



Shell Tonna Oils S

Very high performance lubricant for machine tool slideways

Shell Tonna Oils S are specially designed for the lubrication of machine tool slides and tables. They are based on highly refined mineral oils and contain additives to enhance tackiness, anti-wear and stick-slip characteristics. They are specially recommended in cases where high precision and low speed machines are used as well as where there are combined lubrication systems.

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.
- **Machine tool hydraulic systems**
Particularly recommended for machines which have a combined hydraulic and slideway lubrication system.
- **Machine tool gearboxes and spindles**
Also suitable for gear and headstock lubrication.

The lower viscosity grades are intended for horizontal slide lubrication (Tonna S 32 or 68): For vertical slides use Tonna S 220.

Advice on applications not covered in this leaflet may be obtained from your Shell representative.

Performance Features and Benefits

- **Excellent frictional properties**
Specially developed to overcome "stick-slip" problems with slow moving machine tool slides and tables, allowing more accurate positioning. This provides benefits of improved finished surface quality and dimensional accuracy of workpieces.
- **Advanced technology**
Developed in conjunction with machine tool manufacturers to meet the requirements of the most advanced machine tools using a wide variety of slideway materials.

- **Good slideway adhesion**

Provides strong adhesion to slideway surfaces, resisting wash-off by metalworking fluids and those reducing oil consumption and giving more uniform working condition for the machine.

- **Ready separation from water-miscible cutting fluids**

Separates readily from water-miscible metalworking oils allowing easy removal by skimming.

- **Excellent anti-wear performance**

Provides high levels of anti-wear protection for slideways, gears, bearings and hydraulic system components making the product particularly suitable for machines with combined systems.

- **Excellent corrosion prevention characteristics**

Provides effective protection of machine tool surfaces and components in the presence of water-miscible cutting fluids.

Specifications and Approvals

Tonna S meets the following specifications:
ISO 11158 / ISO 6743-4 HM and HG,
ISO 12925-1 / ISO 6743-6 CKC
ISO 19378 / ISO 6743-13 GA and GB
DIN CGLP
Cincinnati Machine P-50 (ISO 220), P-47 (ISO 68)



Technical Data Sheet

Health & Safety

Guidance on Health and Safety are available on the appropriate Material Safety Data Sheet, which can be obtained from your Shell representative.

Protect the environment

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

Typical Physical Characteristics

Shell Tonna S	32	68	220
ISO Viscosity Grade (ISO 3448)	32	68	220
Kinematic Viscosity @ 40°C mm ² /s 100°C mm ² /s (ISO 3104)	32 5.5	68 8.9	220 18.5
Viscosity Index (ISO 2909)	108	105	99
Density @ 15°C kg/m ³ (ISO 12185)	870	879	894
Flash Point °C (Cleveland Open Cup) (ISO 2592)	215	225	250
Pour Point °C (ISO 3016)	-30	-24	-15

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