

KEY.

Part 2: Molecular Compounds

How to write a chemical formula for molecular compounds:

1st element symbol # atoms

2nd element symbol # atoms

How to name a molecular compound:

prefix + 1st element

prefix + 2nd element -ide

prefix (pg. 43)

Diatomic/polyatomic Elements (pg. 31)

prefix (pg. 43)		Diatomic/polyatomic Elements (pg. 31)	
		element	chemical formula
1	mono		
2	di	hydrogen	H ₂
3	tri	nitrogen	N ₂
4	tetra	oxygen	O ₂
5	penta	fluorine	F ₂
6	hexa	chlorine	Cl ₂
7	hepta	bromine	Br ₂
8	octa	iodine	I ₂
9	nona	phosphorus	P ₄
10	deca.	sulfur	S ₈
		astatine	At ₂

Covalent bond: sharing of ve- between two non-metals.

Molecular compound:

compound formed from two or more non-metal atoms joined through a covalent bond.

Lewis structure:

representation of an atom's valence e-

2 non-metals	Electron dot diagram of each non-metal	Lewis structure of new compound formed	Molecular formula and molecular compound name
1 sulfur 2 bromine			SBr_2 sulfur dibromide
1 carbon 4 chlorine			carbon tetrachloride CCl_4
1 sulfur 1 oxygen			SO sulfur monoxide.
1 phosphorus 3 chlorine			PCl_3 phosphorus trichloride
1 chlorine 1 chlorine			Cl_2 chlorine

Name that molecular compound:

1	tricarbon tetraphosphide	$C_3P_4(g)$
2	hexa sulfur octa oxide	$S_6O_8(g)$
3	bromine tetrachloride	$BrCl_4$
4	triarsenic monohydride	As_3H
5	pentaselenium nonafluoride	Se_5F_9
6	solid sulfur	$S_8(s)$
7	<u>ozone</u>	O_3
8	diphosphorus hepta oxide	P_2O_7
9	<u>glucose</u>	$C_6H_{12}O_6$
10	selenium monophosphide	SeP
11	carbon tetrafluoride	CF_4
12	sucrose	$C_{12}H_{22}O_{11}$
13	diarsenic trioxide	As_2O_3
14	SO_3	sulfur trioxide
15	ethanol	C_2H_5OH