

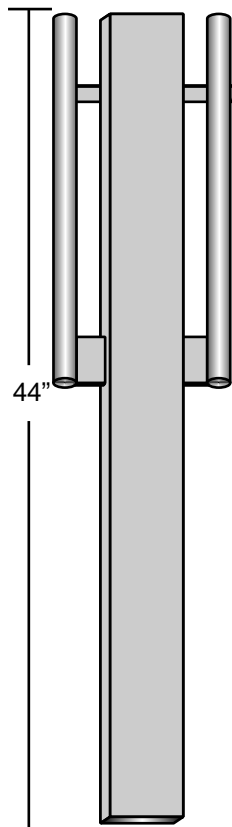
VULCAN DRIVABLE MARKERS

Vulcan's Drivable Marker (DRV) is the top flexible fiberglass product professionals prefer when strength, reliability and visibility are demanded. We have recently developed a screen printed Drivable Marker that will provide an alternative to decals. Currently it is being tested by the toughest standards in the industry, to ensure that it meets the quality assurance that our customers have come to expect.

PRODUCT DATA



ORANGE DRIVABLE MARKER WITH DECAL



DRIVING TOOL



“NO DIG” SYMBOL- EASILY RECOGNIZED BY ALL EXCAVATORS

WARNING OF FEDERAL LAW

CONTRASTING WARNING MESSAGE FOR MAXIMUM VISIBILITY

LARGE BLACK LETTERS MEET FEDERAL REQUIREMENTS

TOP-QUALITY, PREMIUM CAST VINYL FILM WITH AGGRESSIVE ADHESIVE

MATCH COMPONENT SYSTEM INKS USED FOR MAXIMUM LONGEVITY

3" WIDE BY 12", 16" OR 18" LENGTH

DECALS WITH PROTECTIVE OVERLAY APPLIED TO MARKER BEFORE SHIPPING

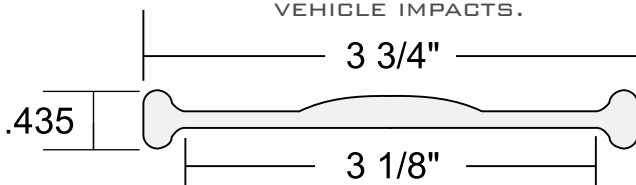
COMPANY NAME AND EMERGENCY PHONE NUMBER

ONE-CALL PHONE NUMBER

811 DECAL

UNIQUE DESIGN

- RECESSED DESIGN ON BOTH SIDES PROTECT THE VINYL SHEETING FROM DAMAGE DURING INSTALLATION OR VEHICLE IMPACTS.



CROSS SECTION

VULCAN DRIVABLE MARKERS

PRODUCT DATA

BENEFITS

- WILL NOT RUST, ROT OR CORRODE
- REMAINS STABLE IN TEMPERATURES FROM -30° TO +120°
- LOWER FREIGHT COSTS COMPARED TO STEEL POST MARKERS
- CONTAINS THE HIGHEST FIBERGLASS CONTENT IN ITS CLASS- 65%
- ABSORBS VEHICULAR IMPACTS AND RETURNS TO ORIGINAL SHAPE
 - SUPERIOR STRENGTH AND EASY TO DRIVE IN SOIL
- ULTRAVIOLET INHIBITORS PROVIDE LONG TERM PRODUCT STABILITY AND COLOR RETENTION
 - NEVER NEEDS PAINTING
- WILL SURVIVE CONTROLLED DITCH BURNS WHICH OFTEN MELT OR DESTROY PLASTIC MARKERS
 - STRONGEST FIBERGLASS MARKER AVAILABLE

COLORS

- YELLOW, BLUE, WHITE, RED, GREEN AND ORANGE
- CUSTOM COLORS ALSO AVAILABLE

LENGTHS

- 60", 66", 72" AND 78"
- CUSTOM LENGTHS ALSO AVAILABLE



ULTIMATE FLEXIBILITY WHEN IMPACTS OCCUR



NEW SCREEN PRINTED DRIVABLE MARKER



MADE IN THE USA

VULCAN DRIVABLE MARKERS

TECHNICAL SPECIFICATIONS

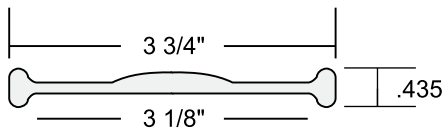
1. OVERVIEW

This specification covers the minimum material, mechanical, and performance properties found in the Vulcan DRV Markers. Vulcan DRV Markers are a proprietary fiberglass/polyester resin composite designed to drive easily into all soil conditions while maintaining its flexibility. They offer outstanding resistance to outdoor elements, vandals and vehicle impact.

2. GENERAL REQUIREMENTS

2.1 DESIGN

The Vulcan DRV Marker is a single piece of marker capable of simple, permanent installation by an individual using a manual driving tool. Upon proper installation, the delineator shall resist the effects from wind and vehicle impact forces. The dimensions are given below:



The bottom end of the marker shall be pointed so as to aid in the force needed to penetrate the ground.

2.2 MATERIAL

The Vulcan DRV Marker shall consist of an inner layer of continuous fiberglass strands in between two layers of a continuous strand fiberglass mat. The outer surface of the entire strand of fiberglass is covered by a polyester veil to give the surface a smooth, splinter-free appearance. All of this is bonded by a UV stabilized polyester resin pigmented to any color desirable. Additionally, the part will be free of Calcium Carbonate which has been shown in laboratory and field testing to increase the rate of sun bleaching and chalking (i.e. - loss of color due to the sun).

2.3 WORKMANSHIP

The Vulcan DRV shall be of sufficient quality to guarantee product performance and serviceability. The surface shall be free of cracks, burrs, discoloration, or any other defect that would cause a decrease in the stated purpose of the part.

3. PHYSICAL AND MECHANICAL REQUIREMENTS

3.1 DIMENSIONS

See section 2.1 Design.

3.2 LENGTH

The Vulcan DRV Marker shall be of such a length to provide the required height above the surface with a minimum embedment depth of 18 inches.

3.3 MECHANICAL PROPERTIES

The Vulcan DRV Marker shall have the minimum mechanical, physical and electrical requirements as provided in the information below.

3.4 TEMPERATURE CONSTRAINTS

The Vulcan DRV Marker shall retain 100% of its rated strength within a minimum temperature range of -40°F to 240°F.

VULCAN DRIVABLE MARKERS

TECHNICAL SPECIFICATIONS

TYPICAL COUPON PROPERTIES

MECHANICAL PROPERTIES	ASTM	UNITS	VALUE
TENSILE STRESS, LW	D-638	PSI	30,000
TENSILE STRESS, CW	D-638	PSI	7,000
TENSILE MODULUS, LW	D-638	106 PSI	2.5
TENSILE MODULUS, CW	D-638	106 PSI	0.8
COMPREHENSIVE STRESS, LW	D-695	PSI	30,000
COMPREHENSIVE STRESS, CW	D-695	PSI	15,000
COMPREHENSIVE MODULES, LW	D-695	106 PSI	2.5
COMPREHENSIVE MODULES, CW	D-695	106 PSI	1
FLEXURAL STRESS, LW	D-790	PSI	30,000
FLEXURAL STRESS, CW	D-790	PSI	10,000
FLEXURAL MODULES, LW	D-790	106 PSI	1.8
FLEXURAL STRESS, CW	D-790	106 PSI	0.8
MODULES OF ELASTICITY, E	FULL SECTION	106 PSI	2.8
SHEAR MODULES	—	106 PSI	0.45
SHORT BEAM SHEAR	D-2344	PSI	4,500
PUNCH SHEAR	D-732	PSI	10,000
NOTCHED IZOD IMPACT, LW	D-256	FT-LBS/IN	25
NOTCHED IZOD IMPACT, CW	D-256	FT-LBS/IN	4

VULCAN DRIVABLE MARKERS

TECHNICAL SPECIFICATIONS

TYPICAL COUPON PROPERTIES

PHYSICAL PROPERTIES	ASTM	UNITS	VALUE
BARCOL HARDNESS	D-2583	_____	45
24 HOUR WATER ABSORPTION	D-570	% MAX	0.45
HEAT DISTORTION	D-792	DEGREES F	240
COEFFICIENT OF THERMAL EXPANSION, LW	D-696	10 ⁻⁶ IN/IN/°C	8

ELECTRICAL PROPERTIES	ASTM	UNITS	VALUE
ARC RESISTANCE, LW	D-495	SECONDS	120
DIELECTRIC STRENGTH, LW	D-149	KV./IN.	35
DIELECTRIC STRENGTH, PF	D-149	VOLTS/MIL.	200
DIELECTRIC CONSTANT, PF	D-150	@60HZ	5

LW= LENGTHWISE, CW= CROSSWISE
PF= PERPENDICULAR TO LAMINATE FACE



MADE IN THE USA