

Classification of Matter

Choose words from the list to fill in the blanks in the paragraphs.

- | | | |
|--------------------|--------------------|----------------------|
| chemical property | intensive property | compound |
| mixture | element | physical property |
| extensive property | property | heterogeneous matter |
| substance | homogenous matter | |

Matter has uniform characteristics throughout is called (1) _____.
Matter that has parts with different characteristics is called (2). A
characteristic by which a variety of matter is recognized is called a(n)
_____ (3) _____. A characteristic that depends upon the
amount of matter in the sample is called a(n) _____ (4) _____. A
characteristic that does not depend upon the amount of matter is called
a(n) _____ (5) _____. A characteristic that can be observed
without producing new kinds of matter is called a(n)
_____ (6) _____. A characteristic that depends on how a kind of
matter changes during interactions with other kinds of matter is called
_____ (7) _____.

Matter can also be classified according to the basic types of
matter it contains. A simple substance that cannot be broken down
into other substances by chemical means is called
_____ (8) _____. A chemical combination of simple substances is
called _____ (9) _____. A physical combination of different
substances that retain their individual properties is called a(n)
_____ (10) _____. Either an element or a compound may be
referred to as a(n) _____ (11) _____.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

MIXTURES

Classify each of the following as an element, compound, heterogeneous mixture, or homogenous mixture.

- | | |
|------------------------------------|----------------------------|
| 12. Water _____ | 13. Carbon _____ |
| 14. Air _____ | 15. Table salt, NaCl _____ |
| 16. Sugar dissolved in water _____ | 17. Granite _____ |
| 18. Homogenized milk _____ | 19. Oxygen _____ |
| 20. Sand in water _____ | |

Chemical and Physical Properties

Classify each of properties listed below as extensive physical, intensive physical, or chemical.

- | | |
|-------------------------|-------------------------------|
| 1. Color _____ | 10. reactivity _____ |
| 2. Combustibility _____ | 11. Unreactive _____ |
| 3. Hardness _____ | 12. Odor _____ |
| 4. Density _____ | 13. stability _____ |
| 5. Mass _____ | 14. Malleability _____ |
| 6. Melting point _____ | 15. Tendency to corrode _____ |
| 7. Ductility _____ | 16. reacts with water _____ |
| 8. Volume _____ | 17. Weight _____ |
| 9. rusting _____ | 18. solubility _____ |

Some of the measured properties of a given substance are listed below. Write the general name describing each property. Select the names from the following properties: chemical, malleability, density, volume, hardness, melting point, ductility, mass, odor, weight, combustibility.

- | | |
|-----------------------------------------------------------------|--|
| 19. 15 dm ³ _____ | |
| 20. Can easily be hammered into sheets _____ | |
| 21. 2.8 g/cm ³ _____ | |
| 22. Burns when heated in the presence of O ₂ . _____ | |
| 23. Stinks when heated _____ | |
| 24. 500 °C _____ | |
| 25. Can easily be drawn into a wire _____ | |

Classify the following properties as extensive or intensive.

- | | | |
|-----------------|---------------------|-------------------------|
| 26. mass _____ | 27. ductility _____ | 28. melting point _____ |
| 29. color _____ | 30. length _____ | 31. conductivity _____ |