

Properties of Covalent Compounds (Pg. 147)

What are some examples of covalent compounds mentioned in the text?

What are three common properties shared by many covalent compounds?

Why do covalent compounds have low melting points?

Why are covalent compounds so relative soft?

Why are covalent compounds generally poor conductors of electricity and heat?

When is the prefix 'mono' used?

How many hydrogen atoms in tetrahydrogen?

How many oxygen atoms in heptaoxide?

How many nitrogen atoms in dinitride?

How many nitrogen atoms in decanitride?

How many fluorine atoms in pentafluorine?

#	Prefix	#	Prefix
1	Mono	6	Hexa
2	Di	7	Hepta
3	Tri	8	Octa
4	Tetra	9	Nona
5	Penta	10	Deca

Draw the Bohr Diagram for Each Covalent Compound

Link the electrons to show how they are **shared**.



sulfur dichloride



phosphorus trichloride



sulfur difluoride



dioxygen difluoride

MOLECULAR COMPOUNDS

Compound Formula	First Non-Metal	Second Non-Metal	Compound Name
CO ₂	1 C carbon	2 O oxygen	carbon dioxide
			carbon monoxide
			sulfur trioxide
			dinitrogen tetraoxide
			dichlorine monoxide

Compound Name	number of atoms of first non-metal	number of atoms or second non-metal	Compound Formula
carbon dioxide	1 C carbon	2 O oxygen	CO ₂
			CH ₄
			NH ₃
			SCl ₂
			Cl ₂ O ₇

Covalent Compounds (Pg. 148-149)

Which elements exist as diatomic molecules under normal conditions, and how many electrons do atoms of these elements share in their covalent bonds?

What type of bond is formed when two oxygen atoms share two pairs of electrons, and how is this bond described?

How many carbon atoms is each carbon atom in a diamond crystal bonded to, and what kind of three-dimensional structure does this form?

In the structure of graphite, how many carbon atoms does each carbon atom form covalent bonds with, and what property of graphite is attributed to this structure?

What type of structure is silicon dioxide (quartz), and how are its atoms bonded together?