

Types of Compounds

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Video Workbook with Dr. B

In order to correctly name chemical compounds you must first identify the type of compound.

To do this you much know which elements are metals and non-metals.

Hydrogen (H) is usually considered a non-metal.

H hydropos															2 He		
3 Li	4 Be		Me	tals	M	letall	oids	N	on-M	etals	6	5 B	6 C Carton	7 N Nitrogen	8 O Origin	9 F Howtre	10 Ne Nece
11 Na Sodium	12 Mg	Transition Metals								13 Al Aberraria	14 Si	15 P Pinspheras	16 S Sotte	17 Cl CMorine	18 Ar		
19 K	20 Ca	21 Sc Scundism	22 Ti	23 V Vanadium	24 Cr	25 Mn Manganese	26 Fe	27 Co	28 Ni Nicket	29 Cu	30 Zn	31 Ga Callum	32 Ge	33 As	34 Se Seleman	35 Br	36 Kr Krypton
37 Rb	38 Sr Stootion	39 Y Yerun	40 Zr	41 Nb Nistian	42 Mo Molyhdosun	43 Te Tochneium	44 Ru Rathenium	45 Rh Rhodram	46 Pd Pallation	47 Ag	48 Cd Cadmium	49 In	50 Sn	51 Sb	52 Te Yellielen	53 I	54 Xe Xeeoo
Cs Cotom	56 Ba	57 La	72 Hf	73 Ta Tantalam	74 W Tutpilos	75 Re	76 Os Osmins	77 Ir	78 Pt Platinum	79 Au	80 Hg	81 Tl Thallium	82 Pb	83 Bi	84 Po Polonium	85 At Adabay	86 Rn
87 Fr	88 Ra Radium	Ac Ac	104 Rf Repherfordism	105 Db Datasius	106 Sg Sestorpun	107 Bh Bulletige	108 Hs	109 Mt Meinerium	110	111	112	113	114				

Essential Video: Types of Compounds

Below are the most common types of compounds you'll work with. Two key types are:

$$Ionic = Metal + Non-Metals(s)$$

Covalent (Molecular) = Non-Metal + Non-Metal

Туре	Description	Examples Sodium ion, Na ⁺ Chloride ion, Cl ⁻				
Ion	Element with a Charge					
Polyatomic Ion	Group of Elements with a Charge	Carbonate ion, CO ₃ ²⁻ Ammonium ion, NH ₄ ⁺				
Binary Ionic	M + Single NM	Sodium chloride, NaCl Aluminum oxide, Al ₂ O ₃				
Ionic with Transition Metal	Transition M with NM or Polyatomic Ion	Iron (III) chloride, FeCl ₃ Manganese (II) sulfate, MnSO ₄				
Molecular (Covalent)	NM + NM	Dinitrogen pentoxide, N ₂ O ₅ Carbon monoxide, CO				
Organic	Compounds consisting primarily of C and H.	Methane, CH ₄ Ethane, C ₂ H ₆				

Practice: Identify the types of compounds.

 NH_3 Al_2O_3 CO_2

Sodium chloride H_2O Iron (II) oxide

 SO_4^{2-} ${\rm O}_2$ C_2H_6

Answers

 $5O_4^{2-}$ Polyatomic ion

Sodium chloride Ionic

VH3 Covalent/Molecular

Organic C2H6 Covalent/Molecular or

Covalent/Molecular

 O_2H

Covalent/Molecular CO^{5} O₂ Covalent/Molecular

Transition Metal

Iron (II) oxide Ionic with

Al2O3 Ionic

Report errors and suggestions to <u>DrB@breslyn.org</u>



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