



Lubricants Report



Product Data Sheet from Shell Lubricants

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MYSELLA* **PREMIUM NATURAL GAS ENGINE OILS**

To service the diverse and demanding range of engines and applications, Shell has developed a premium range of natural gas engine oils. The **Mysella** family of engine oils spans a range of ash levels to service the variety of engine types and applications in the market place today.

PRODUCTS AVAILABLE

Mysella - is a premium ashless engine oil proven to be an exceptional performer during years of field service throughout North America in 2-stroke and selected 4-stroke engines. It is based on an exclusive ashless formulation to help prevent combustion chamber deposits, exhaust port blockage and spark plug fouling. It is available as an **SAE 40** grade.

Mysella LA - represents the most advanced low ash additive technology available today. It is specifically formulated for lean burn engine designs, as well as being compatible with units fitted with catalysts. It is blended to the upper range of an **SAE 30** grade, making it very versatile, so that it can be used in applications calling for a 40 grade. It is also available as an **SAE 15W40** to service engines subject to start-ups at low temperatures. Both grades meet API services CD (obsolete).

Mysella MA - is specifically formulated to a medium ash level to provide extra valve seat recession protection required in many 4-stroke engines in particular some high air/fuel ratio engines. It is available as an **SAE 40** grade and it meets API services CD (obsolete).

PERFORMANCE BENEFITS

- **Mysella** natural gas engine oils are available in a range of ash levels optimized to respond to the lubrication needs of the various engines in service.
- **Mysella** oils provide excellent lubrication in the crankcases of large reciprocating oil field compressors. They are also used in integral (engine/compressor) units.

PERFORMANCE FEATURES

Mysella 40 - is a premium quality ashless oil designed to provide exceptional performance in all 2-stroke natural gas engines and selected 4-strokes.

- **Exclusive ashless formulation** to minimize spark plug and combustion chamber deposits (contain no zinc additives)
- **Exceptional oxidation and nitration resistance** for long oil life
- **Excellent piston and engine cleanliness** for long efficient operation
- **Contains an ashless anti-scuff agent** to prevent ring scuffing during break in.

Mysella LA - is the most versatile of the **Mysella** range and is based on technology representing a significant advance over conventional "Low Ash" technology. It provides excellent performance in a wide variety of 4-stroke engines and acceptable performance in 2-stroke engines.

- **Low phosphorus level** to ensure compatibility with NSCR (non-selective catalytic reduction) catalysts.
- **Reserve Alkalinity** - (TBN) to neutralize acids and provide enhanced corrosion protection, particularly with sour gas fuel.
- **Exceptional oxidation and nitration resistance** helps to resist excessive oil viscosity and filter blockage.
- **Excellent piston and engine cleanliness** for long, efficient operation.
- **Optimized level of "ash"** components to provide enhanced valve recession protection in 4-stroke engines.

Mysella MA 40 - is a specially formulated medium ash oil to provide enhanced valve seat recession protection and additional alkalinity reserve to cope with sour gas fuel in 4-stroke engines. Specifically designed for Superior and Waukesha engines that benefit from higher ash content.

- Higher Ash Level Provides Enhanced valve seat recession protection
- Minimizes engine wear and protects against corrosion even with moderately sour gas fuel.
- Approved for Waukesha cogen applications.

OIL ANALYSIS RESULTS

Most natural gas engine manufacturers have specific recommendations for determining oil drain periods and these recommendations should be referred to in all situations. As a rule of thumb we recommend changing oil when the viscosity at 100°C. increases more than 25% above the value for new oil and TAN (total acid no.) exceeds 1.0.

TYPICAL PROPERTIES	Mysella 40	Mysella LA 30	Mysella LA 15W40	Mysella MA 40	
Product Code	407-177	407-173	407-176	407-174	ASTM METHOD
Density @ 15°C (kg/m3)	882	883	879	882	D 1298
Viscosity: cSt @ 40°C	139	110	108	147	D 445
cSt @ 100°C	13.1	12.2	14.3	14.8	D 445
Pour Point °C	-18	-27	-33	-30	D 97
Flash Point °C	274	265	218	246	D 92
Sulphated Ash % by Mass	0.01	0.45	0.45	0.80	D 874
TBNE mg KOH/gm	1.1	5.2	5.2	7.7	D 2896
Zinc Content % wt	0	0.030	0.030	0.030	AA/ICP
Phosphorus % wt	0.025	0.028	0.028	0.028	AA/ICP
Calcium % wt	0	0.12	0.12	0.22	AA/ICP

NATURAL GAS ENGINE OIL RECOMMENDATIONS

TWO STROKE ENGINES

ENGINE MANUFACTURER	Mysella	Mysella LA	Mysella MA
Ajax	P	A	-
Cooper Energy Services (Cooper Bessemer)	P	A	-
BMEP* < 85 PSI	P	-	-
BMEP > 85 PSI			
Dresser Rand (Clark)	P	A	-
Dresser Rand (Worthington)	P	A	-
Fairbanks – Morse	P	A	-

* BMEP = Brake Mean Effective Pressure (psi)

For 2-strokes, BMEP = 396,000 x HP /RPM x Displacement (in3)

FOUR STROKE ENGINES

ENGINE MANUFACTURER	Mysella	Mysella LA	Mysella MA
Caterpillar	A	P	-
Cooper Energy Services (Cooper Bessemer)	A	P	A
BMEP < 175 PSI	-	P	-
BMEP > 175 PSI			
Delaval	-	P	-
Dresser Rand (Ingersoll-Rand)	A	P	-

Category I and II Category III	-	P	-
MWM Deutz (KHD)	-	P	-
Superior/White Superior	-	A	P
Waukesha	-	A	P
VHP G, GSI, GL	-	A	P
AT 25 GL	-	P	-
Clinton Series	-	P	-
Climax	-	A	P
Intermediate Series	-		

*BMEP = Brake Mean Effective Pressure (psi)

For 4-strokes, BMEP = 792,000 x HP /RPM x Displacement (in3)

P = Primary Recommendation

A = Acceptable Recommendation

Visit your nearest Shell Associate or 90 Reseller for more details.

Need more product information? Please the Shell Helps Centre Technical Desk at 1-800-661-1600 or e-mail us at questions@shell.ca

MSDS requests? Please call 1(403)691-2615 or fax your request to 1(403)691-3321.

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