

**7440.0400 DESIGN STANDARDS AND SPECIFICATIONS.**

Subpart 1. **Dimensional requirements.** The size must be as shown in part 7440.9920. Backing material for portable SMV emblems must have the same geometric shape as the emblem and may be slightly larger in order to provide a margin of not more than one-fourth inch.

Subp. 2. **Color and reflectivity.** The design standards and specifications for color and reflectivity are:

A. The spectrophotometric color values of the yellow-orange fluorescent material must have a dominant wave length of 602-610 millimicrons and a purity of 84 percent before the exposure test specified in subpart 3. The dominant wave length of the fluorescent material after the exposure test must not change more than ten percent.

B. The reflective material used on SMV and alternate SMV emblems must conform to federal specification L-S-300C, Table II, "Specific Intensity per unit Area (SIA): Minimum Reflectivity 1 Sheeting and Tape," of March 20, 1979, approved by the Commissioner, Federal Supply Service, General Services Administration. Table II is incorporated by reference, is not subject to frequent change, and is located and available for copying at the Minnesota State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., Saint Paul, Minnesota 55155. Federal Specification L-S-300C is available from the General Services Administration, Business Service Center, Chicago, Illinois 60604.

C. The size and shape of SMV and alternate SMV emblems must comply with parts 7440.9920 and 7440.9930, respectively.

Subp. 3. **Exposure.** The fluorescent, dull black, and reflective material must show no appreciable discoloration, cracking, crazing, blistering, loss of durable bond, or dimensional change after exposure to the sun at an angle of 45 degrees to horizontal and facing south per ASTM Standard D1014, Method of Conducting Exterior Exposure Tests of Paints on Steel, for a test period of 12 months in southern Florida.

Subp. 4. **Backing material.** The backing material for portable SMV emblems must be 0.040 inch minimum thickness aluminum sheet, 0.08 inch or 2.0 millimeters minimum thickness rigid acrylonitrile butadiene styrene (ABS) plastic, 22 gauge (0.030 inch or 0.8 millimeter) minimum thickness mill-galvanized or coated sheet steel, or other material of equal strength, with the application surface clean and free of oil, grease, etc., so as to be receptive to a durable bond of the fluorescent and reflective materials. The backing material must be free of burrs and corners must be slightly rounded.

Subp. 5. **Reports.** The manufacturer of SMV emblems shall supply certified test reports showing compliance with the design standards and specifications upon request by the commissioner of public safety.

**Statutory Authority:** *MS s 169.522*

**History:** *11 SR 957*

**Published Electronically:** *October 16, 2001*