1.0 Purpose:

1.1 This document describes the procedures necessary to perform Leakage Testing of Barrier Materials-Submersion test.

2.0 Scope:

2.1 This Work Instruction defines methods used for the verification of Leakage Testing of Barrier Materials-Submersion test

3.0 Responsibility and Authority:

3.1 The responsibility and authority for the administration, implementation and maintenance of this work instruction has been assigned to the Sr. Operations Manager and / or his / her designee(s).

4.0 Forms and References:

4.1 MIL-STD-2073-1E, Change 4

4.2 MIL-STD-3010C

4.3 MIL-PRF-121

4.4 MIL-PRF-131

4.5 MIL-PRF-22019, Type 1

4.6 MIL-PRF-22191

4.7 MIL-PRF-81705

4.3 ASC-WDL-PFC-4.8-10

4.8 ASC-WDL-PFC-4.8-14

4.9 ASC-WDL-0080

4.10 AAR-WDL-0004.11

4.11 PackRite Robot Jaw Sealer Operator's Manual

5.0 Procedure:

5.1 The Submersion test shall be performed daily.

5.2 **Preparation:**

5.2.1 Prepare one 6" x 6" test specimen for each type of barrier material and each heat seal machine that is used for the day as follows:

a) Set proper temperature, dwell, and pressure on heat sealing machines per operator's manual and allow time for temperature to be reached.

b) When proper temperature is reached, heat seal barrier material / bag making sure a minimum of a ¼-inch-wide heat seal is obtained.

c) Fill specimen with 200-gram weight for the test. Weight will act as "simulated contents"

d) Write the date, contract number (If available) machine number and your initials on a Leak / Heat Seal label and set aside.

e) Fill tub with water to fill line.

f) Use a calibrated thermometer and calibrated timer to obtain ambient temperature and record it on ASC-WDL-0080. Set timer for 30 seconds and record ambient temperature when the 30 seconds is reached.

g) Use a calibrated thermometer and calibrated timer to test water temperature before and after testing of specimen and record the temperatures on form ASC-WDL-0080. Set timer for 30 seconds for each test and record measurement when 30 seconds is reached.

h) If water temperature is found to be 40 degrees below the recorded ambient temperature see your lead or management before accepting testing results.

5.3 **Testing:**

5.3.1 Place specimen in a tub with water.

5.3.2 Record the “time in” that the specimen was placed in the water filled tub.

5.3.3 Keep specimen submerged for a minimum of 1 hour. Use a calibrated timer to monitor time specimen is submerged.

5.3.4 After a minimum of 1 hour has passed, remove specimen from tub and carefully dry the outside of the specimen with a paper or cloth towel.

5.3.5 Record the “time out” that the specimen was removed from water on the Leak / Heat Seal label.

5.3.6 Use scissors and cut the specimen in approximately half of sealed edge, parallel to the new heat seal.

5.3.7 Inspect the inside of the specimen to make sure no water has leaked in.

5.3.8 If any water is found inside the specimen, it is considered a failure and a new specimen will need to be tested. Return to Preparation (1) and repeat

5.3.9 If no water is found inside the specimen, record it as passing on the Daily Log sheet. Apply Leak / Heat Seal label to bottom portion of specimen. Place specimen inside specimen envelop for the day.

6.0 Revision History:

Revision Date:	Revision:	Sections / Page Revised:	Description / Reason for Revision:	Approved by:
15/DEC/2021	Original	All	Complete rewrite and reformatting.	Mike Baiz
08/JUN/2022	1	5.3.6 / Pg. 3	Changed, “at least 2 inches from the top of sealed edge” to “in approximately half”.	Mike Baiz