PRODUCT BULLETIN

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GAS ENGINE OIL M40 (M)

Long-life Gas Engine Oil

The total energy system (TES) with the gas engine is the system to supply electricity and power by the gas engine which uses city gas as fuel, and performs hot water supply and the air-conditioning in facilities using the exhaust heat. Gas engine oil used for this system is always exposed to the severe condition of the high temperature. **GAS ENGINE OIL M40 (M)** is high performance low ash type gas engine oil for medium and large size gas engines, which achieves long-life by the adoption of the new additives. Also, it is classified to the designated combustible liquid category under the Fire Defense Law in Japan because of the high flash point of over 250 °C.

● Special Features

1. Long-life Type Oil

GAS ENGINE OIL M40 (M) was able to satisfy the long-life performance and contradicting demand of the reduction of the deposit in the engine by the development and adoption of the new additives. **GAS ENGINE OIL M40 (M)** is superior in long-time base number retention and is the oil of long-life type with high viscosity index, which has the good performance to restrain acid number increase and viscosity increase.

2. Outstanding Thermal & Oxidation Stability

In the case of a gas engine, the lubricant is deteriorated by the oxidation easily because it is exposed to high temperatures for a long time.

GAS ENGINE OIL M40 (M) is superior in thermal and oxidation stabilities and can maintain good performance for a long time.

3. Low Deposit Generation

In general, the gas engine oil becomes easy to generate deposit when quantity of additive such as detergent increases.

GAS ENGINE OIL M40 (M) is low ash type oil by the adoption of the new additives which can reduce deposit adhesion to a piston and a valve.

● Oil exchange period

Please follow the instruction manual of the engine manufacturer.

● Containers

200-liter drums, 20-liter pail cans

● Typical properties of GAS ENGINE OIL M40 (M)

SAE viscosity grade		40
Color (ASTM)		L3.0
Density (15 °C)	g/ cm^3	0.869
Kinematic Viscosity (40 °C)	mm^2/s	101.9
(100 °C)	mm^2/s	13.84
Viscosity Index		137
Flash Point (COC)	°C	266
Pour Point	°C	–30.0
Acid Number	mgKOH/g	1.71
Base Number (ASTM D664)	mgKOH/g	4.71
Base Number (ASTM D2896)	mgKOH/g	8.14
Sulfated Ash	mass%	0.50

Note: the typical properties are subject to change without notice. (June 2011)

Handling Precautions

▼ **Follow these precautions when handling this product.**

Composition：	Base Oil, Additives
Precautionary pictograms:	Not applicable
Signal word:	Not applicable
Hazard Statement:	Not applicable
Precautionary Statements: **Prevention**	・Do not handle until all safety precautions have been read and understood. ・Wear protective gloves/protective clothing/eye protection/face protection. ・Do not allow the eyes to become exposed to the product. Do not swallow the product. ・Wash hands thoroughly after handling. ・Do not eat, drink or smoke when using this product.
Response	・IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. ・IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. ・If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician. ・IF ON SKIN: Wash with plenty of soap and water.
Storage	・The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight. ・Containers that have been opened must be tightly sealed.
Disposal	・Dispose of contents/container in accordance with local/regional/national/international regulations. ・If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.