1.0 PURPOSE

To determine if the encapsulation compound used to encapsulate electrical assemblies can resist absorbing moisture.

2.0 SCOPE

Encapsulated assemblies and parts evaluated per ACRI2010.

3.0 REFERENCES

ACRI2010, "Encapsulation Criteria"

4.0 DEFINITIONS

None.

5.0 TEST EQUIPMENT

5.1. Scale. Accuracy of the scale shall be at least ±0.01 grams.

5.2. Drum or tank with clean tap water. Drum or tank shall be of sufficient size and shape to physically accommodate the test samples completely immersed.

5.3. Environmental chamber. Chamber shall be of sufficient size to accommodate the test samples and be capable of maintaining a temperature of 23ºC ±3ºC.

6.0 TEST SAMPLES

Three samples of the encapsulation compound. Samples shall be in their solidified form with any fillers and/or additives included. The size of the test samples shall be circular with a diameter of 50 mm ± 1 mm and a thickness of 3 mm ± 0.2 mm.

PROCEDURES

6.1. Condition three test samples for the absorption test. The test samples shall be conditioned at an ambient temperature of 23ºC ±3ºC for a minimum of 24 hours.

Note: The samples can be conditioned inside or outside of the environmental chamber as long as the ambient temperature is met.

6.1.1. After 24 hours of conditioning individually weigh each sample to within ±0.01 gram. Record their weights.

6.1.2. Immerse the test samples in water at a temperature of 23ºC ±3ºC for 24 hours.

6.1.3. After 24 hours, remove the test samples and wipe dry.

6.1.4. Weigh the test samples to within ±0.01 gram and record the weight. If the weight has increased by more than 1%, the test is failed and shall be terminated.

7.0 TEST DATA

7.1. Identify the encapsulation compound manufacturer's name and part number.

7.2. Record the weight of the samples before and after immersion.

8.0 PASS/FAIL CRITERIA

The test samples shall not increase in weight after soaking by greater than 1% of its pre-soaking weight.