



Previous Name: Shell Tonna V

# Shell Tonna S2 MX 220

- High adherence
- Excellent Separation from Coolants
- Standard Applications

## Machine tool slideway oils

Shell Tonna S2 MX 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 adherence is required and where high exposure to soluble cutting fluids exist.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

- **Excellent slideway adhesion**  
The high tackiness agent content provides very effective 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 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 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 protection 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 MX 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 MX 68). For vertical slides use Shell Tonna S2 MX 220.

#### Specifications, Approvals & Recommendations

- Fives Cincinnati P-50 (ISO 220), P-47 (ISO 68)
  - 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	Tonna S2 MX 220 (USA only)
ISO Viscosity Grade			ASTM D2422	220
Kinematic Viscosity	@104°F	mm <sup>2</sup> /s	ASTM D445	220
Kinematic Viscosity	@212°F	mm <sup>2</sup> /s	ASTM D445	18.5
Viscosity Index			ASTM D2270	99
Density	@15°C	kg/m <sup>3</sup>	ASTM D1298	895

Properties		Method	Tonna S2 MX 220 (USA only)
Flash Point (Cleveland Open Cup)	°F	ASTM D92	482
Pour Point	°F	ASTM D97	5

These characteristics are typical of current production. While 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 authorized collection point. Do not discharge into drains, soil or water.

### Additional Information

- **Advice**  
Product recommendations for applications not covered here may be obtained from your Shell representative.