

<u>Name</u>	<u>Formula</u>	<u>Lewis Dot Structure</u>	<u>Molecular Shape</u> VSEPR Shape	<u>Bond Polarity</u> Use EN differences to calculate	<u>Molecule Type</u> polar or nonpolar based on molecule symmetry
Hydrogen gas	H <sub>2</sub>	H—H	Linear	2.1-2.1 = 0 non polar covalent	nonpolar
carbon tetrachloride	CCl <sub>4</sub>	<pre>       :Cl:         :Cl- C -Cl:               :Cl:           </pre>	Tetrahedral	3.0-2.5 = 0.5 polar covalent	non polar
hydrochloric acid	HCl	H—Cl:	Linear	3.0-2.1 = 0.9 polar covalent	polar
Carbon dioxide	CO <sub>2</sub>	O=C=O	Linear	3.5-2.5 = 1.0 polar covalent	non polar
Oxygen gas	O <sub>2</sub>	O=O	Linear	3.5-3.5 = 0 non polar covalent	non polar
potassium oxide	K <sub>2</sub> O	$K^+ \curvearrowright \overset{\times \times}{\underset{\times \times}{O}} \curvearrowleft K^+ \left[ \overset{\times \times}{\underset{\times \times}{O}} \right]^{2-}$	—	3.5 - 0.8 = 2.7 ionic	—
Hydrobromic acid	HBr	H—Br:	Linear	2.8-2.1 = 0.7 polar covalent	polar
water	H <sub>2</sub> O	<pre>       ..       O      / \     H   H           </pre>	Bent	3.5-2.1 = 1.4 polar covalent	polar
nitrogen gas	N <sub>2</sub>	:N≡N:	Linear	3.0-3.0 = 0 non polar covalent	non polar
Dihydrogen sulfide	H <sub>2</sub> S	<pre>       "S"      / \     H   H           </pre>	Bent	2.5-2.1 = 0.4 polar covalent	polar
nitrogen trihydride	NH <sub>3</sub>	<pre>       N      / \     H   H            H           </pre>	Trigonal pyramidal	3.0-2.1 = 0.9 polar covalent	polar
N/A	CH <sub>2</sub> Cl <sub>2</sub>	<pre>       H             H - C - Cl:               :Cl:           </pre>	Tetrahedral	CH 2.5-2.1 = 0.4 CCL 3.0-2.5 = 0.5 p ← np	polar
Chlorine gas	Cl <sub>2</sub>	:Cl—Cl:	Linear	3.0-3.0 = 0 non polar covalent	non polar
N/A	CH <sub>3</sub> Cl	<pre>       H             H - C - Cl               H           </pre>	Tetrahedral	CH 2.5-2.1 = 0.4 np CCL 3.0-2.5 = 0.5 p	polar