

TECHNICAL DATA SHEET

# ECO MATIC 20W-50 CJ-4

*Heavy-Duty Diesel Engine Oil — Smoke Free Technology*

API CJ-4 • API CI-4+ • API CH-4 • API SL

## PRODUCT DESCRIPTION

ECO MATIC 20W-50 CJ-4 is a premium synthetic blend heavy-duty diesel engine oil formulated to meet API CJ-4 — the advanced performance category engineered for low-emission diesel engines equipped with Diesel Particulate Filters (DPF) and Exhaust Gas Recirculation (EGR) systems. Its proprietary Smoke Free Technology significantly reduces visible exhaust emissions, making it ideal for commercial fleets and urban-use heavy vehicles. The robust 20W-50 viscosity grade delivers exceptional film strength and thermal stability under the extreme load and heat conditions of heavy-duty truck and bus operations in tropical climates. API CJ-4 provides superior protection over CI-4+, with tighter limits on ash, sulfur, and phosphorus to safeguard aftertreatment systems and extend DPF service life.

## APPLICATIONS

- Heavy-duty turbocharged diesel engines in trucks, buses, and commercial vehicles
- Low-emission diesel engines equipped with DPF and EGR systems (2007+ emission standards)
- Long-haul trucking, urban delivery, and fleet applications in tropical climates
- Construction, mining, and agricultural equipment with high-output diesel engines
- Backward compatible with CI-4+, CH-4, CG-4, and CF-4 diesel engines
- Available in 18L jerry can and 200L drum

## PERFORMANCE STANDARDS

API CJ-4 • API CI-4+ • API CH-4 • API SL • ACEA E9 • Mack EOS-4.5 • Cummins CES 20086

## FEATURES & BENEFITS

- Meets API CJ-4 — advanced heavy-duty diesel protection with DPF/EGR compatibility
- Proprietary Smoke Free Technology — significantly reduces visible exhaust emissions
- Robust 20W-50 film strength for heavy-load, high-temperature tropical operation
- Low ash formulation (CJ-4 limits) preserves DPF and aftertreatment system life
- Outstanding soot dispersancy and TBN retention for extended drain capability
- Excellent anti-wear protection for turbocharger, pistons, liners, and valve train
- Superior oxidation stability resists oil thickening and deposit formation
- Backward compatible with all earlier diesel API categories (CI-4+, CH-4, CG-4, CF-4)

## TYPICAL PROPERTIES

TEST PARAMETER	TEST METHOD	TYPICAL VALUE
Appearance	Visual	Clear, Amber Liquid
SAE Viscosity Grade	—	20W-50
API Service Classification — Diesel	—	CJ-4
API Service Classification — Petrol	—	SL
Kinematic Viscosity @ 40°C (cSt)	ASTM D445	162
Kinematic Viscosity @ 100°C (cSt)	ASTM D445	20.5
Viscosity Index	ASTM D2270	130 min
Flash Point, COC (°C)	ASTM D92	232 min
Pour Point (°C)	ASTM D97	-18 max

TEST PARAMETER	TEST METHOD	TYPICAL VALUE
Total Base Number (mg KOH/g)	ASTM D2896	11.0 min
Sulfated Ash (% wt)	ASTM D874	1.0 max
Phosphorus Content (% wt)	ASTM D5185	0.12 max
Sulfur Content (% wt)	ASTM D5185	0.4 max
Density @ 15°C (kg/L)	ASTM D4052	0.882
HTHS Viscosity @ 150°C (mPa·s)	ASTM D4683	3.7 min
Copper Corrosion @ 100°C, 3 hrs	ASTM D130	1B max
Foam Tendency/Stability @ 24°C (ml/ml)	ASTM D892	300/0 max

**STORAGE & HANDLING**

Store the product indoors and avoid direct sunlight or heat. Keep containers tightly closed when not in use. Avoid contact with skin and eyes. After skin contact, wash thoroughly with soap and water. Keep out of reach of children.

*DISCLAIMER: The information provided in this Technical Data Sheet is based on standard laboratory tests and is indicative only. Synergy Lubricant and Chemical makes no warranty regarding the accuracy of this data. Typical values may vary within acceptable production tolerances.*

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