5.1.3 THERMAL SHOCK TEST

This test is performed to verify that all enclosure components critical to the equipment Type of Protection can withstand rapid thermal variations.

A cloth saturated with water at a temperature of 50° F (1O° C) shall be applied to the applicable part with the equipment operating at the voltage which gives the greatest heating effect within the range of 85-110% of nominal rated voltage in a 104° F (40° C) ambient, and after the maximum temperature of the part is achieved. The test shall be repeated five times on one sample.

The quantity of water and size of the cloth involved shall be sufficient to completely wet the surface of the equipment under test.

The thermal shock test is primarily intended for glass parts, but shall be conducted on any material that may be adversely affected.

The test results shall be considered satisfactory if no cracks or other failures that may invalidate the equipment Type of Protection are observed.

5.2 NON-METALLIC ENCLOSURE MATERIAL - CHEMICAL COMPATIBILITY

5.2.1 *Nonmetallic enclosure materials (Exception: replaceable environmental seals, etc.), shall be* resistant to chemical or physical change due to solvent exposure. As a result of chemical compatibility testing, there shall be no permanent change in properties that would affect the Type of Protection afforded by the equipment. Typically, a hardness measurement technique is used to examine for change in properties. Results may be considered satisfactory with no additional testing if there is no change in hardness greater than 10% of initial readings.

EXCEPTION: MATERIALS NOT PASSING THE REQUIRED CHEMICAL COMPATIBILITY TEST FOR ONE OR MORE OF THE SIX TEST CHEMICALS MAY BE CONSIDERED SATISFACTORY IF THE PRODUCT NAMEPLATE SHOWS THE EXCLUSION OF THE CHEMICAL FAMILY(S) FROM THE HAZARDOUS (CLASSIFIED) RATING OF THE EQUIPMENT.

EXAMPLE: "NOT INCLUDING ACIDIC ATMOSPHERES"

5.2.2 Compliance shall be verified by subjecting the enclosure materials to the vapors of the following test chemicals, each in a closed vessel containing 4 fluid ounces per quart volume (120 cm3/l). The tests shall be conducted with the test samples suspended above the liquid level in the vessel and for a period of 150 hours at 20° C ± 5° C (70° F ± 9° F). Measurement for change in critical properties of the material shall be conducted within one hour after removal from the solvent atmosphere.

Test Chemical	Representative Chemical Family
Acetone	Ketones
Gasoline	Aliphatic Hydrocarbons
Hexane	Aliphatic Hydrocarbons
Methanol	Alcohols
Ethyl Acetate	Esters
Acetic Acid	Acids