

L-853 RUNWAY AND TAXIWAY RETRO-REFLECTIVE MARKER, TYPE II ELEVATED, CYLINDRICAL, SOIL MOUNT GENERAL PRODUCT SPECIFICATION

1.0 DESCRIPTION

The two-piece, L-853 Type II elevated runway and taxiway marker shall consist of a flexible, above ground post made from durable, non-discoloring polyethylene plastic to which retro-reflective sheeting is applied. The soil mounted marker is supported in a tubular galvanized metal anchor, which is driven into the soil. The marker shall lock into the metal anchor without any additional fastening hardware. When the marker is no longer serviceable it can be removed and a new marker installed into the existing anchor. Markers shall be free from metallic parts. Markers that are not compatible will be rejected for use.

2.0 GENERAL REQUIREMENTS

The markers shall be tubular in shape and be available in 14", 18", 24" and 30" above ground heights. The 18", 24" & 30" tall markers shall be two and one-quarter [2-1/4"] inches in diameter. Fourteen inch tall markers shall have a two and twenty-one thirty-seconds [2-21/32"] inches outside diameter polyethylene sleeve with reflective sheeting attached fitted over the two and one-quarter inch diameter post. A one and three-quarter [1-3/4"] inch diameter interior reinforcement tube shall be located in the lower portion of the marker and secured to the assembly with two plastic pins. The marker top shall be fitted with a plastic cap to prevent debris from collecting inside the cylinder. A rubber o-ring shall be located between the post and the anchor to prevent soil and debris from entering the anchor. The marker tube color shall be white, light gray or dark gray and be resistant to ultraviolet radiation. All components used in the marker assembly shall be non-metallic. The soil anchor shall be zinc coated to resist corrosion. The marker shall readily bend when struck by an aircraft or vehicle and return to a substantially upright orientation.

The retro-reflective sheeting shall meet the requirements of ASTM D4956 Type IV, Class 1 and be a minimum of ninety-six square inches [96 in²] wrapped around the cylinder. The sheeting shall extend to the top of the cylinder. The retro-reflective sheeting shall be white, blue, red or green in color as per application. The marker shall be certified to the requirements of Federal Aviation Administration Advisory Circular No. 150/5345-39D.

3.0 PERFORMANCE REQUIREMENTS

A. HIGH TEMPERATURE RESISTANCE:

The marker shall be subjected to a temperature of 149°F ±3.6° [65°C ±2°] for a period of not less than seven [7] hours. Any evidence of heat damage, such as deformation, blistering, cracking or crazing of plastic material, or deterioration shall be cause for rejection.

B. LOW TEMPERATURE RESISTANCE:

The marker shall be subjected to a temperature of -67°F ±3.6° [-55°C ±2°] for a period of 24 hours. Any evidence of deterioration shall be cause for rejection.

C. CORROSION RESISTANCE:

The marker shall be subjected to a salt fog test as detailed in MIL-STD-810F, Environmental Test Methods, Method 509.4, Salt Fog, Paragraph 4.5.2 Procedure. Any evidence of damage, rust, pitting or corrosion shall be cause for rejection.

D. ENVIRONMENTAL RESISTANCE:

The marker shall be subjected to accelerated environmental solar radiation test as detailed in MIL-STD-810F, Method 505.4, Solar Radiation, Paragraph 4.4.3, Procedure II. Any evidence of deterioration shall be cause for rejection.

E. WIND LOAD RESISTANCE:

The marker, secured in its mounting anchor, shall be subjected to a static wind load test by applying a 50 mph wind load for 10 minutes and a 100 mph wind load for 10 minutes parallel to the ground plane. Any signs of permanent distortion or failure shall be cause for rejection.

F. CERTIFICATION:

The marker must pass all tests listed above. The tests must be conducted by an independent test laboratory acceptable to the FAA. Test reports shall be certified by a professional engineer and be made available upon request.