



# MS-215F TAGS AND SIGNS

## Technical Data



### Description

MS-215F Signs and Tags are constructed of printed graphics sealed between layers of chemical resistant plastic. The top layer is a hard-coated polycarbonate that provides excellent resistance to process chemicals, impacts and functions as a UV filter to prevent fading of printed graphics. The substrate is flexible, .020" polycarbonate base which allows signs to be mounted on curved surfaces. The sign construction has been tested with chemicals common to pulp, paper mills and petrochemical facilities with no adverse effect.

### Physical and Chemical Characteristics

<b>Base Material for 215F:</b>	0.020" (.5 mm) thick flexible polycarbonate
<b>Total Thickness:</b>	Single Sided: 0.030" (.76 mm) - (base, label, adhesive, protective outer layer); Double Sided: 0.040" (1.01 mm) - (2 each base, label, adhesive, protective outer layer)
<b>Service Temperature:</b>	-40°F through 200°F (-40°C thru 93°C)
<b>Water Resistance:</b>	Excellent
<b>Expected Outdoor Durability:</b>	5 years
<b>UV Resistance:</b>	Excellent; UV stable; resists yellowing and hazing
<b>Storage Stability:</b>	5 years minimum
<b>Chemical Resistance:</b>	One-hour continuous surface contact @ 73°F (23°C); Toluene: No visible effect; Isopropyl Alcohol: No visible effect; Cyclohexanone: No visible effect; Ethyl Acetate: No visible effect; Xylene: No visible effect; 40% NaOH: No visible effect; Concentrated HCl: No visible effect; Gasoline: No visible effect; Butyl Cellosolve: No visible effect; Acetone: Failure; MEK: Failure; Methylene Chloride: Failure
<b>Abrasion Resistance:</b>	Excellent; CS10F Wheel, 500 Grams; 25 Change in % Haze 0.4; 50 Change in % Haze 0.6; 100 Change in % Haze 2; 200 Change in % Haze 6.7
<b>Surface Optical Clarity:</b>	Refractive Index @ 77°F (25°C) – ASTM D542A – Units: 1.5; Light Transmission – ASTM D1003 – Units: 90%; Yellowness Index – ASTM D1925 – Units: 1.3%; Haze – ASTM D1003 – Units: 56%; Gloss over Flat Black min/max @ 60 – ASTM D523-60 (ISO 2813) – Units: 12; UV% Transmission @ 380 nm – UV/Visual; Spectroscopy – Units: 14%
<b>Finish:</b>	Matte finish with parallel edges
<b>Mounting:</b>	Adhesive backing, grommets, holes





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<b>Standard Colors:</b> (Non-standard colors available upon request)	<input type="checkbox"/> BLACK (WHITE text) <input type="checkbox"/> GREEN (WHITE text) <input type="checkbox"/> RED (WHITE text) <input type="checkbox"/> BLUE (WHITE text)	<input type="checkbox"/> BROWN (WHITE text) <input type="checkbox"/> WHITE (BLACK text) <input type="checkbox"/> YELLOW (BLACK text) <input type="checkbox"/> ORANGE (BLACK text)
<b>Typical Sizes (H x W):</b>	<input type="checkbox"/> 1.5" (38 mm) diameter <input type="checkbox"/> 1.5" x 1.5" (38 x 38 mm) <input type="checkbox"/> 1" x 3" (25 x 76 mm) <input type="checkbox"/> 2" x 4" (51 x 102 mm) <input type="checkbox"/> 4" x 8" (102 x 203 mm) <input type="checkbox"/> 10" x 14" (254 x 356 mm) <input type="checkbox"/> 2" (51 mm) diameter	<input type="checkbox"/> 2" x 2" (51 x 51 mm) <input type="checkbox"/> 2" x 3" (51 x 76 mm) <input type="checkbox"/> 3" x 6" (76 x 152 mm) <input type="checkbox"/> 7" x 12" (178 x 305 mm) <input type="checkbox"/> 12" x 20" (305 x 508 mm) <input type="checkbox"/> Other (specify: H x W)
<b>Text Height:</b>	Sized to fit within tag boundary or comply with specified height	

*Information on physical and chemical characteristics is based on tests we believe to be reliable. The values are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material for their specific application.*

