

COVALENT COMPOUNDS

Covalent compounds are made from two non-metals and so don't follow the normal ionic rules. You can tell if a compound is covalent because it has prefixes modifying the species names. These species tell you exactly how many atoms are in the covalent compound.

The prefixes are

- 1 = mono
- 2 = di
- 3 = tri
- 4 = tetra
- 5 = penta
- 6 = hexa
- 7 = hepta
- 8 = octa
- 9 = nona
- 10 = deca

All you have to do is write the species in the compound together, and add a subscript based on the numbers above:

nitrogen dioxide: NO_2

dinitrogen monoxide: N_2O

phosphorus pentachloride: PCl_5

sulfur hexafluoride: SF_6

diphosphorus pentoxide: P_2O_5

Most organic compounds that contain alcohol (R-OH) or carboxylic acid (R-COOH) functional groups will most likely be soluble due to the hydrogen bonding capabilities of those substances. Other covalent compounds tend to be insoluble in water.

Most organic and covalent compounds will not conduct electricity in water. The exception to this rule are organic acids (carboxylic acids).

Name _____

Lewis Dot Structures Worksheet #1

Homework Problems

1. CO₂

2. H₂O

3. H₂CO

4. HI

5. NH₃

6. HCCH

7. CH₄

8. CH₂F₂

9. SeF₂

10. HCN