

## 166 SynTuff™ MTF Full Synthetic Gear Lube SAE 75W-80 and 75W-90

SynTuff™ MTF Full Synthetic Gear Lube is a premium, full synthetic, fuel efficient, heavy-duty gear lubricant for use in synchronized or non-synchronized manual transmissions and steering systems that specify the use of an API GL-4 type gear lubricant. SynTuff™ MTF Full Synthetic Gear Lube is recommended for year round lubrication of manual transmissions in light to severe duty equipment operating in a wide range of environments. SynTuff™ MTF Full Synthetic Gear Lube can also be used in those manual transmission applications that are equipped with intarders or integrated retarders that specify the use a API GL-4 type gear lubricant.

SynTuff™ MTF Full Synthetic Gear Lube is blended from a unique combination of select synthetic base fluids in combination with a premium proprietary, non-corrosive, thermally stable, thermally durable, multifunctional additive system. This combination provides the SynTuff™ MTF Full Synthetic Gear Lube with the following performance benefits and advantages:

- Enhanced thermal and oxidative stability and durability
- Excellent durable extreme pressure protection to resist component scuffing and wear
- Outstanding anti-pitting behavior to provide protection during high load conditions
- Excellent low temperature fluidity for quicker starts and easier shifing
- Balanced frictional characteristics to improve shift control and functionality
- Excellent synchronizer performance and compatibility
- Excellent quick shift performance for smooth and fast engagement of synchronizers and gears
- Improved gear engagement and shiftibility with a variety of synchronizer materials
- Prevention of the formation of sludge and carbon deposits
- Enhanced protection of copper, brass and bronze components from corrosion.
- Non-corrosivity to brass, bronze and other non-ferrous metal parts
- Enhanced gear, bearing and seal cleanliness
- Exceptional shear stability to help maintain a constant viscosity and film strength for better wear protection especially during severe operating conditions
- Excellent resistance to foaming
- Extended drain and service intervals
- Improved fuel economy benefits

Micron Moly®, a proven friction reducer, is added to Supreme Gear Lube to provide boundary lubrication. Micron Moly®, a liquid soluble type moly, plates itself to the metal surfaces of the gears and bearings. Once plated, Micron Moly® forms an indestructible, long-lasting, solid lubricant film capable of withstanding pressures up to 500,000 psi. This solid lubricant film, once plated to the gears and bearings, will reduce friction, vibration, and wear, thus extending equipment life.

Micron Moly® also provides a smooth finished surface on all moving parts of the transmission. This smooth finish minimizes the action of cold welding and vibration, which can occur during start up after the manual transmission have been standing idle and during periods of high shock loading. This in turn lessens starting loads and peak power demand; thus, resulting in a realistic fuel economy cost savings.

SynTuff™ MTF Full Synthetic Gear Lube is suitable and recommended for use in the following API Service Classification GL-4 applications:

| Spec                    | 75W-80 | 75W-90 |
|-------------------------|--------|--------|
| Chrysler MS9070         | X      | X      |
| Chrysler MS9224         | X      | X      |
| GM Part Number 12346190 |        | X      |
| MAN 341 Z2              | X      | X      |
| MAN 341 Z3              | X      |        |
| MAN 341 Z4              | X      |        |
| MAN 341 Z5              | X      |        |
| Volvo 97307             | X      |        |
| ZF-TE-ML-01E            | X      |        |
| ZF-TE-ML-01L            | X      |        |
| ZF TE-ML-02B            | X      | X      |
| ZF TE-ML-02E            | X      |        |
| ZF TE-ML-02L            | X      |        |
| ZF-TE-ML-08             | X      | X      |
| ZF-TE-ML-16K            | X      |        |
| ZF-TE-ML-17A            | X      | X      |

**SynTuff™ MTF Full Synthetic Gear Lube is not recommended for nor is it suitable for use in those applications where API GL-5 and MT-1 type gear lubricants are specified. SynTuff™ MTF Full Synthetic Gear Lube is also not recommended for use in Mack/Volvo I-shift, Detroit Diesel DT12, Mercedes Benz MB 235.11 or Eaton Roadranger transmission applications.**

## TYPICAL PROPERTIES

| SAE Grade   | SAE 75W-80    | SAE 75W-90    |
|---|---------------|---------------|
| Specific Gravity @ 60°F (15.5°C) ASTM D-1289                                      | .8472         | .8543         |
| Viscosity, cSt @ 40°C ASTM D-445  | 73.09         | 104.29        |
| Viscosity, cSt @ 100°C ASTM D-445   | 10.22         | 15.37         |
| Brookfield Viscosity, cP (ASTM D-2893)  |               |               |
| @ -26°C   | 10,940        | 6,410         |
| @ -40°C   | 100,580       | 46,560        |
| Viscosity Index ASTM D-2270   | 145           | 161           |
| Flash Point °F (°C) ASTM D-92   | 435° (224°)   | 450 (232°)    |
| Pour Point °F (°C) ASTM D-97  | <-45° (<-43°) | <-45° (<-43°) |
| Shear Stability (Viscosity after Shearing) – KRL,<br>20 hours, CEC L-45A ISO 3104 |               |               |
| Viscosity, cSt @ 100°C  | 9.92          | 14.56         |
| Four Ball EP ASTM D-2783  |               |               |
| Weld Point, kg  | 315           | 315           |
| Foam Test ASTM D-889  |               |               |
| Sequence I, 75°F  | 0/0           | 0/0           |
| Sequence II, 200°F  | 0/0           | 0/0           |
| Sequence III, 75°F  | 0/0           | 0/0           |