

# DAPHNE SUPER GEAR OIL

## Description

Lubricating oil for various closed type gear speed reducers. Bearing and gear applications where particularly high oil film strength is required.

## Features & Characteristics

A high quality mineral oil, refined from paraffinic base crudes, by most advanced Hydro-treated process and adding various additives such as special extreme pressure agents, oiliness agent.

- (1) Excellent anti-pitting property and anti-wear, anti-seizure properties help to extend service life of gear.
- (2) Low friction property save electric power consumption.
- (3) High oxidation resistance property assures longer oil life.
- (4) Excellent separation from water.
- (5) Excellent anti-rust property.

## Viscosity grade

VG	ISO VG	JIS2219	AGMA MILD EP	DIN51571 Part III
68	68	ISOVG 68	2 EP	○
100	100	ISOVG 100	3 EP	○
150	150	ISOVG 150	4 EP	○
220	220	ISOVG 220	5 EP	○
320	320	ISOVG 320	6 EP	○
460	460	ISOVG 460	7 EP	○
680	680	ISOVG 680	8 EP	○

## Chemical and Physical Properties

Test Item	Test Method	Unit	VG68	VG100	VG150	VG220
Density at 15°C	ASTM D4052	g/cm <sup>3</sup>	0.882	0.889	0.893	0.896
Viscosity at 40°C	ASTM D445	mm <sup>2</sup> /s	65.8	93.4	141.3	211.4
Viscosity at 100°C	ASTM D445	mm <sup>2</sup> /s	8.7	10.8	14.2	18.7
Viscosity Index	ASTM D2270	-	103	98	98	98
Acid Number	ASTM D974	mgKOH/g	0.53	0.53	0.53	0.54
Flash point(COC)	ASTM D92	°C	238	248	262	258
Pour Point	ASTM D97	°C	-40.0	-32.5	-32.5	-30.0
Copper prevention (3h,100°C)	ASTM D130	-	1(1b)	1(1b)	1(1b)	1(1b)
FZG OK Stage	-	-	12≤	12≤	12≤	12≤

Test Item	Test Method	Unit	VG320	VG460	VG680
Density at 15°C	ASTM D4052	g/cm <sup>3</sup>	0.899	0.902	0.903
Viscosity at 40°C	ASTM D445	mm <sup>2</sup> /s	314.1	451.8	679.0
Viscosity at 100°C	ASTM D445	mm <sup>2</sup> /s	24.4	31.2	42.4
Viscosity Index	ASTM D2270	-	99	99	104
Acid Number	ASTM D974	mgKOH/g	0.52	0.48	0.47
Flash point(COC)	ASTM D92	°C	278	288	262
Pour Point	ASTM D97	°C	-22.5	-17.5	-17.5
Copper prevention (3h,100°C)	ASTM D130	-	1(1b)	1(1b)	1(1b)
FZG OK Stage	-	-	12 $\leq$	12 $\leq$	12 $\leq$

- Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provide in the Safety Data Sheet (SDS) are followed.
- SDS is available upon request through your sales contract office, or via the internet.  
<https://www.idemitsu.com/jp/business/lube/>
- Due to continual product research and development, the information contained herein is subject to change without notification.

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