

# Properties of WATER

Water (H<sub>2</sub>O) is the most abundant compound on Earth's surface, constituting about 70% of the planet's surface.



In nature it exists in liquid, solid, and gaseous states. It is in dynamic equilibrium between the liquid and gas states at standard temperature and pressure. At room temperature, it is a nearly colorless with a hint of blue, tasteless, and odorless liquid.

Many substances dissolve in water and it is commonly referred to as the universal solvent. Because of this, water in nature and in use is rarely pure and some of its properties may vary slightly from those of the pure substance. However, there are many compounds that are essentially, if not completely, insoluble in water.

Water is the only common substance found naturally in all three common states of matter.

## WATER TESTING METHODS

Water chemistry analyses are carried out to identify and quantify the chemical components and properties of a certain water. This include pH, major cations and anions, trace elements and isotopes. Water chemistry analysis is used extensively to determine the possible uses a kind of water may have or to study the interaction it has with its environment.

## PROPERTIES

**MOLECULAR FORMULA**  
H<sub>2</sub>O

**MOLAR MASS**  
18.01528(33) g/mol

**APPEARANCE**  
white solid or almost colorless, transparent, with a slight hint of blue, crystalline solid or liquid

**DENSITY**  
1,000kg/m<sup>3</sup>, liquid (4 °C) (62.4 lb/cu. ft)  
917kg/m<sup>3</sup>, solid

**MELTING POINT**  
0 °C, 32 °F (273.15 K)

**BOILING POINT**  
100 °C, 212 °F (373.15 K)

