



Product Data Sheet WAYLUBE

MACHINE TOOL WAY LUBRICANTS May 2001

Waylubes are premium products designed for lubrication of the sliding ways of all types of machine tools. The products may also be used for general machine tool lubrication or in application which require a non-corrosive product with extreme pressure properties.

In service Waylubes offer the following benefits:

- Excellent stick-slip characteristics for smooth chatter-free operation
- Good extreme pressure and anti-wear properties
- Suitability for general machine tool lubrication
- Strong adhesion and corrosion protection

Product Application

Machine tool carriages operate on slideways under high loads and slow speeds. The carriages must start in motion quickly and then continue at a constant speed. Excessive frictional resistance at start-up compared to frictional resistance while in motion can cause erratic motion, which is referred to tool chatter or-stick-slip. Effective way oils must have a low stick-slip value (static/kinetic coefficient of friction ratio) to overcome the stick-slip motion ordinarily associated with slow-moving machine parts. Way oils must also have EP and rust-preventive properties to prevent scoring of ways, guides and gears. They must also possess tackiness to prevent run-off and to adhere strongly to sliding surfaces, making them effective in the control of wear and suitable for general machine tool lubrication – including service in enclosed gear units that operate under moderate service conditions.

Waylubes are blended from highly refined base stocks and fortified with additives to provide excellent lubricity to overcome stick-slip problems Applications such as heavily loaded ways will benefit from the extreme pressure and high film strength properties of the fluid. The tackifier prevents the fluid from being drained away from lubricated surfaces and helps to prevent the fluid from being washed away by emulsifiable cutting fluids. Furthermore, the tackifier minimizes squeeze out of the fluid on heavily loaded ways. **Waylubes** contain rust and corrosion inhibitors to protect machine parts and offer good water separating properties.

Product Recommendations and Approvals

Waylube 68 and 220 pass the stick-slip test of the Cincinnati Milacron Company, meeting the requirements of its Specifications P-47 and P-50, respectively and are approved for use with Bijur automatic lubricating systems.

Product Maintenance and Handling

Lubrication of ways can be difficult under adverse conditions. Systems should be routinely inspected for misaligned or scored ways, clogged oil grooves and contamination with soluble oil emulsions. **Waylube** oils are manufactured from high quality petroleum base stocks, carefully blended with selected additives. As with all petroleum products, good personal hygiene and careful handling should always be practiced. Avoid prolonged contact to skin, splashing into the eyes, ingestion or vapour inhalation. Please refer to the Material Safety Data Sheet for further information.

Note: This product is not controlled under Canadian WHMIS legislation.

Typical Properties

| Waylube Grade | 32 | 68 | 100 | 220 |
|-----------------------------------|-----|------|------|------|
| Density @ 15°C, kg/m ³ | 910 | 913 | 915 | 920 |
| Colour, | 8.0 | 8.0 | 8.0 | 8.0 |
| Pour Point, °C | -48 | -24 | -20 | -16 |
| Flash Point, °C | 167 | 202 | 220 | 224 |
| Viscosity Index | 110 | 110 | 107 | 100 |
| Kinematic Viscosity, cSt | | | | |
| @ 40°C | 32 | 69.5 | 100 | 227 |
| @ 100°C | 5.7 | 7.9 | 11.5 | 16.9 |

The typical properties shown above are representative of current production. Some are controlled by manufacturing and performance specifications while others are not. All may vary within modest ranges.