

Part

FMM-6, FMM-8, FMM-10

Scope

This specification covers the dimensions, mechanical properties, installation, and manufacturing notes for the Flush Mounted Marker as manufactured by ACP International.

This product shall be designed to be an optimally low profile marking solution for the purpose of directing attention to the presence of underground cables or pipes.

Technical Data Sheet

Flush-Mounted Marker

- Soil Markers are a reliable and effective method for marking any underground facility.
- Anchors in the ground.
- Soil Marker can be mowed or driven over.
- Reversed-printed polycarbonate, so ink can not be scratched off.
- Ultra-violet, moisture and chemical resistant.
- Custom printing is inexpensive and quick.
- Other sizes and shapes are available with an unlimited variety of colors and layouts.

Technical Description, Design, and Material

The ACP International flush mounted marker shall be made from a lexan plate and anchored to the ground with an included stake. The stake shall be easily driven down by a single person with a hammer or mallet.

The printed color of the flush mounted marker, assuming proper installation and average climate/UV exposure, shall remain bold for at least 7 years in an outdoor environment.

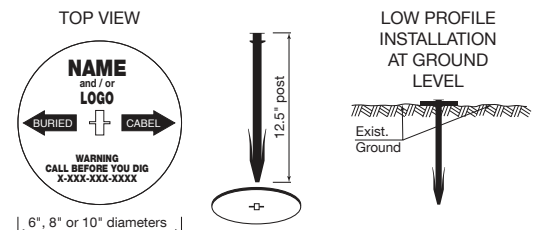
The flush mounted marker shall be manufactured from reverse printing two layers of ink on the underside of a sheet of ultraviolet-resistant polycarbonate. The polycarbonate shall have a hole in the middle of which to fit a stake through and keep flush with the level of the ground. The stake shall be a 12.5" injection molded ultraviolet-resistant polyethylene anchor.

The ink of the flush mounted marker shall be scuff and scratch resistant due to the printing being on the underside of the marker instead of the surface. Its design shall be UV, moisture, and chemical resistant.

The flush mounted marker shall come in orange, red, or yellow and shall be in the shape of a circle. Custom colors and lengths shall be available upon request.

Dimensions

FMM-6	6" Diameter Polycarbonate Plate with Stake
FMM-8	8" Diameter Polycarbonate Plate with Stake
FMM-10	10" Diameter Polycarbonate Plate with Stake



IMPORTANT NOTICE: ACP International and SA-SO (a division of ACP International) trusts that the user of the product has the most accurate knowledge of how the product might be most efficiently or safely utilized in any given application or environment.

ACP International and SA-SO also trust that the above technical data and product information is based on thorough and accurate testing of the product, but are not liable for any loss or damage to the product (or any other product, employee, or building from which the product might come into direct or indirect contact) resulting from an intentional or unintentional mishandling of the product.

Specification Plan

Flush-Mounted Marker

	Drawn By:	Approved By:	Date:
	J.Y. Rollins	M. Prince	06/05/15

Mechanical Properties

(Specifications for the marker)

Property	ASTM Standard	Rating
Specific Gravity	D792	1.2
Refractive Index @ 77°F	D42A	1.586
Rockwell Hardness	D785	M70
Water Absorption, Equilibrium, 24 hrs @ 73°F .35		.35
@ 212°F .58		.58
Tensile Strength @ Yield, PSI	D638	9000i
Tensile Strength Ultimate, PSI	D638	9500
Tensile Modulus, PSI	D638	345,000
Flexural Strength, PSI	D790	13,500
Flexural Endurance, PSI @ 1,800 cycles/min		
73°F, 50% RH	D671	1,000
Compressive Strength, PSI	D695	12,500
Compressive Modulus, PSI		345,000
Elongation, %	D638	110
Poisson's Ratio		0.37
Izod Impact Strength, ft-lbs/in Notched @ 1/8"	D256A	12-16
Unnotched @1/8"		60 (no failure)
Tensile Impact Strength, S-Type Specimen, ft-lbs/in ²	1822	225-300
Shear Strength, PSI @ Yield 6,000	D732	6,000
Ultimate 10,000		10,000
Shear Modulus, PSI	D732	114,000
Deformation Under Load@ 4,000 PSI, % @ 73°F 0.2	D732	0.2
@ 158°F		0.3

Mechanical Properties

(Specifications for the included stake)

Property	ASTM Standard	Rating
Specific Gravity	D792/1183	1.04 g/cm ³ /1040 kg/m ³
Water Absorption	-/ 62	-/62
Tensile Modulus	D638 ² /527-2	2080 MPa/2200 MPa
Tensile Strength	D638 ³ /527-2	47.1 MPa/43.0 MPa
Tensile Elongation (Yield) (Break)	D638 ³ /527-2	5.0%/5.0%
D638 ³ -		40%/-
Nominal Strain at Break	-/527-2	-/15%
Flexural Modulus	D790 ⁴ -	2420 MPa/-
Flexural Strength (Yield)	D790 ⁴ -	70.6 MPa/-
Notched Izod Impact (-30°C, 6.35 mm)	D256/-	130 J/m
(23°C, 3.18 mm)	D256/-	130 J/m
(23°C, 6.35 mm)	D256/-	390 J/m
340 J/m		
Rockwell Hardness (R-scale)	D785/-	108

1: Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted, 2: 1.0 mm/min, 3: 50 mm/min, 4: 15 mm/min

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Specification Plan

Flush-Mounted Marker



Drawn By:	Approved By:	Date:
J.Y. Rollins	M. Prince	06/05/15

ACP International/SA-SO/Marketing Work/Marketing Projects 2/technical drawings/flush mounted marker/flush_mounted_marker.ai

Technical Description, Design, and Material

The ACP International flush mounted marker shall be made from a lexan plate and anchored to the ground with an included stake. The stake shall be easily driven down by a single person with a hammer or mallet.

The printed color of the flush mounted marker, assuming proper installation and average climate/UV exposure, shall remain bold for at least 7 years in an outdoor environment.

The flush mounted marker shall be manufactured from reverse printing two layers of ink on the underside of a sheet of ultraviolet-resistant polycarbonate. The polycarbonate shall have a X-hole in the middle of which to fit a stake through and keep flush with the level of the ground. The stake shall be a 12.5" injection molded ultraviolet-resistant polyethylene anchor.

The ink of the flush mounted marker shall be scuff and scratch resistant due to the printing being on the underside of the marker instead of the surface. Its design shall be UV, moisture, and chemical resistant.

The flush mounted marker shall come in orange, red, or yellow and shall be in the shape of a circle. Custom colors and lengths shall be available upon request.

Mechanical Properties

These are the specifications for the marker:

Property	ASTM Standard	Rating
Specific Gravity	D792	1.2
Refractive Index @ 77°F	D42A	1.586
Rockwell Hardness	D785	M70
Tensile Strength @ Yield, PSI	D638	9000i
Tensile Strength Ultimate, PSI	D638	9500
Tensile Modulus, PSI	D638	345,000
Flexural Strength, PSI	D790	13,500
Compressive Strength, PSI	D695	12,500
Compressive Modulus, PSI		345,000
Elongation, %	D638	110
Poisson's Ratio		0.37
Izod Impact Strength, ft-lbs/in	D256A	
Specimen, ft-lbs/in ²	1822	225-300
Shear Strength, PSI	D732	
@ Yield		6,000
Ultimate		10,000
Shear Modulus, PSI	D732	114,000
Deformation Under Load@ 4,000 PSI, %	D732	
@ 73°F		0.2
@ 158°F		0.3

These are the specifications for the included stake:

Property	ASTM/ISO Standard ¹	Rating
Water Absorption	-/62	-/62
Tensile Modulus	D638 ² /527-2	2080 MPa
Tensile Strength	D638 ³ /527-2	47.1/43.0 MPa
Tensile Elongation (Yield)	D638 ³ /527-2	5.0%/5.0%
(Break)	D638 ³ /-	40%/-
Nominal Strain at Break	-/527-2	-/15%
Flexural Modulus	D790 ⁴ /-	2420 MPa/-
Flexural Strength (Yield)	D790 ⁴ /-	70.6 MPa/-
Notched Izod Impact (-30°C, 3.18 mm)	D256/-	130 J/m
(-30°C, 6.35 mm)	D256/-	130 J/m
(23°C, 3.18 mm)	D256/-	390 J/m
(23°C, 6.35 mm)	D256/-	340 J/m
Rockwell Hardness (R-scale)	D785/-	108

Special Properties

Build America, Buy America (BABA) Compliance and the American Iron and Steel (AIS) requirements:

The general categories of Utility Infrastructure Marking Products by ACP International, Inc., dba or branded as ACP International, SA-SO, Capital Streetscapes, Concrete Graphics, and Stonehouse Signs, is compliance with BABA. Regarding steel content, this product is made primarily of components other than steel. The total steel content falls under the De Minimus waiver of the AIS requirements.

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Approved By:
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Date Created:
4/22/2025

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5/13/2026