

SHELL TONNA S3 M

HIGH PERFORMANCE LUBRICANT FOR MACHINE TOOL SLIDEWAYS

DESIGNED TO MEET CHALLENGES

Shell Tonna S3 M is specially designed for the lubrication of machine tool slides and tables. It is based on highly refined mineral oils and contain additives to enhance its tackiness, anti-wear and stick-slip characteristics. It is specially recommended in cases where high precision and low speed machines are used as well as where there are combined lubrication systems.

PERFORMANCE FEATURES

EXCELLENT FRICTIONAL PROPERTIES

- Specially developed to overcome 'stick-slip' problems with slow moving machine tool slides and tables, allowing more accurate positioning. This provides major benefits of improved surface finish 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.

READY SEPARATION FROM WATER-EXTENDIBLE CUTTING FLUIDS

- Separates readily from water-extendible 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.

EXCELLENT CORROSION PREVENTION CHARACTERISTICS

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

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 grade is intended for horizontal slide lubrication (Shell Tonna S3 M 68). For vertical slides use Shell Tonna S3 M 220.

SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS

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).

TYPICAL PHYSICAL CHARACTERISTICS

CHARACTERISTICS	68	220
Kinematic Viscosity (ISO 3104) @ 40°C mm ² /s	68	220
@ 100°C mm ² /s	8.6	19.1
Viscosity Index (ISO 2909)	98	98
Density @ 15°C kg/m ³ (ISO 12185)	879	894
Flash Point °C (COC) (ISO 2592)	225	250
Pour Point °C (ISO 3016)	-24	-15