



# Federal Aviation Administration

---

---

## Memorandum

Date: JUL 25 2006

From: David W. Hempe, Manager, Aircraft Engineering Division, AIR-100 DWH

To: All Directorate Managers  
All Aircraft Certification Office Managers

Subject: **INFORMATION**: Policy Statement on use of Metallic Materials Properties Development and Standardization (MMPDS) Handbook

---

---

Effective immediately, the Metallic Material Properties Development and Standardization (MMPDS) Handbook is accepted as the replacement for the "Department of Defense Handbook: Metallic Materials and Elements for Aerospace Vehicle Structures," designated MIL-HDBK-5, which is no longer published.

As a member of the MMPDS government steering group (GSG), the FAA has participated in the management and continued development of MIL-HDBK-5, now known as MMPDS. In April 2003, the last version of MIL-HDBK-5 (Revision J) was published in conjunction with the first edition of MMPDS (Revision 01). Both handbooks are technically equivalent. Therefore, the U.S. Air Force has cancelled MIL-HDBK-5J, referring users to the latest version of the MMPDS. The latest version, MMPDS-02 was released in September 2005. Since, MMPDS has fully replaced MIL-HDBK-5, the FAA will now accept MMPDS as an approved source for design allowable properties for metallic materials and fastened joint systems.

The Handbook has been a fundamental tool for structural design engineers. It is the primary source for statistically based metallic material properties used for strength approvals made by FAA engineers. The Handbook is critical to our safety mission. Using MMPDS allowables ensures a high level of safety associated with FAA approvals and reduces the need for FAA review and approval of material property data in support of airworthiness certification compliance. The importance of this document to the FAA and the Aerospace industry is significant and we will continue oversight of the Handbook coordination process. Without an updated MMPDS Handbook, all matter of designs, modifications, and repairs could be required to undergo an expensive and time consuming material certification process placing a significant resource burden on both industry and the FAA. The certification and continued airworthiness of civil aircraft are heavily dependent on the existence of a reliable MMPDS Handbook.

With the release of this memorandum, the MMPDS Handbook becomes an acceptable source for FAA approved material and fastener system allowables. We should consider the A and B-basis design values acceptable for compliance for material strength properties and design values for aircraft certification and continued airworthiness without further showing of compliance.

Currently, MIL-HDBK-5 is explicitly referenced in the U.S. title 14 Code of Federal Regulations (CFR) 27.613(d), 29.613(d), and AC 25.613-1, as an acceptable method of showing compliance. Specific reference to MIL-HDBK-5 was removed from 14 CFR 23.613 and 25.613, as a method of showing compliance. As a direct replacement for the cancelled MIL-HDBK-5, MMPDS design values are to be accepted for compliance to the aforementioned requirements. We encourage the use of the latest revision of the MMPDS. The latest version of MMPDS should be used for the certification of new products. However, prior editions of MIL-HDBK-5 used as the original certification basis will continue to be acceptable in support of existing certificated products per 14 CFR 21.17.