|  |
| --- |
| **Polar Covalent** |
| Partial charges on ends of molecule |
| Electrons shared unequally |
| Medium electronegativity difference between bonding elements |
| Positively charged pole on end of bond that is less electronegative |
| Negatively charged pole on end of bond that is “hogging” the electrons |
| Medium ionic character |
| 2 unlike nonmetals bonded together (usually) |
| Medium melting point, medium boiling point |
| Can dissolve in other polar substances |
| When a phase change occurs, bonds are NOT made/broken |
| When a phase change occurs, IMFs are made or broken |
| Nonelectrolyte  |
| Likely to be a liquid at room temperature |

|  |
| --- |
| **Nonpolar Covalent** |
| No partial charges on ends of molecules |
| Electrons shared equally |
| Very low or no electronegativity difference between bonding elements |
| Low ionic character |
| 2 nonmetals of the same element (usually) bonded together |
| Carbon bonded to hydrogen |
| Low melting point, medium boiling point |
| Can dissolve in nonpolar substances |
| When a phase change occurs, bonds are NOT made/broken |
| When a phase change occurs, IMFs are made or broken |
| Nonelectrolyte  |
| Likely to be a gas at room temperature |