

Formation and Decomposition (Total and Partial) Reactions

1. $\text{Fe} + \text{S} \rightarrow \text{FeS}$ 1-1-1
2. $\text{H}_2\text{O} \rightarrow \text{H}_2 + \text{O}_2$ 2-2-1
3. $\text{HgO} \rightarrow \text{Hg} + \text{O}_2$ 2-2-1
4. $\text{P} + \text{O}_2 \rightarrow \text{P}_2\text{O}_5$ 4-5-2
5. $\text{K}_2\text{O} + \text{H}_2\text{O} \rightarrow \text{KOH}$ 1-1-2
6. $\text{NaNO}_3 \rightarrow \text{NaNO}_2 + \text{O}_2$ 2-2-1
7. $\text{H}_2\text{O} + \text{P}_2\text{O}_5 \rightarrow \text{H}_3\text{PO}_4$ 3-1-2
8. $\text{Fe} + \text{O}_2 \rightarrow \text{Fe}_2\text{O}_3$ 4-3-2
9. $\text{KClO}_3 \rightarrow \text{KCl} + \text{O}_2$ 2-2-3
10. $\text{Al} + \text{O}_2 \rightarrow \text{Al}_2\text{O}_3$ 4-3-2
11. $\text{Pb}(\text{NO}_3)_2 \rightarrow \text{PbO} + \text{NO}_2 + \text{O}_2$ 2-2-4-1
12. $\text{Fe}(\text{OH})_3 \rightarrow \text{Fe}_2\text{O}_3 + \text{H}_2\text{O}$ 2-1-3
13. $\text{Al}(\text{OH})_3 \rightarrow \text{Al}_2\text{O}_3 + \text{H}_2\text{O}$ 2-1-3
14. $\text{N}_2 + \text{H}_2 \rightarrow \text{NH}_3$ 1-3-2
15. $\text{K} + \text{O}_2 \rightarrow \text{K}_2\text{O}$ 4-1-2

Single Replacement Reactions

16. $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$ 1-1-1-1
17. $\text{Al} + \text{H}_2\text{SO}_4 \rightarrow \text{Al}_2(\text{SO}_4)_3 + \text{H}_2$ 2-3-1-3
18. $\text{Na} + \text{HOH} \rightarrow \text{NaOH} + \text{H}_2$ 2-2-2-1
19. $\text{Fe} + \text{CuNO}_3 \rightarrow \text{Fe}(\text{NO}_3)_2 + \text{Cu}$ 1-2-1-2
20. $\text{KI} + \text{Cl}_2 \rightarrow \text{KCl} + \text{I}_2$ 2-1-2-1
21. $\text{Al} + \text{H}_3\text{PO}_4 \rightarrow \text{H}_2 + \text{AlPO}_4$ 2-2-3-2
22. $\text{Zn} + \text{AgI} \rightarrow \text{ZnI}_2 + \text{Ag}$ 1-2-1-2
23. $\text{B}_2\text{O}_3 + \text{Mg} \rightarrow \text{MgO} + \text{B}$ 1-3-3-2
24. $\text{Fe} + \text{H}_2\text{O} \rightarrow \text{H}_2 + \text{Fe}_2\text{O}_3$ 2-3-3-1
25. $\text{HI} + \text{O}_2 \rightarrow \text{I}_2 + \text{H}_2\text{O}$ 4-1-2-2

Double Replacement Reactions

26. $\text{AgNO}_3 + \text{NaBr} \rightarrow \text{NaNO}_3 + \text{AgBr}$ 1-1-1-1
27. $\text{MgCl}_2 + \text{NH}_4\text{NO}_3 \rightarrow \text{Mg}(\text{NO}_3)_2 + \text{NH}_4\text{Cl}$ 1-2-1-2
28. $\text{FeCl}_3 + \text{NH}_4\text{OH} \rightarrow \text{Fe}(\text{OH})_3 + \text{NH}_4\text{Cl}$ 1-3-1-3
29. $\text{Na}_2\text{CO}_3 + \text{Ca}(\text{OH})_2 \rightarrow \text{NaOH} + \text{CaCO}_3$ 1-1-2-1
30. $\text{KI} + \text{Pb}(\text{NO}_3)_2 \rightarrow \text{PbI}_2 + \text{KNO}_3$ 2-1-1-2

31. $\text{Al}_2(\text{SO}_4)_3 + \text{Ca}(\text{OH})_2 \rightarrow \text{Al}(\text{OH})_3 + \text{CaSO}_4$ 1-3-2-3
32. $\text{FeS} + \text{HCl} \rightarrow \text{H}_2\text{S} + \text{FeCl}_2$ 1-2-1-1
33. $(\text{NH}_4)_2\text{S} + \text{Pb}(\text{NO}_3)_2 \rightarrow \text{NH}_4\text{NO}_3 + \text{PbS}$ 1-1-2-1
34. $\text{Hg}(\text{OH})_2 + \text{H}_3\text{PO}_4 \rightarrow \text{Hg}_3(\text{PO}_4)_2 + \text{H}_2\text{O}$ 3-2-1-6
35. $\text{KOH} + \text{H}_3\text{PO}_4 \rightarrow \text{K}_3\text{PO}_4 + \text{H}_2\text{O}$ 3-1-1-3
36. $\text{CaCl}_2 + \text{HNO}_3 \rightarrow \text{Ca}(\text{NO}_3)_2 + \text{HCl}$ 1-2-1-2
37. $\text{K}_2\text{CO}_3 + \text{BaCl}_2 \rightarrow \text{KCl} + \text{BaCO}_3$ 1-1-2-1
38. $\text{K}_3\text{PO}_4 + \text{MgCl}_2 \rightarrow \text{Mg}_3(\text{PO}_4)_2 + \text{KCl}$ 2-3-1-6
39. $\text{Al}_2(\text{SO}_4)_3 + \text{NH}_4\text{Br} \rightarrow \text{AlBr}_3 + (\text{NH}_4)_2\text{SO}_4$ 1-6-2-3
40. $\text{Al} + \text{HCl} \rightarrow \text{AlCl}_3 + \text{H}_2$ (single replacement reaction oops) 2-6-2-3

Combustion and Reactions with Oxygen

41. $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ 1-5-3-4
42. $\text{CH}_3\text{CH}_2\text{OH} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ 1-3-2-3
43. $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ 1-6-6-6
44. $\text{C}_8\text{H}_{18} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ 2-25-16-18
45. $\text{NH}_3 + \text{O}_2 \rightarrow \text{N}_2 + \text{H}_2\text{O}$ 4-3-2-6
46. $\text{Hg}_2\text{O} + \text{O}_2 \rightarrow \text{HgO}$ 2-1-4
47. $\text{ZnS} + \text{O}_2 \rightarrow \text{ZnO} + \text{SO}_2$ 2-3-2-2
48. $\text{As} + \text{O}_2 \rightarrow \text{As}_2\text{O}_3$ 4-3-2
49. $\text{HI} + \text{O}_2 \rightarrow \text{I}_2 + \text{H}_2\text{O}$ 4-1-2-2
50. $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ 1-2-1-2

Unclassified

51. $\text{Na}_2\text{O}_2 + \text{H}_2\text{O} \rightarrow \text{NaOH} + \text{O}_2$ 2-2-4-1
52. $\text{Fe}_2\text{O}_3 + \text{C} \rightarrow \text{Fe} + \text{CO}$ 1-3-2-3
53. $\text{F}_2 + \text{NaOH} \rightarrow \text{NaF} + \text{O}_2 + \text{H}_2\text{O}$ 2-4-4-1-2
54. $\text{Al}_2\text{O}_3 + \text{C} + \text{Cl}_2 \rightarrow \text{CO} + \text{AlCl}_3$ 1-3-3-3-2
55. $\text{Mg}(\text{HCO}_3)_2 + \text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2\text{O} + \text{CO}_2$ 1-2-1-2-2
56. $\text{Fe}_2\text{O}_3 + \text{CO} \rightarrow \text{Fe} + \text{CO}_2$ 1-3-2-3
57. $\text{Al}_2\text{S}_3 + \text{NaHCO}_3 + \text{O}_2 \rightarrow \text{Al}(\text{OH})_3 + \text{Na}_2\text{SO}_4 + \text{CO}_2$ 1-6-6-2-3-6
58. $\text{Mg}_3\text{N}_2 + \text{H}_2\text{O} \rightarrow \text{Mg}(\text{OH})_2 + \text{NH}_3$ 1-6-3-2
59. $\text{CuO} + \text{NH}_3 \rightarrow \text{Cu} + \text{H}_2\text{O} + \text{N}_2$ 3-2-3-3-1