

ANSI/ASME A13.1 2015

Latest Revision ANSI / ASME A13.1-2015

ANSI / ASME A13.1 is the most common pipe identification standard used in the United States. The standard specifies the primary and secondary means of identifying pipe content, as well as, the size, color and placement of the identification device.

Primary Identification

The legend (name of 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 table and installation recommendations for details.



Font type: Sans Serif Gothic
Font name: Arial Bold

Secondary 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 A13.2015 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..."

Fire Quenching Fluids: This classification includes water, foam and CO2 used in sprinkler systems and fire fighting piping systems.

Toxic & Corrosive Fluids: This classification includes fluids that are corrosive or toxic, or will produce corrosive or toxic substances when released.

Flammable Fluids: 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 Fluids: 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.

ANSI / ASME A13.1 Color Codes

ANSI / ASME A13.1-1996		ANSI / ASME A13.1-2015	
Fluid Service	Colors	Fluid Service	Colors
Material Inherently Hazardous	Yellow / Black	Flammable & Oxidizing Fluids	Yellow / Black
Flammable or Explosive Chemical Active or Toxic Extreme Temp. of Pressures Radioactive		Potable, Cooling, Boiler Feed & Other Waters	Green / White
Material of Inherently Low Hazard	Green / White	Compressed Air	Blue / White
Liquid or Liquid Admixtures		Fire Quenching Fluids	Red / White
Material of Inherently Low Hazard	Blue / White	Toxic & Corrosive Fluids	Orange / Black
Gas or Gaseous Admixtures		Combustible Fluids	Brown / White
Fire Quenching Fluids	Red / White	Defined by User	Purple / White
Water, Foam, CO2, Halon, etc.		Defined by User	White / Black
		Defined by User	Gray / White
		Defined by User	Black / White

Additional Means of Identification ASME A13.1 2015

ASME A13.1 has incorporated the GHS pictograms into the 2015 revision and has recommended their use as part of the legend.

"The applicable GHS pictograms 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."



Fig. 1

GHS01 Health Hazard • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	GHS02 Flame • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	GHS03 Exclamation Mark • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)	GHS04 Gas Cylinder • Gases Under Pressure	GHS05 Corrosion • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals	GHS06 Exploding Bomb • Explosives • Self-Reactives • Organic Peroxides	GHS07 Flame Over Circle • Oxidizers	GHS08 Environment Skull (Non-Mandatory) • Aquatic Toxicity	GHS09 Skull and Crossbones • Acute Toxicity (fatal or toxic)

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ANSI / ASME A13.1 2015 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, including insulation, of the pipe to be identified. For pipes O.D. smaller than 3/4" (19mm) and for valve and fitting identification, the use of a permanent legible tag is recommended.



Pipes with Diameter (O.D.)
3/4" to 1-1/4"
(19 to 32mm)
Marker Length: 8" (200mm)
Legend Height: 1/2" (13mm)



Pipes with Diameter (O.D.)
1-1/2" to 2"
(38 to 51mm)
Marker Length: 8" (200mm)
Legend Height: 3/4" (19mm)



Pipes with Diameter (O.D.)
2-1/2" to 6"
(64 to 150mm)
Marker Length: 12" (300mm)
Legend Height: 1-1/4" (32mm)

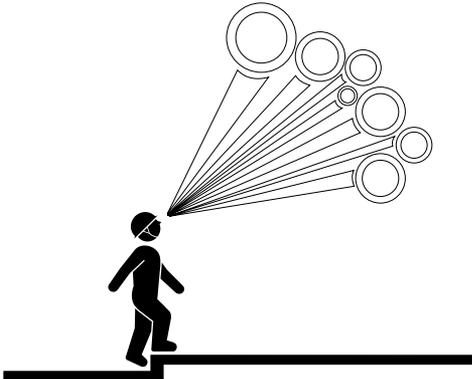


Pipes with Diameter (O.D.)
8" to 10"
(200 to 250mm)
Marker Length: 24" (600mm)
Legend Height: 2-1/2" (64mm)



Pipes with Diameter (O.D.)
Over 10"
(Over 250mm)
Marker Length: 32" (800mm)
Legend Height: 3-1/2" (89mm)

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 near branches and whenever a pipe changes direction.



Install pipe labels close to valves or flanges



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



Install pipe labels at frequent intervals on straight pipe runs. Brimar recommends 20 to 25 ft.