

Idemitsu Kosan Co.,Ltd.

Lubricant Product Information



Daphne Super Multi Oil Series

High Performance Multi-purpose Oil

Description

Daphne Super Multi Oil Series is range of superior multi-purpose oil formulated with highly refined paraffinic base oil incorporating various additives such as oxidation inhibitor, rust prevention additive, anti-foaming and oiliness agents to provide excellent performance.

Application

Recommended for use as a multi-purpose oil in machine tools lubricating. It is most efficient as a lubricating oil for bearing, gears, hydraulic systems and especially for slideways. Daphne Super Multi Oil 2 & 5 is also recommended to be used as a spindle lubrication in most CNC fabrication machines.

Characteristics

- 1. **Excellent Oxidation Stability** A combination of oxidation inhibitor and highly refined paraffinic base oil assures excellent oxidation stability under severe operating condition and assures longer oil life.
- 2. **Excellent Anti-Stick-Slip Properties -** Addition of special oiliness agent gives this oil excellent anti-stick-slip properties which makes it most suitable for slideway lubrication.
- 3. **Excellent Demulsibility -** Extremely quick separation with water prevents it from emulsifying with water makes it most suitable for preventing hydraulic and slideways from troubles caused by mixing water soluble cutting fluid and machine lubricants.
- 4. Excellent Anti-Corrosion & Anti-Rust Properties Effective rust preventive agent and corrosion inhibitor prevent corrosion caused by water and acid produced through deterioration process.

Packing

20L pail, 200L drum



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Lubricant Product Information



Viscosity Standard

Grade	ISO Viscosity Grade	Equivalent Chart						
		Japan Industrial Standards	Generic Equivalent Viscosity					
2	2	K 2239 Bearing Oil ISO VG 2						
5	5	K 2239 Bearing Oil ISO VG 5						
10	10	K 2239 Bearing Oil ISO VG 10	60 Spindle Oil					
22	22	K 2239 Bearing Oil ISO VG 22	150 Spindle Oil					
32	32	K 2213 Turbine Oil 2 types ISO VG 32	90 Turbine Oil					
46	46	K 2213 Turbine Oil 2 types ISO VG 46	120 Turbine Oil					
68	68	K 2213 Turbine Oil 2 types ISO VG 68	180 Turbine Oil					
100	100	K 2219 Industrial Gear Oil 1 types VG 100	30 Motor Oil					
150	150	K 2219 Industrial Gear Oil 1 types VG 150	40 Motor Oil					
220	220	K 2219 Industrial Gear Oil 1 types VG 220	90 Cylinder Oil					



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Lubricant Product Information



Typical Specifications

Daphne Super Multi Oil Series

Available Grades	ASTM METHOD	2	<u>5</u>	<u>10</u>	<u>22</u>	<u>32</u>
Colour	D-1500	L0.5	L0.5	L1.0	L2.0	L2.0
Density 15 °C g/cm ³	D-4052	0.7910	0.870	0.869	0.8703	0.8625
Flash Point (COC) °C	D-92	84	144	168	204	222
Viscosity, cSt @ 40 °C	D-445	2.0	5.0	10.0	22.11	32.48
@ 100 °C		1.0	1.6	2.6	4.47	5.729
Viscosity Index	D-2270	-	-	-	114	118
TAN (mgKOH/g)	D-664	0.07	0.07	0.07	0.20	0.26
Copper Corrosion (100°C x 3h)	D-130	1(1a)	1(1a)	1(1a)	1(1a)	1b

Available Grades	ASTM METHOD	<u>46</u>	<u>68</u>	<u>100</u>	<u>150</u>	<u>220</u>
Colour	D-1500	L2.5	L2.5	L2.5	L4.0	L4.0
Density 15 °C g/cm ³	D-4052	0.8794	0.8739	0.8887	0.8933	0.8977
Flash Point (COC) °C	D-92	242	242	234	270	278
Viscosity, cSt @ 40 °C	D-445	46.57	70.77	99.59	149.2	217.9
@ 100 °C		7.12	9.232	11.55	14.95	19.35
Viscosity Index	D-2270	112	106	103	100	100
TAN (mgKOH/g)	D-664	0.23	0.14	0.14	0.15	0.16
Copper Corrosion (100°C x 3h)	D-130	1(1b)	1b	1(1b)	1(1b)	1(1b)



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Lubricant Product Information



ISO Standard / MAS Standard Chart

Description	Type of usage	Description number	ISO Standard	MAS Standard	Recommend Product
	Medium Load – Enclosed type	CB 32	0	0	Daphne Super Multi Oil 32
	(Spur Gear & Bevel Gear)	CB 68	0	0	Daphne Super Multi Oil 68
	<r&o type=""></r&o>	CB 150	0	0	Daphne Super Multi Oil 150
Gear Oil	High Load – Enclosed type	CC 150	0	0	Daphne Super Multi Oil 150
	(Worm Gear)	CC320	0	0	-
	<with extreme="" pressure="" type=""></with>	CC 460	0	0	-
	Bearing	FC 2	0	0	Daphne Super Multi Oil 2
	(R&O type)	FC 5	0	-	Daphne Super Multi Oil 5
Bearing Oil		FC 10	0	0	Daphne Super Multi Oil 10
		FC 22	0	0	Daphne Super Multi Oil 22
	Slideway	G 32	0	-	Daphne Super Multi Oil 32
	(Anti-Slip properties)	G 68	0	0	Daphne Super Multi Oil 68
Slideway Oil		G 150	0	-	Daphne Super Multi Oil 150
		G 220	0	0	Daphne Super Multi Oil 220
	General Purpose Hydraulic	HL 32	0	0	Daphne Super Multi Oil 32
	system	HL 46	0	-	Daphne Super Multi Oil 46
	(R&O type)	HL 68	0	0	Daphne Super Multi Oil 68
	Hydraulic system & Slideway	HG 32	0	0	Daphne Super Multi Oil 32
Hydraulic Oil		HG 68	0	0	Daphne Super Multi Oil 68
	Hydraulic system with abrasive	HM 32	0	0	Daphne Super Multi Oil 32
	resistance properties	HM 46	0	-	Daphne Super Multi Oil 46
		HM 68	0	0	Daphne Super Multi Oil 68



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	(Worm Gear)	CC320	0	0	-
	<with extreme="" pressure="" type=""></with>	CC 460	0	0	-
	Bearing	FC 2	0	0	Daphne Super Multi Oil 2
	(R&O type)	FC 5	0	-	Daphne Super Multi Oil 5
Bearing Oil		FC 10	0	0	Daphne Super Multi Oil 10
		FC 22	0	0	Daphne Super Multi Oil 22
	Slideway	G 32	0	-	Daphne Super Multi Oil 32
	(Anti-Slip properties)	G 68	0	0	Daphne Super Multi Oil 68
Slideway Oil		G 150	0	-	Daphne Super Multi Oil 150
		G 220	0	0	Daphne Super Multi Oil 220
	General Purpose Hydraulic	HL 32	0	0	Daphne Super Multi Oil 32
	system	HL 46	0	-	Daphne Super Multi Oil 46
	(R&O type)	HL 68	0	0	Daphne Super Multi Oil 68
	Hydraulic system & Slideway	HG 32	0	0	Daphne Super Multi Oil 32
Hydraulic Oil		HG 68	0	0	Daphne Super Multi Oil 68
	Hydraulic system with abrasive	HM 32	0	0	Daphne Super Multi Oil 32
	resistance properties	HM 46	0	-	Daphne Super Multi Oil 46
		HM 68	0	0	Daphne Super Multi Oil 68