely hydrotreated naphthenic base oil is primarily used in the metalworking and compounder blending industries. It has a low pour point, a low odor level, excellent color, and resistance to discoloration by heat or ultraviolet light.

| TEST DESCRIPTION                     | TEST METHOD         | SPECIFICATIONS |           | TYPICAL VALUES |
|--------------------------------------|---------------------|----------------|-----------|----------------|
|                                      |                     | MIN            | MAX       |                |
| <b>Physical Properties</b>           |                     |                |           |                |
| Viscosity, SUS at 100°F (37.8°C)     | ASTM D2161          | 50.0           | 65.0      | 59.7           |
| Viscosity, SUS at 210°F (98.9°C)     | ASTM D2161          |                |           | 34.2           |
| Viscosity, cSt at 40°C (104°F)       | ASTM D445           | 7.0            | 12.0      | 9.5            |
| Viscosity, cSt at 100°C (212°F)      | ASTM D445           |                | 3.0       | 2.4            |
| API Gravity, 60°F (15.6°C)           | ASTM D1250          |                |           | 28.3           |
| Specific Gravity, 60°F (15.6°C)      | ASTM D4052          |                |           | 0.8855         |
| Viscosity-Gravity Constant           | ASTM D2501          |                |           | 0.856          |
| Density, lbs/gal at 60°F             | ASTM D1250          |                |           | 7.374          |
| Density at 15.6°C, g/cm <sup>3</sup> | ASTM D1250          |                |           | 0.8846         |
| Molecular Weight                     | ASTM D2502          |                |           | 275            |
| Flash Point, COC, °F (°C)            | ASTM D92            | 295 (146)      |           | 309 (154)      |
| Flash Point, PMCC, °F (°C)           | ASTM D93            | 275 (135)      |           | 287 (142)      |
| Color, ASTM                          | ASTM D6045          |                | 0.5       | L0.5           |
| Pour Point, °F (°C)                  | ASTM D5950          |                | -45 (-43) | -85 (-65)      |
| Water Content                        | ASTM D7546M         |                | PASS      | PASS           |
| Appearance                           | ASTM D4176M         |                | PASS      | PASS           |
| <b>Chemical Properties</b>           |                     |                |           |                |
| Acid Number, mg KOH/g                | ASTM D664           |                | 0.05      | 0.01           |
| Aniline Point, °F (°C)               | ASTM D611           | 160 (71)       | 180 (82)  | 170 (77)       |
| Sulfur, ppm                          | ASTM D7212          |                | 500       | 43             |
| <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           |

HyGold 60 is a product of Ergon Refining, Inc.  
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