



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

- Cincinatti Machine P-50 (ISO 220), P-47 (ISO 68), P-53 (ISO 32)
- ISO 19378 / ISO 6743-13 GA and GB DIN CGLP

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk, or the OEM Approvals website.

#### Typical Physical Characteristics

Properties			Method	Shell Tonna S2 M Oils
ISO Viscosity Grade			ISO 3448	220
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ISO 3104	220
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ISO 3104	19.1
Viscosity Index			ISO 2909	98
Density	@15°C	kg/m <sup>3</sup>	ISO 12185	894
Flash Point (Cleveland Open Cup)			ISO 2592	250
Pour Point			ISO 3016	-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.