

L-853 RUNWAY AND TAXIWAY RETRO-REFLECTIVE MARKER, TYPE II ELEVATED, CYLINDRICAL, SURFACE 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 surface mounted marker is supported in a thermoplastic base, which is secured to the pavement with epoxy or a butyl pad or mechanical fasteners. The marker shall be secured to the thermoplastic base with two plastic horizontal locking pins. When the marker is no longer serviceable it can be easily removed and a new marker installed into the existing base. Markers shall be free from metallic parts. Markers that are not compatible will be rejected for use.

2.0 GENERAL REQUIREMENTS

The marker shall be tubular in shape and two and twenty-one thirty-seconds inches [2-21/32" \pm 1/8"] in diameter. A one and three-quarter inch [1 3/4" \pm 1/8"] diameter interior reinforcement tube shall be located in the lower portion of the marker and secured to the assembly with a plastic pin. The total above ground height of the marker shall be nominally fourteen inches [14"]. The marker top shall be fitted with a cap to prevent debris from collecting inside the cylinder. The marker tube color shall be white or gray and be resistant to ultraviolet light. All components used in the marker assembly and base shall be non-metallic.

The retro-reflective sheeting shall be ASTM D4956 Type IV, Class 1 and be a minimum of ninety-six square inches [96 in²] wrapped around the cylinder. The retro-reflective sheeting shall be white, blue, red or green in color. The sheeting shall extend to the top of the cylinder. 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 \pm 3° [65°C \pm 2°] for a period of 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 \pm 3° [-55°C \pm 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-810, Environmental Test Methods, Method 509.1. 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-810, Method 505.4, Procedure II. Any evidence of deterioration shall be cause for rejection.

E. WIND LOAD RESISTANCE:

The marker, secured in its mounting base, shall be subjected to a static wind load test by applying a 100 mph wind 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.