

ENGINEERING PRACTICE STUDY

TITLE: MIL-PRF-6106; 3.4 Materials – intended reference to silicone compound, silicone elastomer, internal to relays, fully rated 25 amperes and above.

11 August 2026

STUDY PROJECT (SEE ATTACHMENT 1)

FINAL REPORT

Study Conducted By DLA Land and Maritime

Project Number: 5945-2026-031

Prepared by:

Erika Baker

ATTACH 1

I. **OBJECTIVES:** This engineering practice study is being conducted to examine (1) MIL-PRF-6106; 3.4 Materials to determine definition of the following terms: silicone compound, silicone elastomer, internal to relays, fully rated 25 amperes and above.

II. **BACKGROUND:** At this time, MIL-PRF-6106; 3.4 Materials support the following statements:

1. The use of silicone or silicone compound internally for any purpose is prohibited.
2. The use of silicone elastomers internally for relays fully rated 25 amperes and above is acceptable.

III. **RESULTS:**

1. The sentence, shall be changed FROM "The use of silicone or silicone compound internally for any purpose is prohibited." TO "The use of silicon (within the electronic assembly) for any purpose is prohibited. Rationale is silicone is a compound, eliminating the need to reference both terms. Also, "internally" is a relative term and requires detail of location.

Question and Answer 1: Does a silicone compound contain silicon? If so, what is the benefit of stating silicone? Yes, silicone is a compound of silicon. There is no benefit.

Question and Answer 2: Is the term internally understood as inside the relay housing? Yes. The use of silicon within the electronic assembly is prohibited.

2. The sentence, shall be changed FROM "The use of silicone elastomers internally for relays fully rated 25 amperes and above is acceptable." TO "The use of silicone elastomers (as defined by manufacturers' Material Data Sheet) is acceptable for application external to electrical assembly for relays rated 25 amperes and above - for all loads."

Question and Answer 1: Is the term internally understood to be inside the relay housing? If not, what is the location? While the term may be understood as inside the relay housing, the placement should be outside of electrical assembly.

Question and Answer 2: Does the requirement of fully rated 25 amperes and above imply all listed loads be rated at 25 amperes and above, or a subset of loads (Resistive, Inductive, and Motor) be rated at 25 amperes and above? The fully rated requirement applies to all listed loads, not a subset of loads.

IV. **CONCLUSIONS:** MIL-PRF-6106 was reviewed, and a DLA Land and Maritime position determined the document shall be modified to reflect stated sentences.

V. **RECOMMENDATIONS:** Update MIL-PRF-6106; 3.4 as stated in Results.