GLASFORMSTM
FIBERGLASS REINFORCED MARKERS
& DELINEATORS

PRODUCT CATALOG
GLASFORMS™

Glasforms™ fiberglass reinforced highway delineators, utility markers and recreation markers offer the perfect blend of strength and flexibility for easy installation and a long service life. They are naturally rust, rot and corrosion resistant, and can withstand extreme temperatures, making them ideal for harsh outdoor conditions. Marker posts and highway delineators are designed to stand up to vehicle impacts and return to an upright position without breakage.

**Flexible marker product features:**
- Customized formulations
- Resin matrix: polyester and vinyl ester
- Fiber reinforcement: glass fiber
- Optimized manufacturing using continuous pultrusion processes
- Structural component parts with constant cross-section
- Pre-pointed for easy field installation with most installation tools
- Unlimited length profiles with inventory available for quick shipment
- In-house laboratory and testing capabilities
- UL Registered (ISO 9001:2008) #10003122/10001130

### MECHANICAL PROPERTIES (FLEXIBLE MARKERS)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultimate Tensile Strength</td>
<td>60 Ksi minimum</td>
</tr>
<tr>
<td>Ultimate Compression Strength</td>
<td>50 Ksi minimum</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.8 typical</td>
</tr>
<tr>
<td>Weight % Glass Reinforcement</td>
<td>60 mean</td>
</tr>
<tr>
<td>Barcol Hardness</td>
<td>50 minimum</td>
</tr>
<tr>
<td>Flex Strength/ Ksi</td>
<td>60 Ksi minimum</td>
</tr>
<tr>
<td>Flex Modulus / Msi</td>
<td>3.3 Msi typical</td>
</tr>
</tbody>
</table>

**TO ORDER:**
For current pricing and to place an order, please call or email PolyOne Glasforms Customer Service at +1.800.778.6002 or sales@glasforms.com
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Icons indicate applicable product uses:

- **HIGHWAY**
  - Highway delineators include features such as side rails and recessed surface areas to protect reflective sheeting from damage during impact.

- **UTILITY**
  - Utility markers are available in an array of colors to meet your specifications. Custom decal design and application, and anchor installation are also available.

- **RECREATION**
  - Recreational markers are an economical and low-maintenance replacement for wood and metal posts. Decals with standard and custom recreational symbols are available.
FLEXIBLE MARKERS

FLEXTOUGH™ DELINEATOR & UTILITY MARKER

• Our most popular marker specifically designed with a thicker mid-section for easier installation in hard soil conditions
• Approved for use by numerous Departments of Transportation throughout the US
• Designed to withstand multiple vehicle impacts
• Raised side rails and recessed surface areas protect reflective sheeting from damage during impact
• Installs with GMD400 post driver

Standard lengths: 62", 66", 72"

Color options: (00) White, (01) Brown, (02) Yellow, (03) Orange, (04) Red, (05) Blue, (06) Green

Custom colors available - minimum order required

PROFILE
(Actual size)
TRIFLEX™ DELINEATOR & UTILITY MARKER

- Improved design on the common 3-rail marker
- Rounded back rib for improved impact resistance
- Flat surface for decal application
- Recommended for use on straight-aways and for general delineation
- Ideal for use in extreme temperature environments
- Install with GMD400 post driver

Standard lengths: 62", 66", 72"

Color options: (00) White, (01) Brown, (02) Yellow, (03) Orange, (04) Red, (05) Blue, (06) Green

Custom colors available - minimum order required
DUALFLEX™ DELINEATOR & UTILITY MARKER

• For use on trails, secondary roads, rural 911 house markers
• Flat, recessed decal surfaces for dual-sided decal application
• Raised side rails to protect decals from damage upon impact
• Install with GMD400 post driver
• General anchor can be installed

Standard lengths: 62", 66", 72"

Color options: (00) White, (01) Brown, (02) Yellow, Custom colors available

20 PIECES/CASE
HIWAYFLEX™ DELINEATOR & UTILITY MARKER

• Our most flexible marker – half-moon shape for improved impact resistance
• Ideal for interstate ramps, curves and other high-impact areas
• Designed to withstand repeated bumper and wheel impacts
• Flat side flanges protect sheeting upon impact
• Install with GMD400 post driver
• General anchor can be installed
• U-channel installation option available

**Standard lengths:** 62", 66", 72"
**Color options:** (00) White, (02) Yellow

25 PIECES/CASE

PROFILE (Actual size)
HIWAYFLEX™ GUARDRAIL DELINEATOR

• Provides flexibility and impact resistance from wide loads and overhanging equipment
• Curved surface improves visibility of reflective sheeting
• Standard height (27”) per MUTCD regulations
• Comes standard with 2-hole or 4-hole drill pattern

**Standard length:** 27”
**Color options:** (00) White, (02) Yellow

35 PIECES/CASE

PROFILE
(Actual size)
BOUNDARY/SURVEY MARKER

• Low-cost, all-purpose post for marking boundaries, right of way, hiking trails, surveyed property
• Single rib provides extra support and easy installation in hard soil
• Ideal for non-impact areas
• Reflective sheeting/decals applied to one side only
• Install with GBD250 post driver

Standard lengths: 66”, 72”

Color options: (03) Orange (custom colors available with 3000 foot minimum order)
RECTANGULAR SNOW POLES

• 3/16” x 1¼” or 3/8” x 1¼” solid rectangular bar offers flexibility with stiffness and lower weight
• Radius edges and beveled corners accommodate easy installation directly into the ground or to posts using stainless steel nuts and bolts
• Ideal for connecting to existing u-channel or trail marking in remote locations
• Reflective sheeting/decals applied to top surface or wrapped around for 360° visibility

**Standard lengths:** 72”, 84”, 96”

**Color options:** (03) Orange

**Longer lead time may apply**
ENHANCEMARK UTILITY MARKERS

- 3.5” HDPE post with 3.8” domed enhancer top
- Includes 2 custom decals and plastic T anchor
- Offers 360° visibility with the addition of a 3rd decal
- Recommended for areas with lower impact rate
- Enhancer available separately

**Standard lengths:** 66”, 72”, 78”

**Post colors:** (00) White, (02) Yellow, (03) Orange

**Enhancer colors:** (00) White, (02) Yellow, (03) Orange, (04) Red, (05) Blue, (06) Green

10 PIECES/CASE
ENHANCEMARK TEST STATION

- Station includes Enhancemark round marker with 5-terminal test station and cap installed
- Includes 2 custom decals and plastic T anchor
- Offers 360° visibility with the addition of a third decal
- Recommended for areas with lower impact rate
- Replacement test stations with caps and hardware are also available separately

**Standard lengths:** 66", 72", 78"

**Post colors:** (00) White, (02) Yellow, (03) Orange

**Enhancer & Test Station colors:** (00) White, (02) Yellow, (03) Orange, (04) Red, (05) Blue, (06) Green
FLEXCAT CATHODIC TEST STATION

• Modified version of FlexTough™ marker provides flexibility and impact resistance with two-terminal cathodic protection test station
• Includes 1 custom decal and 1 standard cathodic protection decal (B238ETS)
• Includes 2 copper test terminals and anchor
• Optional 12-gauge wire

**Standard lengths:** 62", 66", 72"

**Color options:** (02) Yellow

10 PIECES/CASE
TRACER-FLEX TEST STATION

- Modified version of FlexTough™ marker provides flexibility and impact resistance with two-terminal line locating test station
- Includes 1 custom decal and 1 standard line tracing decal (B2580TOF)
- Includes 2 copper test terminals and anchor
- Optional 12-gauge wire

**Standard lengths:** 62”, 66”, 72”

**Color options:** (05) Blue, (06) Green
HYDRANT MARKERS

- Available in 2 styles: Ring and Standard
- 1/4” and 3/8” thickness
- Ideal for marking hydrants in heavy snowfall areas
- Includes 5 bands of 5” reflective sheeting
- Durable in extreme weather conditions

**Standard lengths:** 48”, 60”

**Color options:** (00) White, (03) Orange

CASE SIZE VARIES BY STYLE
DRIVEWAY MARKERS

- 5/16” diameter rod
- High visibility for edge marking
- Durable in extreme weather conditions
- Flexible to withstand high winds and retain upright position
- Includes 1 band of 5” reflective sheeting and black cap

**Standard lengths:** 48”, 60”, 72”

**Color options:** (00) White, (02) Yellow, (03) Orange
TEMPO MARKING FLAGS

- Used to temporarily mark utility lines on construction projects
- Highly visible, safe and durable
- Weatherproof & fade resistant
- Stock and custom messages are available
- Flags available in a variety of colors

Flag sizes: 2.5” x 3.5”, 4” x 5”, 5” x 8”
Staff options: Wire, fiberglass, and plastic

1,000 PIECE MINIMUM
WARNING TAPE

• Offers easy identification of pipeline and specifically designed to be resistant to underground elements
• Assists in preventing accidental damage to above-ground utilities during excavation
• Available in 5 mil detectable, and 4 mil non-detectable material
• Stock and custom messages are available - artwork charge may apply

Tape widths: 2”, 3”, 6”, 12”
Tape lengths: 300 ft. & 1,000 ft. rolls

BARRICADE TAPE

• Made for durability in outdoor environments
• Effectively used to mark temporary construction projects
• Available in 2 mil, 2.5 mil, and 3 mil
• Stock and custom messages are available - artwork charge may apply

Tape width: 3”
Tape lengths: 300, 1,000, 1,500 ft. rolls
UTILITY WHISKERS

- Nearly indestructible alternative to marking flags
- Ideal for marking survey sites and underground utility locating
- Weatherproof and fade resistant
- Available in the APWA Colors for underground utilities

Whisker Size: 6”

Color options: (00) White, (02) Yellow, (03) Orange, (04) Red, (05) Blue, (06) Green, (07) Purple, (10) Pink

ONE CASE MINIMUM
**ADDITIONAL PRODUCTS**

**ELLIPtical Snow Poles**
- Elliptical profile offers stiffer design than standard triangular shape
- Flattened back for easier installation with any hardware
- Reflective sheeting/decals applied to top surface or wrapped around for 360° visibility

**Standard lengths:** 72", 84", & 96"

**Color options:** (03) Orange

**Minimum order required**

**Aerial Markers**
- Offers easy identification of pipeline and cable routes from the air
- High visibility across long distances to assist in rapid identification of disruption locations
- Available in 8 or 10 foot galvanized posts
- Aluminum frames hold up to 4 digits per side on marker plates
- Easy assembly with self-tapping screws (included)

Contact Glasforms for size and color information

**Sign Post Delineator & Utility Marker**
- Our strongest marker for high wind loads
- Designed for holding larger aluminum or fiberglass signs
- Returns to upright, original position after impact
- Ideal for marking culverts
- Reflective sheeting/decals applied to both sides
- Can be predrilled for signs

**Standard lengths:** 66", 72", 78"

**Color options:** (00) White, (01) Brown

**3000 foot minimum order required**

Longer lead time may apply
REFLECTIVE SHEETING & DECALS
REFLECTIVE SHEETING

- Designed with a variety of features such as side rails and recessed surface areas to protect reflective sheeting from sustaining damage during impact
- Numerous grades and colors of sheeting offered to meet needs of a range of projects
- Delineators are delivered pre-pointed, and work with most manufacturer installation tools
- Sheeting application and anchor installation at the factory are included with purchase

Sheeting width: 3”
Standard lengths: 3”, 6”, 9”, 12”, 18”
Color options: (00) White, (02) Yellow, (03) Orange, (04) Red, (05) Blue, (06) Green

All reflective sheeting is pressure sensitive and must be installed properly. Apply to clean, dry surfaces to promote continued adhesion.

Reflective Sheeting Recommendations
- Engineer Grade: Recommended application on posts with recessed/curved surfaces for best adhesion. This grade of sheeting is for use in areas where maximum brightness is NOT required, such as rural areas and parking lots.
- Type 3 Hi Intensity: Recommended for application on completely flat surfaces for best adhesion. Used in areas where maximum brightness is required, such as urban areas, construction zones, work zones, and general roadside delineation.
- Type 4 Hi Intensity: Recommended for application on posts with recessed/curved surfaces. Used in areas where maximum brightness is required, such as urban areas, construction zones, work zones, and general roadside delineation.
- Diamond Grade: Recommended for application on completely flat surfaces for best adhesion. Used in areas where maximum brightness is required, such as urban areas, construction zones, work zones, and extreme roadside delineation.
VINYL AND REFLECTIVE DECALS

• Glasforms’ in-house graphics department can create custom messages and re-create company logos for decals
• All decals are coated with a clear UV overlay material to protect decal color from fading
• Decals are available in vinyl and reflective substrates
• All decals meet FHA specifications
• Die cut letters and numbers are available in 1”, 2”, 3”, and 4” tall
• All Federal recreation symbols related to land, water, winter, accommodations/services, facilities, and directional signage are available
• Decal application at the factory is included with purchase

**Standard decal widths**: 2 3/8", 2 7/8"

**Decal length**: Up to 22 inches (before incurring additional charges)

**Colors**: White, Yellow, Orange, Blue, Green, Black, Purple, Cobalt Blue, and Brown

Decal printing: Standard decal price includes one substrate (background) color and one copy (text) color; custom decals and messages are available upon request

Decals are pressure sensitive and must be installed properly. Apply to clean, dry surfaces to promote continued adhesion.

*Custom colors are available, and may incur a custom ink charge. Please call Glasforms customer service for information.*
STANDARD DECALS

Glasforms maintains a vast database of decals that is continually updated. Following is a sample of available decals by market. Please contact Glasforms customer service for additional decal options.
STANDARD SEWER UTILITY DECALS

CAUTION

PIPELINE

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

SEWER MAIN

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

SEWER MAIN

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

FORCED MAIN

BEFORE DIGGING CALL 811

BURIED BELOW

CAUTION

MANHOLE

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

MANHOLE

BEFORE DIGGING IN THIS AREA CALL 811

CAUTION

SANITARY SEWER

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

SANITARY SEWER

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

SANITARY SEWER

BEFORE DIGGING CALL 811

BURIED BELOW

CAUTION

SEWER/STORMWATER

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

SEWER/STORMWATER

BEFORE DIGGING IN THIS AREA CALL 811

CAUTION

SEWER/STORMWATER

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

SEWER/STORMWATER

BEFORE DIGGING CALL 811

BURIED BELOW

CAUTION

SEWER/STORMWATER

BEFORE DIGGING OPENING OR IN CASE OF EMERGENCY CALL 811

CAUTION

SEWER/STORMWATER

BEFORE DIGGING IN THIS AREA CALL 811

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STANDARD GAS UTILITY DECALS

CAUTION
PIPELINE
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B100C

CAUTION
PIPELINE
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B100C811

WARNING
PETROLEUM
BEFORE EXCAVATING
OR IN EMERGENCY CALL COLLECT
B120PP

WARNING
PETROLEUM
BEFORE EXCAVATING
OR IN EMERGENCY CALL COLLECT
B120PP811

WARNING
PETROLEUM
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B1084WNG

WARNING
PETROLEUM
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B1084WNG811

HIGH PRESSURE
GAS SERVICE LINE
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B1084WNG811

HIGH PRESSURE
GAS SERVICE LINE
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B1572UL

HIGH PRESSURE
CARBON DIOXIDE
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B10374DND

HIGH PRESSURE
CARBON DIOXIDE
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B10333CDP

CAUTION
HEADER PIPELINE
LANDFILL GAS
B10214LGH

CAUTION
VACUUM GAS
BURIED BELOW
B10220CGV

WARNING
PETROLEUM
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B1077SWB0

WARNING
METANOL
BEFORE DIGGING
CALL OR IN EMERGENCY CALL COLLECT
B1012WNG

STOP
Do Not Enter
B1456FDL

CATHODIC PROTECTION
TEST STATION
B238ETS

+1,800.778.6002
MISCELLANEOUS DECAL OPTIONS
MISCELLANEOUS DECAL OPTIONS
FEDERAL RECREATION SYMBOL LIBRARY

Glasforms maintains a vast library of the standard Federal Recreation symbols. These are manufactured in sheets of 6 symbols on a white reflective substrate. Each individual decal measures 3” x 3”. All symbols are available with a red slash for prohibited activities in certain areas.

WATER RECREATION

- Beach access
- Boat launch
- Boat tour
- Canoe access
- Dam
- Diving
- Fishing
- Fish cleaning
- Fish hatchery
- Fish ladder
- Fishing pier
- Hand launch/Small boat
- Kayaking
- Life jackets
- Marina
- Motorboating
- Partially submerged wreck
- Personal watercraft
- River rafting
- Rowboating
- Sailing
- Scuba diving
- Seal viewing
- Surfing
- Swimming
- Wading
- Waterfowl
- Waterskiing
- Whale viewing
- Wind surfing
WINTER RECREATION

- Chair lift/Ski lift
- Cross-country ski trail
- Downhill skiing
- Ice fishing
- Ice skating
- Ski jumping
- Sledding
- Snowboarding
- Snow-shoeing
- Snowmobile trail
- Watch for falling ice
- Winter Recreation area

DIRECTIONAL ARROWS

AGENCY LOGOS

BUREAU OF LAND MANAGEMENT
U.S. FOREST SERVICE
U.S. ARMY CORPS OF ENGINEERS
NATIONAL OCEANS & ATMOSPHERE ADMIN

BUREAU OF RECLAMATION
U.S. FISH & WILDLIFE
NATIONAL PARK SERVICE

+1.800.778.6002
LAND RECREATION

4-wheel-drive road
Archery
All-terrain trail
Automobiles
Baseball
Bear viewing
Bicycle trail
Campfire
Campground
Cans or bottles
Climbing
Deer viewing
Driving tour
Exercise/Fitness
Falling rocks
Floating dump station/restroom
Golfing
Hang gliding
Hiking trail
Hold hand rail
Horseback riding
In-line skating
Interpretive exhibit
Lighthouse
Lookout tower
Motor bike trail
Parking
Pedestrian crossing
Pets on leash
Picnic area
Playground
Point of interest
Radios
Ranger station
Rattlesnakes
Restrooms
Rock collecting
RV campground
Sanitary disposal station
Scenic viewpoint
Sea plane
Self-guiding trail
Shelter
Showers
Skateboarding
Slippery ramp
Slippery steps
Smoking
Snack bar
Spelunking/Caves
Stable
Stay back from edge
Stay on trail
Strollers
Technical rock climb
Tennis
Trailhead information
Trucks
Tunnel
Uneven walkways
Viewing area
Walking
Walk on boardwalk
Wildlife viewing
Wood gathering
Zebra mussel decontamination station
ACCOMMODATIONS & SERVICES

- Airport
- Amphitheater
- Assistive listening systems
- Assistive listening systems T-coil compatible
- ATM
- Audio description
- Book and souvenir shop
- Bookstore
- Bottles
- Braille
- Bus stop/Shuttle stop
- Camera
- Closed captioning (CC)
- Drinking water
- Emergencies
- Emergency telephone
- Fire extinguisher
- Firewood cutting
- First aid
- Food service
- Gas station
- Hospital
- Information
- Kennel
- Large print
- Laundromat
- Library
- Litter receptacle
- Live audio description
- Lockers/Storage
- Lodging
- Low vision access
- Mechanic
- Men’s room
- Metal detectors
- Metro station
- Museum
- Open captioning (OC)
- Parking
- Picnic shelter
- Post office
- Radiator water
- Recycling
- Restrooms
- Sign language interpretation
- Sleeping shelter
- Souvenir shop
- Store
- Sunny
- Telephone
- Telephone typewriter (TTY) service
- Theater
- Trailer site
- Tramway
- Trash dumpster
- Vehicle ferry
- Volume control telephone
- Wheelchair-accessible
- Wi-Fi
- Women’s room
Glasforms installation tools are made in the U.S.A. and are compatible with most manufacturer marker posts. These tools are made using heavy-duty steel, and are finished with a powder coating.

**Available tools include:**
- Snowpole driver
- Post driver
- Post puller
- Pilot hole driver
- U-channel manual driver
- Boundary marker driver

**Post Installation Instructions:**
- Posts up 66” in length must be buried 18”
- Posts between 72” and 84” must be buried 24”
- Posts longer than 96” must be buried at least 36”

**Accessories:**
- Plastic and U-Channel Anchors can be installed for permanent anchoring of marker posts in loose soils
- Flexible barb collapses during installation and expands upon attempted removal
- Plastic anchor kits are available and sold in packs of 10
- Rivet guns are available