DEFENSE LOGISTICS AGENCY
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IN REPLY REFER TO DSCC-VAT (P. Kyne/DSN 850-0562/(614)692-0562) 12 March 2008

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Engineering Practices Study Concerning the Use of Lead-Free, High-Temperature Solders In EMI/RFI; filters; Project number 5915-2008-018.

An engineering practices study is being conducted to determine if lead(Pb)-free, high-temperature solders are being used in the manufacture of military EMI/RFI filters and if so, what actions should be taken.

Background

Specifications of interest:

MIL-PRF-15733
MIL-PRF-28861

The use of pure tin (Sn) is prohibited in the above military filter specifications. Although the exact wording may differ, each of these specifications requires that tin be alloyed with a minimum of 3 percent lead (Pb).

The G-11 committee of GEIA reported, at the September 2007 meeting, that some MIL-PRF-39003 (solid tantalum capacitors) parts had failed destructive physical analysis (DPA) because the high temperature solders used (typically SnAg) did not contain the required 3% lead (Pb). This raised concern that some of the high temperature solders used for lead attachment on other military components may also be in conflict with the requirement. The committee requested that DSCC query the supply base to determine which parts, if any, may not meet or have conflicts with the restrictions on materials and finishes that may be used for internal and external construction of the parts.

Request for Comments

Please comment on the following issues.

Is lead-free, high-temperature solder used in the construction of your parts?

Are there any known failures related to the use of lead-free, high-temperature solders with regards to the above specifications?

Should DSCC revise the pure tin prohibition paragraph in the above specifications to allow SnAg alloys? If so, would the following addition to the pure tin prohibition be acceptable?

> **"Use of SnAg high temperature solders for internal connections requires approval by the qualifying activity."**

Concurrence or comments are required at this Center no later than 30 April 2008. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians or this office, as applicable, in sufficient time to allow for consolidating the department reply. Since Navy - EC is a custodian for this document; all Navy review activities should forward their comments directly to this Center.

The point of contact for this project is Mr. Patrick Kyne, Defense Supply Center Columbus, DSCC-VAT, Post Office Box 3990, Columbus, OH 43218-3990. The preferred method of contact is via email. Patrick can be reached at patrick.kyne@dla.mil or 614-692-0562/DSN 850-0562.

/SIGNED/
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