Low particle generating KURODA C-Grease

C-Grease meets the needs for environments requiring low particle generation in equipment such as semiconductor manufacturing machines and electronic component devices.

Features

- Particle generation greatly reduced!
- Torque stabilization!
- Excellent lubrication performance!
- Rust prevention equivalent to that of lithium grease!

Model No.

C1-080G-J (supplied in a 80 g bellows-shaped container)

C1-400G-J (supplied in a 400 g bellows-shaped container)

- * For the can (1 kg, 1.5 kg) and the syringe (50 cc), contact KURODA.
- * The color of the bellows-shaped container for KURODA C-Grease is white.

Main properties

| Appearance | Yellow white |
|-----------------------------|---------------|
| Thickener | Urea |
| Base oil | Synthetic oil |
| Consistency | 280 (No.2) |
| Operating temperature range | −30 to +150°C |

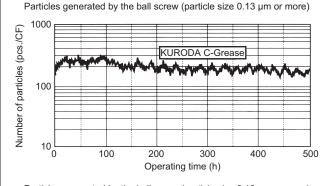
/!\ Precautions when handling

Before using C-Grease, carefully read the precautions on the "Safety Data Sheet" (SDS) of the corresponding grease type. For the "Safety Data Sheet", request to the distributor from whom you purchased the product.

| Main applications | KURODA C-Grease |
|---|---|
| Caution Precautions when handling | ◆ C-Grease is flammable (flash point: 220°C). Keep away from flame. ◆ Use protective glasses when handling. If it enters your eye, irritation may be occur. ◆ Use protective gloves when handling. If it touches your skin, irritation may be occur. ◆ Do not eat. (If you eat it, you will suffer from diarrhea and vomiting.) ◆ Keep away from children. ◆ After use, seal thoroughly to prevent intrusion of dirt or water. |
| Emergency measures | If it enters your eye, wash the eye with clean water for over 15 minutes and consult a doctor. If it touches your skin, fully wash with soap and water. If swallowed, do not induce vomiting. Immediately consult a doctor. |
| Disposal of waste oil and waste container | ◆ For disposal, take the appropriate measures according to the "Waste Management and Public Cleansing Act". |
| Storage | ♦ Avoid direct sunlight, keep away from fire or heat and store in a dark place. |

Performance data

■ Reduced particle generation

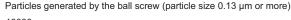




Shaft diameter: 20 mm Lead: 20 mm

Preload: 800 N Rotational speed: 1200 min-1

Stroke: 250 mm Amount of grease: 1 cc Measurement interval: 1 h



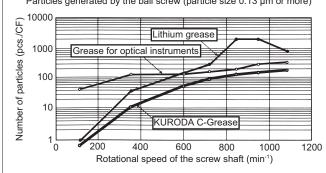


Fig. 2 Test conditions Ball screw

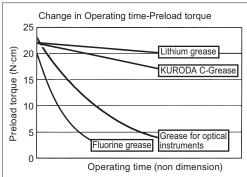
Shaft diameter: 20 mm

Lead: 20 mm Preload: 800 N Stroke: 250 mm

Amount of grease: 1 cc Measurement interval: 1 h These values are mean values taken after 100 measurements of

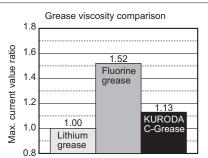
each rotational speed. The operating time of the ball screw during those measurements is about 240 hours.

■ Torque



Test conditions are the same as those in Fig. 2. The less preload torque, the better the lubrication performance.

■ Lubrication



The above bars indicate the maximum current value ratio at 500 mm/s (1500 min-1) for a single-axis robot. The current value of the drive motor is proportional to the load torque.

Therefore, the larger the current value is, the larger the grease resistance becomes (smoothness is reduced).

Low particle generating KURODA S-Grease

S-Grease meets the needs for environments requiring low particle generation in equipment such as semiconductor manufacturing machines, liquid crystal devices and medical equipment.

Features

- Suitable for clean environments!
- Excellent lubrication performance!
- Torque stabilization!
- Excellent rust prevention!

Model No.

S1-080G-J (supplied in a 80 g bellows-shaped container)

S1-400G-J (supplied in a 400 g bellows-shaped container)

- * For containers (cans, etc.) other than the above containers, contact KURODA.
- * The color of the bellows-shaped container for KURODA S-Grease is chocolate brown.

Main properties

| Appearance | Yellow white |
|-----------------------------|---------------|
| Thickener | Urea |
| Base oil | Mineral oil |
| Consistency | 280 (No.2) |
| Operating temperature range | −20 to +150°C |

!\ Precautions when handling

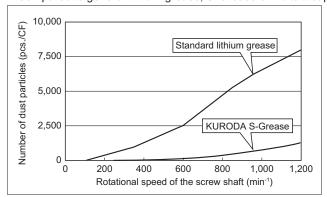
Before using C-Grease, carefully read the precautions on the "Safety Data Sheet" (SDS) of the corresponding grease type. For the "Safety Data Sheet", request to the distributor from whom you purchased the product.

| you purchassa the product. | | |
|---|--|--|
| Main applications | KURODA S-Grease | |
| Caution Precautions when handling | S-Grease is flammable (flash point: 195°C). Keep away from flame. Use protective glasses when handling. If it enters your eye, irritation may be occur. Use protective gloves when handling. If it touches your skin, irritation may be occur. Do not eat. (If you eat it, you will suffer from diarrhea and vomiting.) Keep away from children. After use, seal thoroughly to prevent intrusion of dirt or water. | |
| Emergency measures | If it enters your eye, wash the eye with clean water for over 15 minutes and consult a doctor. If it touches your skin, fully wash with soap and water. If swallowed, do not induce vomiting. Immediately consult a doctor. | |
| Disposal of waste oil and waste container | For disposal, take the appropriate measures according to the "Waste Management and Public Cleansing Act". | |
| Storage | ◆ Avoid direct sunlight, keep away from fire or heat and store in a dark place. | |

Performance data

■ Reduced particle generation

o Compared to general lithium grease, S-Grease exhibits a superior dust prevention property.

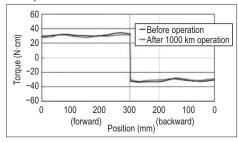


| T4 | |
|----------------------|--------|
| Test conditions | |
| Screw shaft diameter | ø20 mm |
| Lead | 20 mm |
| Axial load | 800 N |

■ Lubrication performance: Comparison of changes in torque values before and after operation

| Test conditions | |
|----------------------|---------|
| Screw shaft diameter | ø20 mm |
| Lead | 20 mm |
| Preload torque | 30 N·cm |

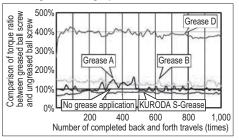
o After 1000 km operation, no change of torque is found.



■ Torque: Comparison of torque values of low particle-generating grease types

| • | |
|----------------------|--------|
| Test conditions | |
| Screw shaft diameter | ø16 mm |
| Lead | 2 mm |
| Operating stroke | 0.5 mm |

o The torque stabilization feature is exhibited during oscillating operation.



■ Rust prevention

- Received a #1 rating in rust prevention after conducting the bearing rust prevention test (52°C, 48 hours)
- * #1 indicates that no rust formed under the above test conditions.

