NOW TRY IN ENGLISH CLIL

Oxide Nomenclature

Li_2O	Lithium oxide	Fe_2O_3	Iron(III) oxide
Na_2O	Sodium oxide	Cu_2O	Copper(I) oxide
K_2O	Potassium oxide	CuO	Copper(II) oxide
BeO	Beryllium oxide	Ag_2O	Silver oxide
MgO	Magnesium oxide	ZnO	Zinc oxide
CaO	Calcium oxide	PbO	Lead(II) oxide
BaO	Barium oxide	PbO_2	Lead(IV) oxide
Al_2O_3	Aluminium oxide	HgO	Mercury(II) oxide
FeO	Iron(II) oxide	NiO	Nickel(II) oxide

Anhydrides Nomenclature

B_2O_3	Boron oxide	P_2O_3	Diphosphorus trioxide
CO	Carbon monoxide	P_2O_5	Diphosphorus pentoxide
CO_2	Carbon dioxide	As_2O_3	Diarsenic trioxide
SiO_2	Silicon dioxide	As_2O_5	Diarsenic pentoxide
N_2O	Nitrous oxide	SO_2	Sulphur dioxide
NO	Nitrogen oxide	SO_3	Sulphur trioxide
N_2O_3	Dinitrogen trioxide	Cl_2O_3	Dichlorine trioxide
NO_2	Nitrogen dioxide	Cl_2O_5	Dichlorine pentoxide
N_2O_5	Dinitrogen pentoxide	Cl_2O_7	Dichlorine heptoxide

Hydroxides Nomenclature

$LiOH$	Lithium hydroxide	$Fe(OH)_3$	Iron(III) hydroxide
$NaOH$	Sodium hydroxide	$CuOH$	Copper(I) hydroxide
KOH	Potassium hydroxide	$Cu(OH)_2$	Copper(II) hydroxide
$Be(OH)_2$	Beryllium hydroxide	$AgOH$	Silver hydroxide
$Mg(OH)_2$	Magnesium hydroxide	$Zn(OH)_2$	Zinc hydroxide
$Be(OH)_2$	Calcium hydroxide	$Pb(OH)_2$	Lead(II) hydroxide
$Ca(OH)_2$	Barium hydroxide	$Cd(OH)_2$	Cadmium hydroxide
$Al(OH)_3$	Aluminium hydroxide	$Hg(OH)_2$	Mercury hydroxide
$Fe(OH)_2$	Iron(II) hydroxide	$Ni(OH)_2$	Nickel hydroxide

Acids Nomenclature

H_3BO_3	Boric acid	HClO	Hypochlorous acid
H_2CO_3	Carbonic acid	$HClO_2$	Chlorous acid
HNO_2	Nitrous acid	$HClO_3$	Chloric acid
HNO_3	Nitric acid	$HClO_4$	Perchloric acid
H_2SO_3	Solphurous acid	HF	Hydrofluoric acid
H_2SO_4	Solphuric acid	HCl	Hydrocloric acid
H_3PO_3	Phosphorous acid	HBr	Hydrobromic acid
H_3PO_4	Phosphoric acid	HI	Hydriodic acid
H_3AsO_3	Arsenious acid	H_2S	Hydrogen sulphide
H_3AsO_4	Arsenic acid	HCN	Hydrocianic acid

Oxide

An oxide is a binary chemical compound of the oxygen with other chemical elements.
Two hundred years ago in the eighteen century, oxides were named calxes or calces after the calcination process used to produce oxides.
Oxides can be named after the amount of oxygen atoms in the oxide.
Oxides containing only one oxygen are called oxide or monoxide; those containing two oxygen atoms, are called dioxide; three oxygens, are called trioxide, four oxygens, are called tetroxide, and so on following the Greek numerical prefixes.
There are three types of oxides: oxides, peroxides and superoxides.
They count as oxides but have different oxidation states (valences) and react in different ways compared to oxides.
In the oxide, oxygen has valence -2, in the peroxydes valence -1 and in the superoxides -½.
Generally, oxides are insulating to electricity.
Whit this property silicon dioxide, as silicon can easily be oxidized and the resulting part can be made into a transistor.
This is the basis for much of modern computer technology.
Oxides of more electropositive elements, like metals, tend to be basic and react with water to form hydroxides.
For example, lithium oxide is basic; when hydrated, it forms lithium hydroxide.
Oxides of more electronegativre elements, like non-metals, tend to be acids.
They are called anhydrides.
Anhydrides react with water, and form oxigen acids.
For example, dinitrogen pentoxide is acid; nitric acid is the hydrated form.

(Adapted from Wikipedia)

Glossary

Binary	Binario	Compound	Composto
Valence	Valenza	Non-metal	Non metallo
Metal	Metallo	Anhydride	Anidride
Oxide	Ossido	Peroxide	Perossido
Hydroxide	idrossido	Nomenclature	Nomenclatura
Acid	Acido	HCl	Hydrocloric acid

Practise

Match the words in table A with the English equivalent in table B. Use a dictionary if needed.

Table A

A	Conservazione della massa
B	Proporzioni multiple
C	Ammoniaca
D	Proporzioni definite
E	Acido fosforico
F	Nomenclatura
G	Ossidi
H	Perossidi
I	Idrossidi
J	Anidridi
K	Acidi
L	Idruri
M	Idracidi
N	Numero di ossidazione
O	Valenze
P	Acido cloridrico
Q	Rapporti di combinazione
R	Acido nitrico
S	Acido fosforoso
T	Acido solforico

Table B

1	Oxides
2	Hydrocloric acid
3	Multiple proportions
4	Valences
5	Phosphorous acid
6	Ammonia
7	Peroxides
8	Oxidation number
9	Nitric acid
10	Definite proportions
11	Hydroxides
12	Combination ratio
13	Phosphoric acid
14	Hydrides
15	Mass conservation
16	Anhydrides
17	Nomenclature
18	Acids
19	Sulphuric acid
20	Hydracids

Complete the text with the most suitable words.

The (1) ..... has a foundamental importance in chemistry.
With this concept we will be able to realise the chemical formula of a generic compound.
(2) ..... react with (3) ..... to form binary compound named oxides.
For binary compound we mean a compound formed by two elements alone.
There are two kinds of nomenclature: tradictional and (4) .....(International Union of Pure and Applied Chemistry).
In every chemical transformation the sum of the (5) ..... of the reactants is equal to the sum of the (6) ..... of the reaction products.
Oxides react with water to form (7) .....
Anhydrides or acid oxides react with water to form (8) .....

Keys

Match the words in table A with the English equivalent in table B. Use a dictionary if needed.

Table A	Table B
A	15
B	3
C	6
D	10
E	13
F	17
G	1
H	7
I	11
J	16
K	18
L	14
M	20
N	8
O	4
P	2
Q	12
R	9
S	5
T	19

Complete the text with the most suitable words.

The (1) valence has a foundamental importance in chemistry.
With this concept we will be able to realise the chemical formula of a generic compound.
(2) Metals react with (3) oxigen to form binary compound named oxides.
For binary compound we mean a compound formed by two elements alone.
There are two kinds of nomenclature: tradictional and (4) I.U.P.A.C. (International Union of Pure and Applied Chemistry).
In every chemical transformation the sum of the masses of the (5) reactants is equal to the sum of the (6) masses of the reaction
products.
Oxides react with water to form (7) hydroxides.
Anhydrides or acid oxides react with water to form (8) acids.