



# UNIWAY SF

## A LUBRICANT FOR MACHINE TOOL SLIDEWAYS

Machine tools called “Mother machines” are now being designed for ever better precision and faster speed in order to increase their work quality and productivity. When stick slips occur during cutting and grinding, both the precision and the efficiency of the work drops, so stick slips must be kept to a minimum. The Nippon Oil Corporation has long been a leader in the field with our widely used UNIWAY Series of lubricating oils for machine tools slideways. To meet the higher performance of today’s machines, we now offer our new UNIWAY SF.

UNIWAY SF can be used under all conditions as a slideway lubricating oil for machine tools that demand the best possible machining precision.

### ● GRADES AND APPLICATIONS

UNIWAY SF is available in three types, 32, 68 and 220. These oils can be used for all types of slideway lubrication from the lowest to the highest speeds.

### ● SPECIAL FEATURES

**UNIWAY SF offers the following advantages over conventional slideway oils.**

#### 1. Low Friction Coefficient

The friction coefficient of UNIWAY SF is lower than that of conventional slideway lubricating oils. As a result, it prevents stick slips and enables high-precision machining even at very slow speeds and extremely high pressures.

#### 2. Tough Oil Film

UNIWAY SF forms a tough film of lubricating oil that can withstand even high loads on slideway surfaces.

#### 3. Strong Adhesion

Thanks to its powerful adhesive strength, UNIWAY SF forms a durable oil film even with intermittent oiling and vertical slideways.

#### 4. Excellent Corrosion Prevention

UNIWAY SF will not corrode either iron or copper alloys, and it prevents the formation of rust.

#### 5. Can Be Used for Long Periods

Thanks to its excellent thermal stability, UNIWAY SF resists sludge formation and can withstand repeated long-term use.

#### 6. Other Features

The color of UNIWAY SF is more attractive than that of other slideway lubricating oils.

### ● CONTAINERS

200-liter drums and 20-liter cans.

Typical Properties of UNIWAY SF

Item		UNIWAY SF 32	UNIWAY SF 68	UNIWAY SF 220	Test Method (ASTM)
Density (15°C)	g/cm <sup>3</sup>	0.870	0.875	0.891	D 4052
Viscosity(40°C)	mm <sup>2</sup> /s	32.6	66.0	216	D 446
	(100°C)	mm <sup>2</sup> /s	5.59	8.82	
Viscosity index		110	108	99	D 2270
Total Acid Value	mgKOH/g	0.80	0.80	0.80	D 664
Flash point(COC)	°C	230	250	290	D 92
Pour point	°C	- 32.5	- 25.0	- 12.5	D 97
Color (ASTM)		L 0.5	L 1.0	L 2.5	D 1500
Copper Corrosion (100°C×3h)		1	1	1	D 4048
Rust Preventive (60°C×24h)		Pass	Pass	Pass	D 665



## Handling Precautions

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▼ Follow the following precautions when handling this product.

- Read this product's Material Safety Data Sheet before using the product.
- Obey all applicable laws and regulations concerning the handling and disposal of this product, particularly laws and regulations related to fire safety, the treatment and disposal of waste and sewage, the prevention of water and ocean pollution, and workplace safety and hygiene.

Please request the Material Safety Date Sheet where you purchased this product.