



Shell Tonna S4 M 68

- Extra Machining Accuracy
- Standard & Advanced Applications
- Excellent Fluid Compatibility

Advanced machine tool slideway oils

Shell Tonna S4 M oils are specially designed for the lubrication of machine tool slides, tables and feed mechanisms. Their enhanced tackiness and stick-slip characteristics are combined to offer outstanding frictional performance on slideways. They are specially recommended in cases where high precision and low speed machines are used as well as in combined lubrication systems.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Outstanding frictional Properties**
Today's machine tool slides and tables require accurate positioning and products with outstanding friction protection to overcome stick slip problems. Shell Tonna S4 M is engineered with enhanced protection compared to Shell Tonna S3 M.
- **Fast separation from water-miscible cutting fluids**
Separates readily from a wide variety of water-miscible metalworking fluids allowing easy removal by skimming.
- **Strong slideway adhesion**
Helps to reduce oil consumption through a strong adhesion to slideway surfaces and resistance to wash off by metalworking fluids.
- **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.
- **Outstanding 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.

Main Applications



- **Machine tool slideways, tables and feed mechanism**
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 (Shell Tonna S4 M 32 or 68). For vertical slides use Shell Tonna S4 M 220.

Specifications, Approvals & Recommendations

- Fives (Cincinnati Machine) P-53 (ISO 68)
- ISO 11158 HM Fluid
- DIN 51524-2 HLP
- DIN 51517-3 CLP
- ISO 12925-1 CKC
- ISO 19378, ISO 6743-13 GA, ISO 6743-13 GB
- GB 11118.1-2011 L-HG

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

Typical Physical Characteristics

Properties			Method	Shell Tonna S4 M 68
ISO Viscosity Grade			ISO 3448	68
Kinematic Viscosity	@40°C	mm ² /s	ASTM D445	68
Kinematic Viscosity	@100°C	mm ² /s	ASTM D445	92
Viscosity Index			ISO 2909	100
Density	@15°C	kg/m ³	ISO 3675	875
Flash Point (COC)		°C	EN ISO 2592	225
Pour Point		°C	ISO 3016	-27
Rust Test, Synthetic Sea Water			ASTM D665B	PASS
Demulsibility (time to no more than 3 ml emulsion)	@54°C	minutes	ASTM D1401	15
FZG (A/8,3/90)		Fail Stage	ISO 14635-1	12 PASS

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

• Health and Safety

Shell Tonna S4 M 68 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used fluid. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from <https://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.