



Previous Name: Shell Tonna T

Shell Tonna S2 M 220

- Extra Separation from Coolants

Machine tool slideway oils

Shell Tonna S2 M oils are specially designed for the lubrication of machine tool slides, tables and feed mechanisms. Their enhanced tackiness and stick-slip characteristics combine to offer superior frictional performance on slideways. They are specially recommended in cases where high exposure to soluble cutting fluids exist.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Ready separation from water-miscible cutting fluids**
Separates completely and immediately from water-miscible metalworking fluids allowing easy removal by skimming. This helps to achieve longer coolant life, better cutting performance and to reduce Health & Safety issues.
- **Good slideway adhesion**
Provides very effective adhesion to slideway surfaces, resisting wash-off by metalworking fluids and thus reducing oil consumption and giving more uniform working condition for the machine.
- **Good frictional properties**
"Stick-slip" problems are overcome allowing more accurate positioning. This provides benefits of improved finished surface quality and dimensional accuracy of work pieces.
- **Good anti-wear performance**
Provides anti-wear protection for slideways, gears, bearings and hydraulic system components.
- **Excellent corrosion prevention characteristics**
Provides effective prevention of machine tool surfaces and components in the presence of water-miscible cutting fluids.

Main Applications



- **Machine tool slideways, tables and feed mechanisms**
Developed for use on a wide range of materials used for machine tool slideway surfaces, including cast iron and synthetic materials.
Shell Tonna S2 M oils can be used also in the hydraulic and gearboxes system although in such applications Shell Tonna S3 M oils are generally preferable.
The lower viscosity grades are intended for horizontal slide lubrication (Shell Tonna S2 M 32 or 68). For vertical slides use Shell Tonna S2 M 220.

Specifications, Approvals & Recommendations

- Fives Cincinnati P-50 (ISO 220), P-47 (ISO 68), P-53 (ISO 32)
- ISO 19378 / ISO 6743-13 GA and GB DIN CGLP
- CGLP Slideway Oils against DIN 51502

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Typical Physical Characteristics

| Properties | | Method | Shell Tonna S2 M 220 |
|----------------------------------|--------|--------------------|----------------------|
| ISO Viscosity Grade | | ISO 3448 | 220 |
| Kinematic Viscosity | @40°C | mm ² /s | 220 |
| Kinematic Viscosity | @100°C | mm ² /s | 19.1 |
| Viscosity Index | | ISO 2909 | 98 |
| Density | @15°C | kg/m ³ | 894 |
| Flash Point (Cleveland Open Cup) | | °C | 250 |
| Pour Point | | °C | -15 |

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

- Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>

- **Protect the Environment**

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Advice**

Advice on applications not covered here may be obtained from your Shell representative.