

## ETRO 4

### High Quality Group III Base Oil



PETRONAS

ETRO 4 is a high quality Group III base oil, manufactured from a unique feedstock by using a proprietary hydrotreatment - and wax isomerization process and hydrofinished to a colourless liquid. The base oil is highly isoparaffinic and exhibits a very high viscosity index as well as superior low-temperature performance. It has an excellent viscosity-volatility relationship.

ETRO 4 is registered by NSF for categories H1 (use as lubricant with incidental food contact) and HX-1 (ingredient for use in lubricants with incidental food contact).

#### Applications

ETRO 4 is an excellent choice for formulating high-performance, low-viscosity engine oils due to its high viscosity index and low volatility. This base oil is also suitable for application in industrial equipment, such as compressors, hydraulic systems, gears and turbines.

#### Features and Benefits

- Very high viscosity index
- Excellent volatility for low-viscosity engine oils
- Superior low-temperature performance
- Good oxidation stability

#### Formulation Support

ETRO 4 application is supported with top-tier engine oil formulations that meet the requirements for:

- API SP and API SP-RC
- ILSAC GF-6A and GF-6B
- ACEA 2021
- OEM Specifications

#### Properties

| Properties                            | Test Methods         | Units              | Specification Value | Typical Value  |
|---------------------------------------|----------------------|--------------------|---------------------|----------------|
| Appearance                            | Visual               |                    | Bright & Clear      | Bright & Clear |
| Density @ 15°C                        | ASTM D 1298 / D 4052 | kg/L               | Report              | 0.8348         |
| Colour                                | ASTM D 1500          |                    | L 0.5 Max.          | L 0.5          |
| Viscosity @ 40 °C                     | ASTM D 445           | mm <sup>2</sup> /s | Report              | 18.95          |
| Viscosity @ 100 °C                    | ASTM D 445           | mm <sup>2</sup> /s | 4.15 – 4.35         | 4.21           |
| Viscosity Index                       | ASTM D 2270          |                    | ≥ 127               | 129            |
| Pour Point                            | ASTM D 97 / D 5950   | °C                 | ≤ -15               | -18            |
| Flash Point                           | ASTM D 92            | °C                 | ≥ 200               | 220            |
| Evaporation Loss - Noack              | ASTM D 5800-B        | mass %             | ≤ 15.0              | 13.8           |
| Saturates                             | IP 368 / ASTM D 7419 | mass %             | > 95                | > 99           |
| Sulphur Content                       | ASTM D 2622 / D 5453 | mg/kg              | ≤ 15                | 6              |
| CCS Viscosity<br>@ -30 °C<br>@ -35 °C | ASTM D 5293          | mPa.s              | -<br>-              | 1380<br>2345   |

Marketed by,  
PETRONAS Lubricant International (PLI)  
Base Oil Division

Further information is available at [www.pli-petronas.com](http://www.pli-petronas.com)



Nonfood Compounds  
H1, HX-1

