



# Diesel Engine Oil

## Technical Data Sheet



### LOCOMOTIVE POWER API CI-4/SL

#### SEMI SYNTHETIC

#### PRODUCT DESCRIPTION:

LOCOMOTIVE POWER CI-4/SL is a Semi Synthetic heavy-duty engine oil that provides excellent lubrication in today's diesel and gasoline engines operating in severe applications. It is designed using the high-performance base oils which provide excellent low temperature fluidity, high temperature viscosity retention and volatility control. Momenta Nano is engineered to provide a strong foundation for oxidation resistance, soot handling, and wear control. It provides excellent piston deposit protection and reduced sludge formation to help provide long engine life.

#### APPLICATION:

LOCOMOTIVE POWER CI-4/SL provides demonstrated protection and performance in the latest high-power heavy-duty diesel engines from Europe, US, and Japanese manufacturers in both on-highway and off-highway applications. It is suitable for modern low emission engines meeting Euro 2, 3 and US 2002 emission requirements to help provide long engine life.

#### FEATURES & BENEFITS:

- Increased thermal and oxidation stability.
- Reduced sludge buildup, deposits and extended engine life.
- Improved corrosion protection and advanced piston deposit control.
- Advanced soot handling to control viscosity increase and sludge build up.
- Enhanced low temperature pumpability.

#### PERFORMANCE LEVELS: Meets or Exceeds:

- API CI-4/SL
- ACEA E7, A3/B3/B4
- DTFR 15B110 / 229.1
- MAN M3275-1
- Volvo VDS-3
- Deutz DQC III-10
- JASO DH1
- MACK EO-N
- Cummins CES 20076/20077/78
- MB 228.3 / 229.1
- Renault RLD2
- MTU Type 2
- Allison C4
- Caterpillar ECF 1a, ECF 2
- DDC 93K215

#### TYPICAL PROPERTIES:

| PARAMETERS                         | TEST METHOD | UNIT              | LOCOMOTIVE POWER API CI-4/SL (SEMI SYN) |               |
|------------------------------------|-------------|-------------------|---|---------------|
| Grade                              |             |                   | 10W-30                                  | 10W-40        |
| Kinematic Viscosity @ 104°F /40°C  | ASTM D-7042 | cSt               | 62.6                                    | 96            |
| Kinematic Viscosity @ 212°F /100°C | ASTM D-7042 | cSt               | 10.4                                    | 14.4          |
| Viscosity Index (min)              | ASTM D-2270 | -                 | 155                                     | 155           |
| SP. Gravity @15°C/ 60°F            | ASTM D-4052 | g/cm <sup>3</sup> | 0.868                                   | 0.875         |
| Flash Point (min)                  | ASTM D-92   | °C                | 218                                     | 228           |
| Pour Point (max)                   | ASTM D-97   | °C                | -36                                     | -36           |
| TBN                                | ASTM D-2896 | Mg KOH/g          | 11.0                                    | 11.0          |
| CCS, (°C)                          | ASTM D-5293 | m.Pa.S            | <7000 (-25°C)                           | <7000 (-25°C) |

#### HEALTH & SAFETY, ENVIRONMENT:

Prolonged and repeated contact with oil may cause skin disorders. Avoid contact. Wash immediately with soap and water. Do not discharge used oil into drains or the environment. Dispose to an authorized used oil collection point. For further Information on safety guidelines please refer to MSDS available on our website Locomotive.com