

# GEAR OIL GL-5

## High-Grade Automotive Gear Oil (GL-5)

**GEAR OIL GL-5** is a high-grade automotive gear oil made from highly refined base oils and top-performance extreme-pressure agents, oxidation inhibitors, detergent-dispersants, etc. It meets the API service classification grade GL-5.

### ● SPECIAL FEATURES

#### 1. Outstanding EP Performance

Automotive gears are used under severe conditions of extremely high contact pressure and sliding speed. For this reason, automotive gear oils are required to have the performance (extreme pressure properties) to operate gears smoothly even under extreme pressure conditions.

**GEAR OIL GL-5** contains sulfur- and phosphorus-based extreme pressure agents with excellent anti-seizing and anti-wear properties. Therefore, it has extreme pressure properties that enable smooth lubrication of gears in high-speed and heavy-duty vehicles that are subjected to severe driving conditions.

#### 2. Excellent Thermal & Oxidation Stability

The high contact pressure and sliding velocity of hypoid gears result in high frictional heat and high gear oil temperatures. Extreme pressure agents, which are added to achieve extreme pressure properties in gear oil, are chemically active substances that react with metals to form an extreme pressure film. Therefore, at high temperatures, reactions such as decomposition and polymerization are likely to occur, and harmful sludge may be generated. To prevent this sludge formation, excellent thermal & oxidation stability is required for long-term use under severe conditions.

**GEAR OIL GL-5** uses base oils and extreme pressure agents with excellent thermal & oxidation stability, to which are added oxidation inhibitors and detergents-dispersants that do not impair extreme pressure properties. This allows for long-term use.

### ● GRADES

**GEAR OIL GL-5** is available in four types according to viscosity: 80, 90, 140 and 75W-90. These numbers indicate the SAE viscosity grades for gear oil.

### ● APPLICATIONS

80, 90, 140: Differential gears (especially hypoid gears) for passenger cars, trucks and buses

75W-90: Transmissions and differential gears for passenger cars

### ● CONTAINERS

200-liter drum, 20-liter can

### ● TYPICAL PROPERTIES OF GEAR OIL GL-5

SAE Viscosity Grade		80	90	140	75W-90
Color	(ASTM)	L1.0	L2.5	L3.0	L1.0
Density	(15°C) g/cm <sup>3</sup>	0.886	0.897	0.903	0.890
Kinematic viscosity	(40°C) mm <sup>2</sup> /s	68.8	195	365	85.4
Kinematic viscosity	(100°C) mm <sup>2</sup> /s	8.95	17.9	26.9	15.2
Viscosity index		104	100	99	188
Flash point	(COC) °C	226	230	238	196
Pour point	°C	-30.0	-20.0	-12.5	-45.0
Acid number	mgKOH/g	1.32	1.39	1.34	2.35

Note: The typical properties may be changed without notice. (January 2025)




## Handling Precautions

▼ Follow these precautions when handling this product.

GL-5 80, GL-5 90, GL-5 140

<b>Composition :</b>	Base Oil(s), Additives
<b>Hazard pictograms:</b>	
<b>Signal word:</b>	Warning
<b>Hazard Statement:</b>	May cause an allergic skin reaction.
<b>Precautionary statements:</b>	<ul style="list-style-type: none"> <li>• Do not handle until all safety precautions have been read and understood.</li> <li>• Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>• Do not allow the eyes to become exposed to the product. Do not swallow the product.</li> <li>• Contaminated work clothing should not be allowed out of the workplace.</li> <li>• Avoid breathing dust/fume/gas/mist/vapours/spray.</li> <li>• Wash hands thoroughly after handling.</li> <li>• Do not eat, drink or smoke when using this product.</li> </ul>
<b>Response</b>	<ul style="list-style-type: none"> <li>• IF SWALLOWED: Immediately call a POISON CENTER/doctor.</li> <li>• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>• If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.</li> <li>• IF ON SKIN: Wash with plenty of soap and water.</li> <li>• If skin irritation or a rash occurs: Get medical advice/attention.</li> <li>• Take off contaminated clothing and wash it before reuse.</li> </ul>
<b>Storage</b>	<ul style="list-style-type: none"> <li>• The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.</li> <li>• Containers that have been opened must be tightly sealed.</li> </ul>
<b>Disposal</b>	<ul style="list-style-type: none"> <li>• Dispose of contents/container in accordance with local/regional/national/international regulations.</li> <li>• If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.</li> </ul>

GL-5 75W-90

<b>Composition :</b>	Base Oil(s), Additives
<b>Hazard pictograms:</b>	
<b>Signal word:</b>	Warning
<b>Hazard Statement:</b>	May cause an allergic skin reaction. Harmful to aquatic life Harmful to aquatic life with long lasting effects.
<b>Precautionary Statements</b>	<ul style="list-style-type: none"> <li>• Do not handle until all safety precautions have been read and understood.</li> <li>• Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>• Do not allow the eyes to become exposed to the product. Do not swallow the product.</li> <li>• Avoid release to the environment.</li> <li>• Contaminated work clothing should not be allowed out of the workplace.</li> <li>• Avoid breathing dust/fume/gas/mist/vapours/spray.</li> <li>• Wash hands thoroughly after handling.</li> <li>• Do not eat, drink or smoke when using this product.</li> </ul>
<b>Response</b>	<ul style="list-style-type: none"> <li>• IF SWALLOWED: Immediately call a POISON CENTER/doctor.</li> <li>• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>• If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.</li> <li>• IF ON SKIN: Wash with plenty of soap and water.</li> <li>• If skin irritation or a rash occurs: Get medical advice/attention.</li> <li>• Take off contaminated clothing and wash it before reuse.</li> </ul>
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