

## Marker Posts, Delineators & Snow Poles

Fiberglass Composite, Ground-Mounted Signage

Glasforms fiberglass reinforced composite marker posts, delineators, snow and marker poles are highly visible, durable, safe and versatile products for compact identification signage. Our products offer high strength and low weight combining stiffness and flexibility for ground driven installation, impact resistance and memory to recover after vehicle collisions. In addition, our composite products are corrosion, weather and vandal resistant, offering easy installation, safety and long term, maintenance free service. Composite properties are not affected by exposure to cold temperatures or sunlight. These features make composites a superior alternative to other marker and signage products.



NTPEP Testing, July 1998

### Company Profile

Glasforms designs, formulates and produces pultruded composite products. Established in 1978, Glasforms' expertise, innovation, and quality have led to industry leadership in the manufacturing of pultruded composites. Registered by Underwriters Laboratories to the ISO 9002 Quality Standard, our quality control is unprecedented in our industry, as we are the first pultruder with such a broad product range to achieve ISO registration.

Our superior products, combined with over 20 years of responsive, quality oriented customer service has enabled us to supply the electrical, telecommunications, corrosion, transportation, medical, infrastructure, aerospace, consumer and sporting goods industries. We have applied this technology and expertise to offer a complete line of marker products.

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# Fiberglass Composite Markers

- Utility Pipelines
- Underground Cables
- Roadway Mile Markers
  - Road Closures
- Roadside Delineation
  - Parking Control
    - Trail Routes
    - Boundaries
  - Fire Hydrants
  - Storm Drains
  - Golf Courses



Marker posts are intended for low traffic areas, whereas our roadway delineators are designed to withstand multiple, high-speed vehicle impacts. Marker posts are offered in three shapes; Tri-Flex, Flex-Tough and Dual-Flex, pointed on one end for permanent ground installation. All posts will accommodate standard 3" wide, pressure sensitive decals and reflective sheeting.

### Composite Retention Anchors

Some soil types or post locations may require the extra security of composite retention anchors. Designed to flex into a holding position after the post installation, the anchor will provide additional protection from being removed by impacting vehicles or vandals. The anchors are provided pre-drilled with flanged rivets to simplify attachment.

### U-Channel Post Anchors

For easy installation in any soil type, all Glasforms markers are available with an optional u-channel anchor. Post comes completely assembled and ready for installation



### Tri-Flex™

Designed for maximum stiffness and flexibility, these posts are intended for use in traffic areas with less potential for direct vehicle impacts. Reflective sheeting or decals are protected on one side by the edge rib design.

### Dual-Flex

Principally designed for use on secondary roads, trails, boundaries and utility demarcation, the dual edge rib design permits application and protection of decals on both sides of the post.

### Flex-Tough™

Marker post used in areas of hard or compacted ground conditions. The thicker middle area increases its ability to be installed in even the harshest terrains while allowing for decals on both sides.

# Fiberglass Composite Roadway Delineators

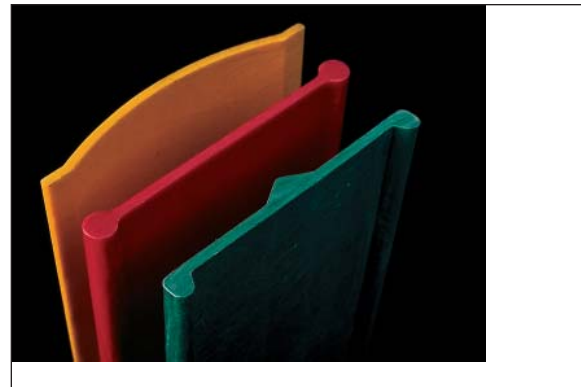
Flexible Ground-Mounted Posts with Reflective Sheeting



Tire Impact Testing

## Arc-Flex™

Glasforms Arc-Flex delineators are fiberglass reinforced thermoset polyester posts. The single piece, ground mounted composite posts permit easy and permanent installation to display reflectors. Designed for the proper combination of stiffness, flexibility and durability, posts withstand penetration into soil, high wind loads and recover to upright position after multiple impacts to display safety reflectors. The reinforcing fiber architecture maximizes strengths for recovery of posts after multiple, high-speed vehicle impacts while minimizing potential delamination.



## Glas-Flex™

The Glas-Flex marker has a three rail design with a larger back rib that has been flattened for improved impactability. The flat rib spreads the force of the impact over a larger area instead of focusing the force to a small pointed rib that cracks under the pressure. This marker uses only premium raw materials and manufacturing techniques making it the best performing three rail design on the market. It is ideal for repeated impact locations like interstate on/off ramps.



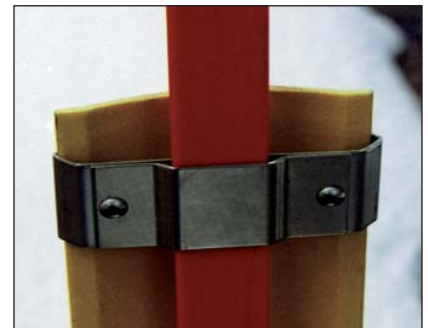
NTPEP Testing, July 1998

## Snow & Marker Poles

Glasforms composite fiberglass snow and marker poles improve roadway demarcation for motorists and snow removal crews. The one-piece poles are designed for either direct burial into the shoulder of the road or for attachment to Glasforms' delineator or marker posts. Snow and marker poles are available in three standard cross sections and in multiple lengths to achieve the proper combination of stiffness and flexibility. Should the composite poles or posts be directly impacted near the ground-line by snow removal equipment, the composites will break away to minimize

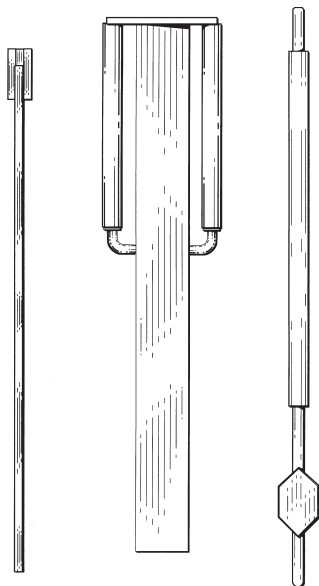
potential equipment damage, versus conventional metal poles and posts that may disable equipment.

Poles are produced in a bright, safety orange color with ultra violet light stabilizer for color retention. The shape allows for application of reflective sheeting to either side of the rectangular pole or around the elliptical pole. Rectangular poles have radius edges and beveled corners to accommodate easy installation directly into the ground or to posts using our stainless steel adapter brackets.



Length	Elliptical	3/16" x 1-1/4"	3/8" x 1-1/4"
4'	ESP-048	RSP316-048	RSP38-048
5'	ESP-060	RSP316-060	RSP38-060
6'	ESP-072	RSP316-072	RSP38-072
7'	ESP-084	RSP316-084	RSP38-084
8'	ESP-096	RSP316-096	RSP38-096

Custom lengths and colors are also available.



### Decals

We produce standard or custom artwork using modern computer digitized graphics and reproductions. Starting with a customer's camera ready art or design, we can produce precision graphics to exacting specifications. Set-up information is stored for future orders. The posts display standard 3" wide pressure sensitive, reflective or non-reflective sheeting. Call us for custom quotations on multiple color printing or various grades of sheeting.

### Installation Tools

Common driving tools for pilot holes and for installing fiberglass posts and poles are offered. The pilot hole driver is used to simplify the post installation by loosening compacted soil, while the post/pole drivers permit easy ground installation into the pilot hole.

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