

# HDAX<sup>®</sup> 9500 SAE 40

## Gas Engine Oil



### Product description

**HDAX<sup>®</sup> 9500** is an exceptional quality, high performance dispersant/detergent type gas engine oil formulated specifically for landfill gas, biogas, digester gas and sour gas applications.

**HDAX<sup>®</sup> 9500** is formulated with premium base oils which contain extremely low sulphur, nitrogen and aromatics. It uses a premium additive package containing ashless dispersants, oxidation inhibitors, metallic detergents and a metallic anti-wear agent.

**HDAX<sup>®</sup> 9500** provides excellent corrosion resistance, helps prevent deposit and sludge formation, and helps provide protection against wear and scuffing.

### Customer benefits and product features

#### Customer benefits

##### Helps Maximize Oil Service Life

Exceptional oxidation/nitration resistance and base number retention characteristics enable extended drain capability, even in engines designed to use a very low oil feed rate and in arduous landfill applications.

##### Helps Lower Operating Costs

Long component life with outstanding piston deposit control, providing scuffing protection to the cylinder liners. Helps protect against abrasive wear.

##### Helps Minimize Maintenance Costs

Promotes engine cleanliness. Optimized dispersant/detergent system allied to oxidation/nitration resistance, helps minimize oil thickening and sludge formation, protecting against filter plugging, and cylinder head sludge.

##### Extends Engine Life to Overhaul

Excellent anti-wear additive protects against valve train wear and scuffing on parts operating under boundary conditions. Optimized ash level provides excellent valve recession control and controls potential for pre-ignition.

##### Catalytic Converter Compatibility

Low phosphorus additive system optimized for use with catalyst systems.

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### Applications

- HDAX 9500 is designed for use in four-stroke engines burning landfill gas (including gas containing elevated levels of chlorofluorocarbons and/or siloxane), biogas, digester gas and sour gas.
- The combination of excellent base number retention and oxidation/nitration resistance allows HDAX 9500 to deliver extended drain capability - even in applications where the oil feed rate is deliberately kept low, placing extra stresses on the lubricant. HDAX 9500 prevents sludge formation on cylinder liners, which could interfere with oil flow and lead to higher oil consumption.
- Exceptional corrosion control helps ensure maximum liner life even in intermittent operation in sour gas applications, which may result in the formation of significant levels of acidic condensate.
- HDAX 9500 provides excellent control of carbonaceous deposits on pistons, ensuring correct piston ring operation and providing scuffing protection to cylinder liners.
- Optimized ash level provides protection against valve recession, while helping avoid the formation of ash deposits in the combustion chamber that could lead to pre-ignition.

Chevron recommends **HDAX 9500** for:

- Four-stroke engines fuelled by landfill gas containing elevated levels of chlorofluorocarbons (CFC's) and/or siloxane.
- Sour gas applications where corrosive wear is a special concern.

### Product approvals, performance, and recommendations

#### Performance standards

Developed independently by Chevron to comply with the following performance standards and specifications:

#### GE Jenbacher

TA 1000-1109

Fuel Class B (biogas, sewage gas) and Class C (landfill gas) for the following engine types and versions:

- Type 2 & 3
- Type 4 Versions A & B
- Type 6 Versions C & E

Consult OEM representatives for independent verification, updates and recommendations.

#### Service Considerations

The sulfated ash, alkalinity reserve and phosphorus content of gas engine oils can be properly matched to the needs of individual applications, taking account of engine design, operating conditions, fuel type and quality, with particular reference to sulfur content and whether or not the engine is fitted with an exhaust catalyst for emission control purposes.

Spark ignition, gas-fuelled engines may be sensitive to the sulfated ash level of the lubricant and to the chemical nature of the ash. Excessive ash can lead to problems such as spark plug fouling, exhaust valve guttering and build-up of pre-ignition inducing combustion chamber deposits. On the other hand, many engines require a certain amount of lubricant ash to ensure satisfactory valve seat lubrication and to minimize valve seat recession.

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## Typical Test Data

HDAX <sup>®</sup> 9500 SAE 40 GAS ENGINE OIL KEY PROPERTIES	TEST METHOD	RESULTS
<b>SAE Grade</b>		<b>40</b>
<b>Product Code</b>		<b>530052</b>
Density at 15 °C, kg/l	ASTM D4052	0.873
Kinematic viscosity, mm <sup>2</sup> /s @ 40°C	ASTM D445	116
mm <sup>2</sup> /s @ 100°C	ASTM D445	13.4
Viscosity Index	ASTM D2270	113
Pour Point, °C	ASTM D97	-33
Flash Point, °C	ASTM D92	270
Total Base Number, mg KOH/g	ASTM D2896	5.4
Sulphated Ash, %wt	ASTM D874	0.60

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended. Produced by Chevron Global Lubricants: Asia Pacific.

ENVIRONMENT, HEALTH and SAFETY. Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit the [Product Information Center](#).

This Product Data Sheet (PDS) was produced for the Asia Pacific region based on the best available information at the time of issue. The specific information included may not directly reflect the market or conditions, and may vary. For the most up-to-date, country-specific information, please contact your local customer service center.

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