

# Chemistry Vocabulary

**The atom** (helium)

Atomic number: 2 (2 protons)

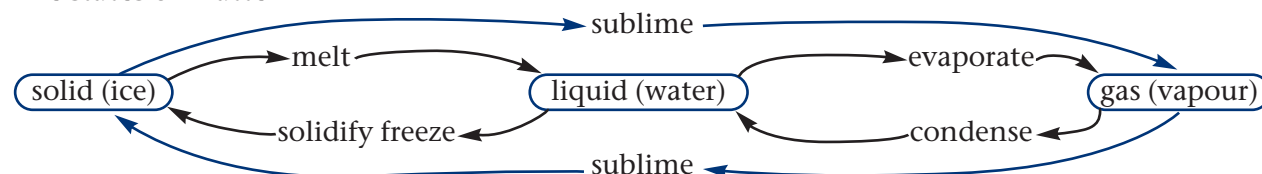
Atomic mass: 4 (2 protons + 2 neutrons). Only one isotope of helium commonly occurs.

Number of electrons: 2



A proton has a positive electric charge. An electron has a negative electric charge.

**The states of matter**



**Elements and compounds**

The simplest elements

Atomic number	Name	Symbol	Most frequent valencies
1	hydrogen	H	1, -1
2	helium	He	
3	lithium	Li	1
4	beryllium	Be	2
5	boron	B	3
6	carbon	C	4, -4, 2
7	nitrogen	N	3, -3, 5, 4, 2, 1
8	oxygen	O	-2
9	fluorine	F	-1
10	neon	Ne	
11	sodium	Na	1
12	magnesium	Mg	2
13	aluminium	Al	3
14	silicon	Si	4
15	phosphorus	P	3, -3, 5
16	sulphur	S	-2, 6, 4
17	chlorine	Cl	1, -1, 3, 5, 7
18	argon	Ar	
19	potassium	K	1
20	calcium	Ca	2

**Elements whose symbols are very different:**

iron	Fe
copper	Cu
silver	Ag
tin	Sn
gold	Au
lead	Pb

**Common anions with their valencies:**

hydride	H <sup>-</sup>
carbonate	CO <sub>3</sub> <sup>2-</sup>
nitride	N <sup>3-</sup>
nitrite	NO <sub>2</sub> <sup>-</sup>
nitrate	NO <sub>3</sub> <sup>-</sup>
oxide	O <sup>2-</sup>
peroxide	O <sub>2</sub> <sup>2-</sup>
hydroxide	OH <sup>-</sup>
fluoride	F <sup>-</sup>
phosphate	PO <sub>4</sub> <sup>3-</sup>
sulfide	S <sup>2-</sup>
sulfite	SO <sub>3</sub> <sup>2-</sup>
sulfate	SO <sub>4</sub> <sup>2-</sup>
chloride	Cl <sup>-</sup>
chlorite	ClO <sub>2</sub> <sup>-</sup>
chlorate	ClO <sub>3</sub> <sup>-</sup>

**Example compounds:**

Sodium hydride	NaH
Lithium carbonate	Li <sub>2</sub> CO <sub>3</sub>
Boron nitride	BN
Sodium nitrite	NaNO <sub>2</sub>
Silver nitrate	AgNO <sub>3</sub>
Zinc oxide	ZnO
Barium peroxide	BaO <sub>2</sub>
Potassium hydroxide	KOH
Hydrogen fluoride	HF
Tricalcium phosphate	Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>
Iron (II) sulfide	FeS
Sodium sulfite	Na <sub>2</sub> SO <sub>3</sub>
Copper (II) sulfate	CuSO <sub>4</sub>
Potassium chloride	KCl
Sodium chlorite	NaClO <sub>2</sub>
Potassium chlorate	KClO <sub>3</sub>

# Chemistry Vocabulary Exercises

## 1 Write the translation of the words.

- |   |            |   |       |
|---|------------|---|-------|
| 1 | hectogram  | a | ..... |
| 2 | silicon    | b | ..... |
| 3 | nanosecond | c | ..... |
| 4 | evaporate  | d | ..... |
| 5 | molar mass | e | ..... |
| 6 | isotope    | f | ..... |
| 7 | hydrogen   | g | ..... |

## 2 Complete the definitions with a word from the box.

charge    compound    ~~liquid~~    metal    molecule    reaction

- If a substance *sublimes* it passes from a solid to a gas, without becoming a *liquid* .
- A ..... is the smallest structured particle of a substance, with no electric charge.
- Lead* is a soft, very dense, poisonous .....
- An element's *electric* ..... is given by subtracting the number of electrons from the number of protons.
- A substance's *valency* gives the number of ions that will combine to form a .....
- An equation such as  $H_2 + Cl_2 = HCl$  represents a chemical .....

## 3 Match the names of the compounds with the formulae and the descriptions.

- |   |                   |           |   |
|---|-------------------|-----------|---|
| 1 | sodium chloride   | $N_2O$    | alumina, taken from bauxite ore to make aluminium           |
| 2 | hydrogen chloride | $H_2O_2$  | chalk, limestone, and shells                                |
| 3 | carbon dioxide    | $Al_2O_3$ | a gas which makes hydrochloric acid when dissolved in water |
| 4 | aluminium oxide   | $NaCl$    | 'laughing gas', used as an anaesthetic                      |
| 5 | nitrous oxide     | $CaCO_3$  | table salt  |
| 6 | hydrogen peroxide | $CO_2$    | a gas that we breathe out and plants use                    |
| 7 | calcium carbonate | $HCl$     | a watery liquid used for cleaning wounds and bleaching hair |

## 4 Write the English names of these compounds.

- $KNO_3$     ..... *potassium nitrate* .....
- $NaOH$     .....
- $LiF$     .....
- $AuCl_3$     .....
- $MgCO_3$     .....
- $H_2O$     .....

**ANSWER KEY****Exercise 2**

2 molecule    3 metal    4 charge    5 compound    6 reaction

**Exercise 3**

2 HCl a gas which makes hydrochloric acid when dissolved in water

3 CO<sub>2</sub> a gas that we breathe out and plants use

4 Al<sub>2</sub>O<sub>3</sub> alumina, taken from bauxite ore to make aluminium

5 N<sub>2</sub>O 'laughing gas' used as an anaesthetic

6 H<sub>2</sub>O<sub>2</sub> a watery liquid used for cleaning wounds and bleaching hair

7 CaCO<sub>3</sub> chalk, limestone and shells

**Exercise 4**

2 sodium    3 lithium fluoride    4 gold chloride    5 magnesium carbonate

6 water