

Chemical Formula of Binary Ionic Compounds – Sheet 1

The combining power or valency of **silver is always 1**.

All other **transition metals are 2** unless otherwise indicated.

No.	Binary compound	Formula	✓
1	potassium fluoride		
2	calcium chloride		
3	barium bromide		
4	silver sulfide		
5	aluminium iodide		
6	potassium iodide		
7	lead(IV) oxide		
8	zinc nitride		
9	silver iodide		
10	barium fluoride		
11	lead(II) iodide		
12	silver fluoride		
13	sodium sulfide		
14	sodium bromide		
15	calcium oxide		
16	zinc fluoride		
17	strontium phosphide		
18	barium sulfide		
19	aluminium oxide		
20	aluminium chloride		
21	aluminium sulfide		
22	lead(II) oxide		
23	barium chloride		
24	copper chloride		
25	barium phosphide		

No.	Binary compound	Formula	✓
26	calcium sulfide		
27	lithium bromide		
28	nickel sulfide		
29	zinc phosphide		
30	barium iodide		
31	caesium chloride		
32	copper bromide		
33	sodium nitride		
34	silver chloride		
35	sodium hydride		
36	potassium nitride		
37	cobalt chloride		
38	magnesium sulfide		
39	potassium chloride		
40	calcium bromide		
41	iron(III) oxide		
42	aluminium fluoride		
43	magnesium bromide		
44	iron(III) chloride		
45	barium nitride		
46	sodium fluoride		
47	lithium fluoride		
48	lithium iodide		
49	lithium hydride		
50	potassium oxide		

“Aluminum” and “cesium” are commonly used alternative spellings for "aluminium" and "caesium" that are used in the US.
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Chemical Formula of Binary Ionic Compounds – Sheet 2

The combining power or valency of **silver is always 1**.

All other **transition metals are 2** unless otherwise indicated.

No.	Binary compound	Formula	✓
51	nickel oxide		
52	silver oxide		
53	silver bromide		
54	calcium iodide		
55	magnesium oxide		
56	zinc iodide		
57	potassium bromide		
58	magnesium iodide		
59	lead chloride		
60	lithium nitride		
61	copper(II) iodide		
62	lithium oxide		
63	nickel chloride		
64	magnesium nitride		
65	beryllium oxide		
66	zinc oxide		
67	lithium phosphide		
68	copper oxide		
69	iron(II) chloride		
70	barium oxide		
71	copper(I) iodide		
72	calcium phosphide		
73	calcium nitride		
74	lithium chloride		
75	potassium sulfide		

No.	Binary compound	Formula	✓
76	sodium iodide		
77	lithium sulfide		
78	zinc chloride		
79	aluminium bromide		
80	aluminium nitride		
81	sodium oxide		
82	zinc sulfide		
83	strontium fluoride		
84	mercury(I) chloride		
85	mercury(II) iodide		
86	calcium fluoride		
87	vanadium(V) oxide		
88	aluminium phosphide		
89	sodium chloride		
90	copper sulfide		
91	magnesium fluoride		
92	sodium phosphide		
93	caesium oxide		
94	zinc bromide		
95	iron(II) oxide		
96	potassium phosphide		
97	magnesium phosphide		
98	magnesium chloride		
99	strontium oxide		
100	potassium hydride		

Chemical Formula of Binary Ionic Compounds – Sheet 1 ANSWERS

No.	Binary compound	Formula	✓
1	potassium fluoride	KF	✓
2	calcium chloride	CaCl ₂	✓
3	barium bromide	BaBr ₂	✓
4	silver sulfide	Ag ₂ S	✓
5	aluminium iodide	AlI ₃	✓
6	potassium iodide	KI	✓
7	lead(IV) oxide	PbO ₂	✓
8	zinc nitride	Zn ₃ N ₂	✓
9	silver iodide	AgI	✓
10	barium fluoride	BaF ₂	✓
11	lead(II) iodide	PbI ₂	✓
12	silver fluoride	AgF	✓
13	sodium sulfide	Na ₂ S	✓
14	sodium bromide	NaBr	✓
15	calcium oxide	CaO	✓
16	zinc fluoride	ZnF ₂	✓
17	strontium phosphide	Sr ₃ P ₂	✓
18	barium sulfide	BaS	✓
19	aluminium oxide	Al ₂ O ₃	✓
20	aluminium chloride	AlCl ₃	✓
21	aluminium sulfide	Al ₂ S ₃	✓
22	lead(II) oxide	PbO	✓
23	barium chloride	BaCl ₂	✓
24	copper chloride	CuCl ₂	✓
25	barium phosphide	Ba ₃ P ₂	✓

No.	Binary compound	Formula	✓
26	calcium sulfide	CaS	✓
27	lithium bromide	LiBr	✓
28	nickel sulfide	NiS	✓
29	zinc phosphide	Zn ₃ P ₂	✓
30	barium iodide	BaI ₂	✓
31	caesium chloride	CsCl	✓
32	copper bromide	CuBr ₂	✓
33	sodium nitride	Na ₃ N	✓
34	silver chloride	AgCl	✓
35	sodium hydride	NaH	✓
36	potassium nitride	K ₃ N	✓
37	cobalt chloride	CoCl ₂	✓
38	magnesium sulfide	MgS	✓
39	potassium chloride	KCl	✓
40	calcium bromide	CaBr ₂	✓
41	iron(III) oxide	Fe ₂ O ₃	✓
42	aluminium fluoride	AlF ₃	✓
43	magnesium bromide	MgBr ₂	✓
44	iron(III) chloride	FeCl ₃	✓
45	barium nitride	Ba ₃ N ₂	✓
46	sodium fluoride	NaF	✓
47	lithium fluoride	LiF	✓
48	lithium iodide	LiI	✓
49	lithium hydride	LiH	✓
50	potassium oxide	K ₂ O	✓

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Chemical Formula of Binary Ionic Compounds – Sheet 2 ANSWERS

No.	Binary compound	Formula	✓
51	nickel oxide	NiO	✓
52	silver oxide	Ag ₂ O	✓
53	silver bromide	AgBr	✓
54	calcium iodide	CaI ₂	✓
55	magnesium oxide	MgO	✓
56	zinc iodide	ZnI ₂	✓
57	potassium bromide	KBr	✓
58	magnesium iodide	MgI ₂	✓
59	lead chloride	PbCl ₂	✓
60	lithium nitride	Li ₃ N	✓
61	copper(II) iodide	CuI ₂	✓
62	lithium oxide	Li ₂ O	✓
63	nickel chloride	NiCl ₂	✓
64	magnesium nitride	Mg ₃ N ₂	✓
65	beryllium oxide	BeO	✓
66	zinc oxide	ZnO	✓
67	lithium phosphide	Li ₃ P	✓
68	copper oxide	CuO	✓
69	iron(II) chloride	FeCl ₂	✓
70	barium oxide	BaO	✓
71	copper(I) iodide	CuI	✓
72	calcium phosphide	Ca ₃ P ₂	✓
73	calcium nitride	Ca ₃ N ₂	✓
74	lithium chloride	LiCl	✓
75	potassium sulfide	K ₂ S	✓

No.	Binary compound	Formula	✓
76	sodium iodide	NaI	✓
77	lithium sulfide	Li ₂ S	✓
78	zinc chloride	ZnCl ₂	✓
79	aluminium bromide	AlBr ₃	✓
80	aluminium nitride	AlN	✓
81	sodium oxide	Na ₂ O	✓
82	zinc sulfide	ZnS	✓
83	strontium fluoride	SrF ₂	✓
84	mercury(I) chloride	HgCl	✓
85	mercury(II) iodide	HgI ₂	✓
86	calcium fluoride	CaF ₂	✓
87	vanadium(V) oxide	V ₂ O ₅	✓
88	aluminium phosphide	AlP	✓
89	sodium chloride	NaCl	✓
90	copper sulfide	CuS	✓
91	magnesium fluoride	MgF ₂	✓
92	sodium phosphide	Na ₃ P	✓
93	caesium oxide	Cs ₂ O	✓
94	zinc bromide	ZnBr ₂	✓
95	iron(II) oxide	FeO	✓
96	potassium phosphide	K ₃ P	✓
97	magnesium phosphide	Mg ₃ P ₂	✓
98	magnesium chloride	MgCl ₂	✓
99	strontium oxide	SrO	✓
100	potassium hydride	KH	✓

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