



DEMNUM_{TM} • DEMNUM_{TM} GREASE

DEMNUM_{TM} is a perfluoropolyether oil that has a straight-chain structure developed using DAIKIN's original technology. It has excellent thermal and chemical stability and inertness, and is suitable as a lubricant grease especially when durability and cleanliness are required. DEMNUM GREASE is a grease formed with DEMNUM as the base oil, chemically inert with excellent high-thermal stability and solvent resistance.

1. Product Grades and Physical Properties

Different types of DEMNUM are available, as shown below, depending on the level of kinematic viscosity.

Table I Grades and physical properties of DEMNUM

		S-20	S-65	S-200
Average molecular weight		2700	4500	8400
Kinematic viscosity (cSt)	20°C	53	150	500
	40°C	25	65	200
	60°C	14	33	95
	100°C	5	15	30
Viscosity index		150	180	210
Density 20°C (g/cm ³)		1.860	1.873	1.894
Pour point (°C)		-75	-65	-53
Refractive index 20°C n _D		1.290	1.295	1.298
Surface tension 20°C (mN/m)		17.7	18.0	19.1
Vapor pressure (hPa)	20°C	1×10 ⁻⁵	3×10 ⁻⁷	3×10 ⁻¹¹
	100°C	2×10 ⁻²	3×10 ⁻⁴	2×10 ⁻⁷
Glass-transition temperature (°C)		-115	-111	-104
Specific heat (J/g·°C)		1.0		
Dielectric breakdown voltage 2.5mm (kV)		72		
Structural formula		F-(CF ₂ CF ₂ CF ₂ O) _n -CF ₂ CF ₃		

*The above numeric values are representative and not guaranteed.

The following types of DEMNUM GREASE are available. They use DEMNUM as the base oil and fluororesin as the puffing agent.

Table II Grades and physical properties of DEMNUM GREASE

Test item	Test method	Test condition	L-65	L-200
Appearance	Visual check		White opaque	White opaque
Penetration	JIS K-2220 5·3	0 strokes	280±15	280±15
		60 strokes	280±15	280±15
Mechanical stability	JIS K-2220 5·11	10000 strokes	260~290	260~290
		100000 strokes	260~290	260~290
Apparent viscosity	Haake-Rotovisco viscometer	25°C, 300s ⁻¹	2500mPa·s	5300mPa·s
Dropping point	JIS K-2220 5·4	-	None	None
Evaporation	JIS K-2220 5·6 (B method)	200°C, 22 hrs	1 mass% or less	0.1 mass% or less
Oil separation	JIS K-2220 5·7	100°C, 30 hrs	3 mass% or less	2 mass% or less
		200°C, 30 hrs	12 mass% or less	10 mass% or less
		300°C, 30 hrs	-	16 mass% or less
Copper corrosion	JIS K-2220 5·5	25°C, 24 hrs	1a	1a
		100°C, 24 hrs	1a	1a
Oxidation stability	JIS K-2220 5·8	100°C, 100 hrs	0.1 or less	0.1 or less
Low-temperature rotation torque	In compliance with JIS K-2220 5·14	-60°C	5.9 N·cm	10.8 N·cm
		-70°C	9.8 N·cm	21.6 N·cm
Water durability	JIS K-2220 5·12	38°C, 1 hr	1 mass% or less	1 mass% or less

* The above numeric values are representative and not guaranteed.

2. Cautions on Handling

Be sure to read the Material Safety Data Sheet (MSDS) carefully before using this product.

Take care not to let the product get in your eyes or adhere to your skin. Avoid inhaling vaporized product.

If the product has gotten into your eyes, immediately wash your eyes with flowing water for more than 15 minutes and consult a physician. If the product has adhered on your skin, immediately wash the part with soap and water and rinse it thoroughly.

3. Packaging unit

DEMNUM: 1 kg (plastic bottle), 25 kg (can)

DEMNUM GREASE: L-65 50 g (tube), 1 kg (plastic container), 16 kg (can)

L-200 50 g (tube), 750 g (cartridge), 1 kg (plastic container), 16 kg (can)

- Products listed in this information sheet are supplied for general industrial use. Because they are not designed and manufactured for medical use, they have not been tested for appropriateness or safety for medical use. Therefore, we do not, in any way, guarantee their appropriateness and safety as materials for medical use. Whether they can be used for medical applications must be judged based on experiments conducted on your own as well as opinions of medical experts and statutory regulations established by relevant authorities. If the products are to be used for such applications, they will be supplied only if you agree with the terms and conditions proposed by DAIKIN.
- The data in this information sheet are examples of actual measurement, and example applications listed do not, in any way, guarantee the result of such applications of the products.
- When exporting DEMNUM (excluding DEMNUM GREASE), which falls into the goods listed in row 5 of appended table 1 of Export Trade Control Order as stipulated in the Foreign Exchange and Foreign Trade Act, you must follow necessary procedures including the obtaining of export permit from the Japanese government.

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