

SUPER MULPUS DX

HIGH-PERFORMANCE MULTIPURPOSE LUBRICATING OIL FOR INDUSTRIAL MACHINERY

SUPER MULPUS DX meets the requirements of bearing oils, gear oils, hydraulic oils and slideway oils for general-purpose industrial machinery and various machine tools, and it exhibits comparable performance to dedicated oil for each application. Because **SUPER MULPUS DX** is a multipurpose industrial oil, it is ideal for streamlining lubrication management in factories.

● SPECIAL FEATURES

1. Excellent Lubrication

SUPER MULPUS DX, with its newly developed S-P type additives, exhibits superior antiwear and extreme pressure characteristics. It achieves an FZG failure load stage of over 12^{*1}, which is at the highest level, and its exceptional lubrication performance has been confirmed in durability tests conducted by major bearing manufacturers.

^{*1} FZG Failure Load Stage

The FZG test, as defined in DIN 51354, is a test that uses gears as test pieces to evaluate the extreme pressure properties of the test oil. A failure load stage of over 12 indicates the highest performance. (Applicable to oils of VG 46 and above)

2. Suppresses Oil Temperature Rise

SUPER MULPUS DX, with its newly adopted friction modifiers, suppresses frictional heat generation, contributing to the extended service life of equipment.

3. Outstanding Oxidation and Thermal Stability

Because **SUPER MULPUS DX** is blended from highly refined base oils with outstanding oxidation and thermal stability, as well as carefully selected oxidation inhibitors, it suffers very little oxidation degradation or sludge formation even when used for extended periods. It ensures excellent performance even at high temperatures in hot circulation systems.

4. Excellent Separation from Water and from Water-soluble Cutting Fluids

Thanks to **SUPER MULPUS DX**'s excellent ability to separate water, it is easy to remove water from the oil by letting the oil stand or by using a centrifugal separator, even if some amount of water or water-soluble cutting fluid enters into the oil.

5. Outstanding Rust Prevention

SUPER MULPUS DX is blended with top-quality antirust additives, so it prevents rust and corrosion in the lubrication system even when moisture becomes mixed with the oil.

6. Excellent Antifoaming Performance

SUPER MULPUS DX is also blended with high-performance antifoaming agents, so it prevents oil circulation problems caused by foaming.

● GRADES

SUPER MULPUS DX comes in twelve grades: 2, 5, 10, 22, 32, 46, 68, 100, 150, 220, 320, and 460. These numbers indicate the ISO viscosity grade.

This wide range of viscosity grades means that **SUPER MULPUS DX** is available in the proper viscosity for any application.

● APPLICATIONS

1. Lubrication of many types of bearings for steel and nonferrous metal rolling mills, rubber and plastic rolls, calender rolls, papermaking machines, electric motors, generators, pumps, fans, etc.
2. Lubrication of many types of gear reducers
3. Hydraulic systems
4. Many types of lubrication for machine tools (bearings, gears, hydraulics, slideways)

5. Oil circulation systems for gears and bearings that are susceptible to rust and oil degradation
6. Lubrication of bearings in textile machinery and other high-speed rotating machinery
7. Hydraulic oil for instruments and remote-controlled hydraulic devices

● **CONTAINERS**

200-liter drum and 20-liter can

● **TYPICAL PROPERTIES OF SUPER Mulpus DX**

Grade	2	5	10	22	32	46
Color (ASTM)	L0.5	L1.0	L0.5	L0.5	L0.5	L0.5
Density (15°C), g/cm ³	0.819	0.828	0.850	0.869	0.875	0.878
Kinematic viscosity (40°C), mm ² /s	2.32	4.34	9.94	22.6	32.2	46.5
Kinematic viscosity (100°C), mm ² /s	1.01	1.57	2.65	4.40	5.43	6.90
Viscosity index	-	-	100	103	103	104
Acid number, mgKOH/g	-	-	-	0.06	0.06	0.06
Flash point (COC), °C	108	118	174	214	226	238
Pour point, °C	-50.0	-47.5	-25.0	-35.0	-35.0	-32.5
Copper strip corrosion (100°C, 3 h)	1	1	1	1	1	1
Rust prevention (distilled water, 60°C, 24 h)	No rust	No rust	No rust	No rust	No rust	No rust

Grade	68	100	150	220	320	460
Color (ASTM)	L1.0	L1.5	L2.0	L2.5	L2.0	L2.5
Density (15°C), g/cm ³	0.882	0.886	0.890	0.894	0.898	0.899
Kinematic viscosity (40°C), mm ² /s	68.2	100	152	224	319	459
Kinematic viscosity (100°C), mm ² /s	8.88	11.2	15.0	19.4	24.3	30.8
Viscosity index	103	97	98	98	97	97
Acid number, mgKOH/g	0.06	0.08	0.07	0.07	0.06	0.08
Flash point (COC), °C	252	274	278	292	298	318
Pour point, °C	-27.5	-25.0	-22.5	-15.0	-15.0	-12.5
Copper strip corrosion (100°C, 3 h)	1	1	1	1	1	1
Rust prevention (distilled water, 60°C, 24 h)	No rust	No rust	No rust	No rust	No rust	No rust


Note: The typical properties may be changed without notice. (May 2024)




Handling Precautions

▼ Follow these precautions when handling this product.

SUPER Mulpus DX 2, 5

Composition :	Base Oil(s), Additives
Hazard pictograms:	
Signal word:	Danger
Hazard Statement:	May be fatal if swallowed and enters airways Harmful to aquatic life Harmful to aquatic life with long lasting effects
Precautionary Statements:	<ul style="list-style-type: none">• 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.• Avoid release to the environment.• Wash hands thoroughly after handling.• Do not eat, drink or smoke when using this product.
Response	<ul style="list-style-type: none">• IF SWALLOWED: Immediately call a POISON CENTER/doctor.• 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.• Do NOT induce vomiting.
Storage	<ul style="list-style-type: none">• 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.• Store locked up.
Disposal	<ul style="list-style-type: none">• 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.

SUPER MULPUS DX 10, 22

Composition :	Base Oil(s), Additives
Hazard pictograms:	
Signal word:	Danger
Hazard Statement:	May be fatal if swallowed and enters airways
Precautionary Statements:	<ul style="list-style-type: none"> • 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.
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Disposal	<ul style="list-style-type: none"> • 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.

SUPER MULPUS DX 32, 46, 68, 100, 150, 220, 320, 460

Composition :	Base Oil(s), Additives
Hazard pictograms:	Not applicable
Signal word:	Not applicable
Hazard Statement:	Not applicable
Precautionary statements:	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • IF SWALLOWED: Immediately call a POISON CENTER/doctor. • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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.