

## THK Original Grease

# AFJ Grease

- Base oil: refined mineral oil
- Consistency enhancer: urea-based



AFJ grease uses refined mineral oil as its base and a urea-based grease as its consistency enhancer, while also featuring other special additives. This gives it excellent lubrication properties at a wide range of speeds—from low to high.

### [Features]

#### (1) Wide range of speeds

It provides consistent and even lubrication at a wide range of speeds, from low to high.

#### (2) Wear resistance

Even at low speeds, it has excellent oil film formation to reduce wear.

#### (3) Vibration resistance

It reduces wear caused by machine vibration during high-speed operation.

### [Representative Physical Properties]

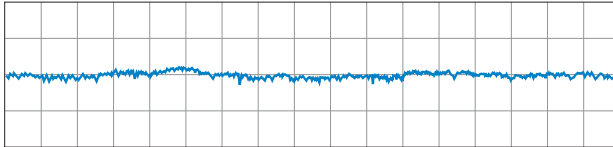
Item	Representative value	Test method
Consistency enhancer	Urea-based	
Base oil	Refined mineral oil	
Base oil kinematic viscosity: mm <sup>2</sup> /s (40°C)	20	JIS K 2220 23
Worked penetration (25°C, 60 W)	325	JIS K 2220 7
Mixing stability (100,000 W)	360	JIS K 2220 15
Dropping point: °C	185	JIS K 2220 8
Evaporation amount: mass% (99°C, 22 h)	0.6	JIS K 2220 10
Oil separation rate: mass% (100°C, 24 h)	7.0	JIS K 2220 11
Copper plate corrosion (B method, 100°C, 24 h)	Accepted	JIS K 2220 9
Low-temperature torque: mN·m (-20°C)	Starting	JIS K 2220 18
	Rotational	
4-ball testing (welding load): N	3089	ASTM D2596
Service temperature range: °C	-20 to 120	
Color	Yellowish brown	

## [Wear Resistance Test Data (LM Guide Block)]

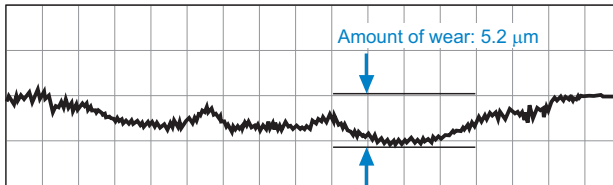
Test conditions

Item	Description
Tested model	NRS55B2SS+780LP
Applied load	5.9 kN
Feeding speed	0.1 m/min
Stroke	200 mm
Grease quantity	12 cm <sup>3</sup> (initial lubrication only)
Test duration	480 hours

### AFJ Grease



### Other urea-based grease



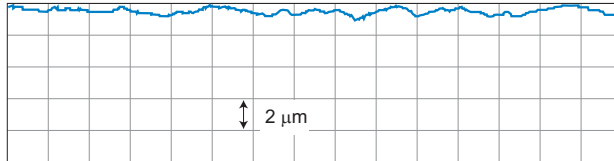
## [Vibration Resistance Test Data (LM Guide Rail)]

Test conditions

Item	Description
Tested model	SHS25R1UU+580LP
Applied load	11.05 kN (0.35C)
Feeding speed	60 m/min
Acceleration/ deceleration	9.8 m/s <sup>2</sup>
Stroke	350 mm
Grease quantity	2 cm <sup>3</sup> (initial lubrication only)

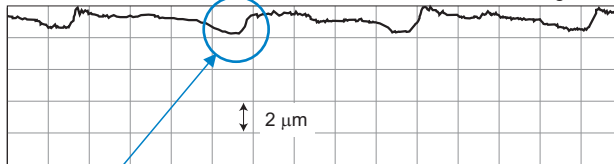
AFJ Grease

After traveling 434 km



Other urea-based grease

After traveling 86 km



**“Wear  
mechanism”**

High-speed  
movement and  
rapid acceleration/  
deceleration

Mechanical  
vibrations  
occur

Raceways  
wear down

## [LM Guide Rolling Resistance Measurement Data]

Test conditions

Item	Description
Tested model	SHS25R1UU+3000L
Applied load	No load
Acceleration	29.4 m/s <sup>2</sup> (3G)
Stroke	2300 mm
Test temperature	21°C
Grease quantity	2 cm <sup>3</sup> (initial lubrication only)
Measurement speed	0.5, 1, 2, 3, 4, 5, 6 m/s

