



MIL-COMM PRODUCTS COMPANY

PRODUCT PROFILE

EXTREME COLD TEMPERATURE PERFORMANCE

SUBJECT: TW25B® and its viscosity variants MC3000® MC2500® and MC1210®

Cold Temperature Performance reliability is one of the most challenging requirements of weaponry lubrication materials -- and MIL-COMM's TW25B® and its viscosity variants have been tested and proven to be consistently reliable by U.S. Air Force and U.S. military applications in extreme cold temperature efficacy of – 90 F (– 68 C).

To achieve extreme cold temperature performance levels, a lubricant must be – **first -- non-water soluble**, meaning that the lubricant should NOT absorb water, which will cause it to freeze (fail) at temperatures below freezing.

Water freezes at 32 F and when present in a lubricant material will severely compromise the efficacy of the lubricant for cold temperature applications. The performance of weaponry deployed on fighter jets poses an extreme test of cold temperature efficacy. Fighters and attack aircraft typically operating at altitudes of 30,000 to 50,000 feet are exposed to temperatures ranging from minus 30 F down to minus 80 F. This was a particular concern of the U.S. Air Force until MIL-COMM lubricants were adopted for aircraft bomb rack doors, related hardware and high-cyclic weaponry of the M61A1 class. Previously applied MIL-SPEC lubricants (such as Mil-L 63460 (“CLP”) and Mil-L-46000 (“LSA”) were – besides other deficiencies – water soluble.

During the past 30 years, MIL-COMM has become a recognized leader in the engineering of extreme performance lubricants for military and commercial applications requiring cold temperature performance and reliability.

TW25B® and its derivatives are proven to operate without failure in the harshest, coldest combat operating conditions. In very early testing (1993) of TW25B® by the U.S. Army at Redstone Arsenal, Huntsville, Alabama, the Army confirmed that in a weeklong “cold room” testing of TW25B® that the lubricant remained effective -- failed to freeze -- at (minus) -- 125 F. Later independent laboratory testing conducted by PETRO-LUBRICANT TESTING LABORATORIES of Lafayette, New Jersey – the U.S. Army Arsenal System’s long affiliated third-party lubricant testing facility – further documented the cold temperature efficacy of the TW25B® grease series.

With several decades of real-world extreme temperature performance reliability, MIL-COMM’s suite of weaponry lubricants remain unequalled for consistency and safety in the field.

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