

# STANDARD SAFETY EQUIPMENT COMPANY

## STA SAFE® INFLATION TEST KIT

### User Instructions

*The StaSafe® Inflation Test Kit is intended to allow users of StaSafe® total encapsulating Level A Garments the opportunity to test each suit before and after use for air-tight integrity. This test does not guarantee fitness for use; it simply gives a quantitative measure of the ability of the suit to maintain a given internal air pressure. This test meets the ASTM F1052 inflation test requirements to ensure the air tight integrity of the TEG/Level A garments .*

### CONTENTS

1. One (1) Dump Valve Test Jig—gray PVC with two (2) clear plastic tubes and female Tru-Flate quick disconnects attached.
2. Three (3) Vinyl Stoppers—modified with center frill to cover valves.
3. One (1) 2-Foot Extension Hose- with both male and female Tru-Flate quick disconnects.
4. One (1) Needle Valve Block- with male Tru-Flate quick disconnect. This can be changed to match your local air supply fittings.
5. One (1) Magnehelic Pressure Gauge— registers air pressure with range of 0-6" in .2" increments. Unit of measure is inches of water.

Note: Extra stoppers are available separately, 3 per kit, under part number 149-1126-0100.

### CAUTIONS

- This test gives a quantitative measure of the air-tightness of the suit and does not indicate performance on a chemical level.
- A soapy water test should be applied initially and at regular intervals to a "passing" suit in order to check the sensitivity of the equipment. Boots and gloves, in particular, should be tested before each use, as they are the areas with the greatest probability of chemical exposure and wear.
- Care should be taken to inflate the suit correctly as over-inflation may damage the suit of equipment. Inflate slowly and never exceed maximum inflation pressure of 15 PSI.
- Do not leave the test-jig or stoppers in any suit unattended or for extended periods of time.

### YOU WILL NEED

1. StaSafe Inflation Test Kit (p/n: 149-1126-0000)
2. Air Supply
3. Large, well-lit, quiet area
4. 4 minute timer (or clock)

# INFLATION TEST KIT

## PROCEDURE FOR TESTING

1. The suit to be tested should be clean and decontaminated. Lay the suit out with the zipper open and on top.
2. Using the vinyl stoppers, reach into the suit and plug each dump valve located in the leg and the upper back. The black stem from the rubber flapper should fit inside the hole drilled in the stopper.
3. From inside the suit, unscrew the silver aluminum ring from the remaining valve and push the valve body through the suit and out the valve cover on the outside.
4. From outside the suit, place the test jig in the valve cover and push the threaded portion through the suit. The clear plastic hoses should stick out from under the valve cover.
5. From inside the suit, thread the aluminum ring onto the test jig, taking care not to cross the threads.
6. Install the gloves and boots and/or confirm that they have been installed correctly and without leaks.
7. Confirm that all stoppers and the test jig are secure and completely close the zipper. The suit should be as straight and flat as possible.
8. Connect the needle valve block to the air supply and turn the valve so that it is completely closed.
9. Attach the other side of the valve block to one of the clear plastic hoses on the test jig.
10. Use the 2-foot extension hose to connect the pressure gauge to the other clear plastic hose on the test jig.
11. Slowly open the valve block to allow air to enter the suit. Inflate the suit until 4.4 registers on the Magnehelic pressure gauge making sure that the suit is not folded and that the arms and legs fill out completely.
12. Close the valve and allow the suit to remain at this pressure for five (5) minutes as the suit material stretches.
13. Disconnect the air supply from the valve block—slowly allow air to be released from the suit until the Magnehelic pressure gauge registers 4.0.
14. Note the exact position of the needle. Allow the suit to remain undisturbed for four (4) minutes. During this period, do not touch or move the suit in any way. This test is sensitive and may register this slight activity.
15. Read the gauge after four (4) minutes have passed. The suit should not have lost more than 0.8 units of measure (four marks on the gauge scale) or, no lower than 3.2 on the gauge.

### **In the event that a suit fails this inflation test, follow these steps to rule out common causes of leaks:**

1. Check that the gloves and boots are installed properly.
2. Check that the dump valves have been installed properly. The stoppers only prevent air loss through the valves, not around them.
3. Check that the zippers are undamaged and fully closed.

A soapy solution can be brushed onto various portions of the suit in order to determine the exact location of any leaks. Once any leaks have been identified and corrected, repeat the inflation test as described previously.

For re-usable garments, if needed repairs are numerous, or if the suit still fails the test, return the cleaned and decontaminated suit to Standard Safety for a repair/replacement inspection. (Note: There is a charge for this service.)

## REASSEMBLY

1. When testing is completed, remove the test jig and vinyl stoppers. Make sure that the rubber valve flappers are seated properly.
2. Replace the single dump valve making sure that the slot in the valve body is facing down to the boots of the suit.
3. Rinse off any soap solution that may remain on the suit, especially around the glove and boot interfaces. Make sure that the suit is completely dry before storage.



Providing Quality Safety Products Since 1921

1407 Ridgeview Drive McHenry, IL 60050

Phone: 815-363-8565

Fax: 815-363-8633

email: [info@standardsafety.com](mailto:info@standardsafety.com)

Mailing Address: P.O. Box 189 McHenry, IL 60051

Website: [www.standardsafety.com](http://www.standardsafety.com)