

JIS

JAPANESE INDUSTRIAL STANDARD

Identification Marking for Piping Systems

JIS Z 9102-1987

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Identification Marking for
Piping Systems

Z 9102-1987

1. Scope

This Japanese Industrial Standard specifies the general matters governing the identification marking on piping systems for the purposes of effecting safety including prevention of erroneous operation of valves in piping systems and of improving the handling practices of piping systems in factories, mines, schools, theaters, marine vessels, vehicles, aerial safety equipment, etc.

2. Definitions

The meaning of the principal terms used in this standard shall be as follows:

- (1) identification colour The colour painted for distinguishing from outside the kind of material contained in the pipe.
- (2) material marking The marking for showing the kind and name of the material in the pipe.
- (3) state marking The marking for showing the state of the material in the pipe.
- (4) safety marking The marking by means of safety colours (safety colours specified in JIS Z 9101, hereinafter referred to as the "safety colours"), painted on the pipe for promoting safety. The generic term of the following three markings.
 - (a) danger marking The marking showing that the material contained in the pipe is dangerous.
 - (b) extinguisher marking The marking denoting that the material in the pipe can be used for fire extinguishing.
 - (c) radioactivity marking The marking denoting that the material in the pipe is the dangerous article having radioactivity.

3. Identification Marking

- 3.1 Material Marking The material marking shall be as follows:

Applicable Standards:

JIS Z 8102-Names of Non-Luminous Object Colours

JIS Z 8721-Specification of Colours According to their Three Attributes

JIS Z 8722-Methods of Measurement for Colour of Reflecting or Transmitting Objects

JIS Z 9101-General Code of Safety Colour

JIS Z 9103-Safety Signs

(1) Identification of the kinds of material in the pipe is marked by using seven kinds of colour given in Table 1 (refer to Attached Fig. 1).

(2) The marking of the names of the material in the pipe shall be as follows (refer to Attached Fig. 2).

(a) The names of material are marked either without abbreviations, or by using the chemical symbols.

Example 1: drinking water, sulfuric acid

Example 2: H_2O , H_2SO_4

(b) The character of material name and the chemical symbol of material shall be written on the groundwork of an identification colour using the safety colour white or black.

Table 1. Kinds of Materials and Their Identification Colours

Kind of material	Identification colour
Water	Blue
Steam	Dark red
Air	White
Gas	Pale yellow
Acid and alkaline	Greyish purple
Oil	Brown
Electricity	Pale yellowish red

Remarks 1. The identification colour is expressed in accordance with JIS Z 8102.

2. For the gas vent pipe or the like in a mine gateway, the safety colour yellow is used.

3. Though electricity is not a material, a conduit tube is identified in the same way as for other regular pipings.

4. If an identification colour is needed for material other than those given above, an identification colour other than specified above shall be used.

3.2 State Marking

3.2.1 Identification of Flow Direction An arrowhead shall be used for the indication of the flow direction of the material in the pipe as follows:

(1) The arrowhead is denoted in white or black.