



El Mar Mid Ash Supreme

Conoco El Mar Mid Ash Supreme oil is a premium-quality, mid-ash gas engine oil recommended for naturally aspirated and moderately to highly turbocharged, 4-cycle gas engines, such as Cooper-Superior (formerly White-Superior) and Waukesha VHP GL turbocharged lean-burn engines (3521, 5115, 7042 and 9390) requiring a nominal 1% sulfated ash oil. El Mar Mid Ash Supreme is formulated with a limited phosphorus and zinc content for catalytic converter protection. Its high TBN makes it very effective in protecting engines operating under corrosive conditions such as those fueled by sour, digester or land fill gas.

Applications

- 4-stroke cycle gas and dual-fuel engines burning sour gas or landfill gas⁽¹⁾
- Gas engines in wastewater treatment plants fueled by digester gas
- Agricultural engines using animal waste gas

⁽¹⁾ **Note:** *Used oil should be drained from any engine fueled with sour gas whenever the TBN drops below one-half that of the fresh oil. Following this rule enables the oil to effectively combat the corrosive effects of sulfur-containing acids, including sulfuric acid, which are produced during combustion of hydrogen sulfide in the sour gas, and also to remove deposit-forming sulfates.*

El Mar Mid Ash Supreme oil is recommended for natural gas engines manufactured by:

- Colt-Fairbanks Morse, 4-Stroke Cycle, Dual-Fuel
- Cooper Bessemer, 4-Stroke Cycle
- Cooper Superior, Dual-Fuel
- Hatch & Kirk-Nordberg
- Waukesha
 - VGF, VHP, VSG Series
 - AT25/27GL Series
 - Clinton/Intermediate Series F817G, F1197G

**Premium-Quality,
Mid-Ash Gas
Engine Oil**

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Outstanding Features

- Mid-ash formulation provides improved wear control for valves, rings and liners
- Excellent resistance to oxidation and nitration
- Low-phosphorus content (<300 ppm) suitable for use with catalyst-equipped engines
- High-alkaline reserve to combat the corrosive effects of raw hydrogen sulfide as well as the acidic by-products of combustion of sour gas
- Contains no bright stock which can cause harmful carbon deposits

El Mar Mid Ash Supreme Typical Properties

SAE Grade	30	40	15W-40
Viscosity,			
cSt @ 40°C	86.7	140	103
cSt @ 100°C	10.6	14.2	14.1
SUS @ 100°F	450	734	530
SUS @ 210°F	62.4	76.4	75.9
Viscosity Index	105	99	140
Ash, Sulfated, ASTM D874, wt %	1.0	1.0	1.0
Pour Point, °C (°F)	-24 (-11)	-18 (0)	-33 (-27)
Flash Point (COC), °C (°F)	238 (460)	263 (505)	232 (428)
Density, g/cm ³ @ 15°C	0.806	0.895	0.885
Total Base Number, ASTM D2896	9.6	9.6	9.6
Color, ASTM	3.0	3.0	3.0
High Temperature/High Shear Viscosity, 150 C, cP	3.3	4.2	3.8
Viscosity, Cold Cranking (CCS), cP @ °C	—	—	5,100 (-20)
Phosphorus, ppm	290	290	290
Zinc, ppm	320	320	320

Due to continual product research and development, the information contained herein is subject to change without notification.

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