

Product Information Bulletin

64 Outwater Lane, Garfield, NJ 07026 Ph: 973-340-7889 | Fax: 973-340-7809

ANSI/ASME A13.1-2023 Scheme for the Identification of Piping Systems

Latest Revision ANSI / ASME A13.1-2023:

Primary Means of Identification:

The legend (name of the pipe content) and directional flow arrow remain the primary means of identifying pipe content. The size and placement of the marker and arrow has not changed. See ANSI/ ASME Size Chart below and installation guide for details.

ASME A13.2023 3.1 Legend: "Positive identification of the contents of a piping system shall be by lettered legend, giving the name of the contents in full or abbreviated form. Arrows shall be used to indicate direction of flow. Where flow can be in both directions, arrows in both directions shall be displayed. Contents shall be identified by a legend with sufficient additional details such as temperature, pressure, etc. as are necessary to identify the hazard."

Pipemarker.com meets ANSI & ASME A13.1-2023 Type and Letter Size requirements: Brimar uses sans serif gothic bold lettering (Arial Bold) when manufacturing pipe markers to provide high readability and contrast with marker color.












Font type: Sans Serif Gothic | Font name: Arial Bold

Additional Means of Identification ASME A13.1-2023

ASME A13.1 has incorporated the GHS pictograms into the new 2023 revision and has recommended their use as part of the legend.

"The applicable GHS pictogram as illustrated in Fig. 1 may be included as part of the legend. Where piping is connected to containers that are labeled in accordance with GHS requirements, a corresponding label on the piping may be provided. The corresponding label should contain at least the product name or identifier, the pictogram, the signal word, and the physical, health and environmental hazard statements."

 <p>GHS01</p> <p>Health Hazard</p> <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	 <p>GHS02</p> <p>Flame</p> <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	 <p>GHS03</p> <p>Exclamation Mark</p> <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory) 	 <p>GHS04</p> <p>Gas Cylinder</p> <ul style="list-style-type: none"> • Gases Under Pressure 	 <p>GHS05</p> <p>Corrosion</p> <ul style="list-style-type: none"> • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals
 <p>GHS06</p> <p>Exploding Bomb</p> <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides 	 <p>GHS07</p> <p>Flame Over Circle</p> <ul style="list-style-type: none"> • Oxidizers 	 <p>GHS08</p> <p>Environment Skull (Non-Mandatory)</p> <ul style="list-style-type: none"> • Aquatic Toxicity 	 <p>GHS09</p> <p>Skull and Crossbones</p> <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic) 	



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Secondary Means of Identification:

The secondary means of identification is the color code of the marker. The exact colors are contained in the ANSI Z535.1 Safety Color Code.

ASME A13.2023 3.2 Color: "Color should be used to identify the characteristic hazards of the contents. Color should be displayed on, or contiguous to, the piping by any physical means, but its use shall be in combination with the legend..."

Brimar Products Compliance:

The new standard does not require the replacement of previously installed markers. The standard only applies to new installations. Brimar products comply with ANSI / ASME A13.1 standards and we are committed to a uniform standard of pipe identification. However, we recognize that it's not possible or realistic for everyone to adopt the new 2023 standard immediately and therefore Brimar will continue to offer markers that comply with the old and new standards. For our product offering Brimar has identified which color combinations comply with which standard, either the 1996 or the 2023 version.

ANSI / ASME A13.1 Designation of Colors

FLUID SERVICE	Color Combinations
Firefighting Fluids This classification includes water, foam and CO2 used in sprinkler systems and fire fighting piping systems.	RED BKGD / WHITE LETTERS
Toxic & Corrosive Fluids This classification includes fluids that are corrosive or toxic, or will produce corrosive or toxic substances when released.	ORANGE BKGD / BLACK LETTERS
Flammable, Combustible, & Oxidizing Fluids Flammable: This classification includes fluids, which, under ambient or expected operating conditions, are a vapor or produce vapors that can be ignited and continue to burn in air. Oxidizing: Oxidizing fluid is any gas or liquid that may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does. Combustible Fluids This classification includes fluids that can burn, but are not flammable.	YELLOW BKGD / BLACK LETTERS
Steam; or Steam Condensate, Boiler Feedwater, or Other Hot Water	GRAY BKGD / BLACK LETTERS
Potable, Cooling, or Other Cold or Tepid Water	GREEN BKGD / WHITE LETTERS
Compressed Air	BLUE BKGD / WHITE LETTERS
Defined by the User	PURPLE BKGD / WHITE LETTERS
Defined by the User	WHITE BKGD / BLACK LETTERS
Defined by the User	BROWN BKGD / WHITE LETTERS
Defined by the User	BLACK BKGD / WHITE LETTERS

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Pipemarker.com meets ANSI & ASME A13.1-2023 Marker Size requirements:

Brimar follows the size recommendations supplied on this standard for all of our pipe marking products.

ANSI / ASME A13.1-2023 Size Chart (Pipe Overall Diameter, Marker Size & Letter Height)

The following chart shows the recommended pipe marker letter height and marker size based on the outside pipe diameter of the pipe to be identified. For pipes O.D. smaller than 0.75" (19mm) and for valve and fitting identification, the use of a permanent legible tag is recommended.



For pipes with O.D. of 0.7" to 1.3"
(18 to 33mm)
Legend Size: 0.5" (13mm) high
Marker Size: 8" (200mm) wide



For pipes with O.D. of 1.4" to 2.4"
(34 to 61mm)
Legend Size: 0.7" (19mm) high
Marker Size: 8" (200mm) wide



For pipes with O.D. of 2.5" to 6.7"
(62 to 170mm)
Legend Size: 1.3" (32mm) high
Marker Size: 12" (300mm) wide



For pipes with O.D. of 6.8" to 10"
(171 to 254mm)
Legend Size: 2.5" (64mm) high
Marker Size: 24" (600mm) wide



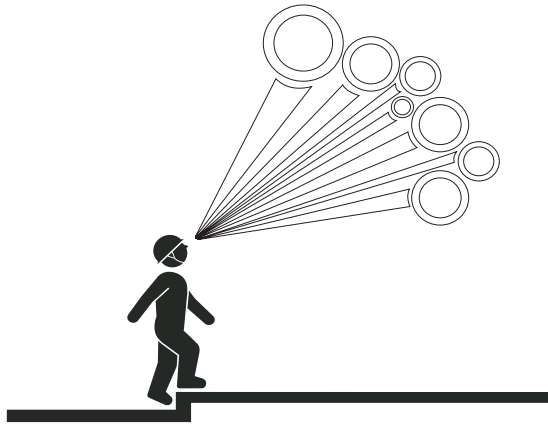
For pipes with O.D. over 10"
(254mm)
Legend Size: 3.5" (89mm) high
Marker Size: 32" (800mm) wide

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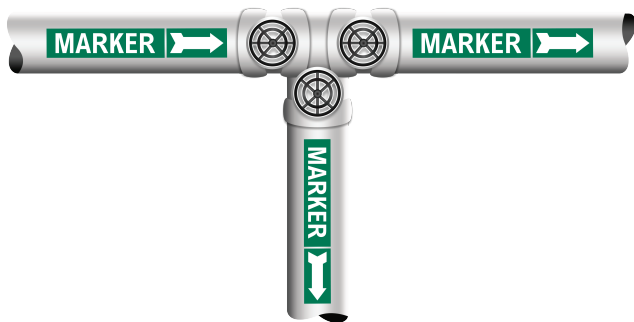
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Installation Recommendations:



Always position pipe labels on pipes to achieve the best visibility. Install pipe labels below or above the horizontal centerline of the pipe when pipes are located above or below the normal line of vision.



Install pipe labels close to valves or flanges



Install pipe labels near branches and whenever a pipe changes direction.



Install pipe labels before and after all wall, floor and ceiling penetrations



Install pipe labels at frequent intervals on straight pipe runs.
Brimar recommends 25 ft.

Abandoned Piping

Piping that has been abandoned in place should be identified. The recommended color scheme is safety white background with black letters. A black border should be added to the identification. When the abandoned piping is protected from corrosion by the addition of a pressurized fluid or contains residual hazardous material, the legend should indicate that.