

2. 연소, 산화 반응

(1) 금속 + 산소 → 산화금속

나트륨 연소식 : $4\text{Na} + \text{O}_2 \rightarrow 2\text{Na}_2\text{O}$

마그네슘 연소식 : $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$

알루미늄 연소식 : $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$

(2) 제4류위험물(C H O 구성) + 산소 → 이산화탄소 + 물

메탄올(메틸알코올) 연소식 : $2\text{CH}_3\text{OH} + 3\text{O}_2 \rightarrow 2\text{CO}_2 + 4\text{H}_2\text{O}$

에탄올(에틸알코올) 연소식 : $\text{C}_2\text{H}_5\text{OH} + 3\text{O}_2 \rightarrow 2\text{CO}_2 + 3\text{H}_2\text{O}$

아세톤 연소식 : $\text{CH}_3\text{COCH}_3 + 4\text{O}_2 \rightarrow 3\text{CO}_2 + 3\text{H}_2\text{O}$

아세트산 연소식 : $\text{CH}_3\text{COOH} + 2\text{O}_2 \rightarrow 2\text{CO}_2 + 2\text{H}_2\text{O}$

아세틸렌 연소식 : $2\text{C}_2\text{H}_2 + 5\text{O}_2 \rightarrow 4\text{CO}_2 + 2\text{H}_2\text{O}$

(3) 그 외 + 산소

적린 연소식 : $4\text{P} + 5\text{O}_2 \rightarrow 2\text{P}_2\text{O}_5$

황린 연소식 : $\text{P}_4 + 5\text{O}_2 \rightarrow 2\text{P}_2\text{O}_5$

황(유황) 연소식 : $\text{S} + \text{O}_2 \rightarrow \text{SO}_2$

삼황화린 연소식 : $\text{P}_4\text{S}_3 + 8\text{O}_2 \rightarrow 2\text{P}_2\text{O}_5 + 3\text{SO}_2$

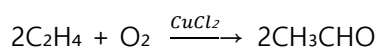
이황화탄소 연소식 : $\text{CS}_2 + 3\text{O}_2 \rightarrow 2\text{SO}_2 + \text{CO}_2$

트리에틸알루미늄 연소식 : $2(\text{C}_2\text{H}_5)_3\text{Al} + 21\text{O}_2 \rightarrow \text{Al}_2\text{O}_3 + 15\text{H}_2\text{O} + 12\text{CO}_2$

트리메틸알루미늄 연소식 : $2(\text{CH}_3)_3\text{Al} + 12\text{O}_2 \rightarrow \text{Al}_2\text{O}_3 + 9\text{H}_2\text{O} + 6\text{CO}_2$

아세트알데히드 산화식 : $2\text{CH}_3\text{CHO} + \text{O}_2 \rightarrow 2\text{CH}_3\text{COOH}$

에틸렌 산화식 : $\text{C}_2\text{H}_4 + \text{PbCl}_2 + \text{H}_2\text{O} \rightarrow \text{CH}_3\text{CHO} + \text{Pb} + 2\text{HCl}$



탄산마그네슘 산화식 : $\text{MgCO}_3 \rightarrow \text{MgO} + \text{CO}_2$