

Types of Chemical Compounds

Classify the following compounds as ionic or molecular (covalent).

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| 1. CaCl_2 _____ ionic _____ | 11. MgO _____ |
| 2. CO_2 _____ | 12. NH_4Cl _____ |
| 3. H_2O _____ | 13. $\text{Sr}(\text{NO}_3)_2$ _____ |
| 4. Na_2SO_4 _____ | 14. KI _____ |
| 5. K_2O _____ | 15. $\text{Ba}(\text{OH})_2$ _____ |
| 6. NaF _____ | 16. NO_2 _____ |
| 7. Na_2CO_3 _____ | 17. $\text{Ca}_3(\text{PO}_4)_2$ _____ |
| 8. CH_4 _____ | 18. FeCl_3 _____ |
| 9. $\text{Mg}(\text{NO}_3)_2$ _____ | 19. P_2O_5 _____ |
| 10. LiBr _____ | 20. N_2O_3 _____ |

Binary Ionic Compounds – Compounds with monatomic ions in it, a metallic ion and a nonmetallic ion. This allows only two types of atoms in the formula. Ex: Rb_2O

Ternary Ionic Compounds – Compounds with at least one polyatomic ion in it. This allows three or more types of atoms in the formula. Ex: RbNO_3

Classify the following compounds as binary ionic or ternary ionic.

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| 21. KOH _____ ternary ionic _____ | 26. $\text{Na}_2\text{Cr}_2\text{O}_7$ _____ |
| 22. CoO _____ | 27. MgSO_4 _____ |
| 23. $\text{Fe}(\text{NO}_3)_2$ _____ | 28. Cu_2S _____ |
| 24. MgH_2 _____ | 29. SnO_2 _____ |
| 25. Cs_2S _____ | 30. NH_4NO_3 _____ |