

# Ligand



Here is a list of some common ligands, their types, names, and formulas:

## 1. Water ( $\text{H}_2\text{O}$ )

- Type: Neutral ligand
- Formula:  $\text{H}_2\text{O}$
- Name: Aqua

## 2. Ammonia ( $\text{NH}_3$ )

- Type: Neutral ligand
- Formula:  $\text{NH}_3$
- Name: Ammine

## 3. Carbon monoxide ( $\text{CO}$ )

- Type: Neutral ligand
- Formula:  $\text{CO}$
- Name: Carbonyl

## 4. Cyanide ( $\text{CN}^-$ )

- Type: Anionic ligand
- Formula:  $\text{CN}^-$
- Name: Cyano

## 5. Chloride ( $\text{Cl}^-$ )

- Type: Anionic ligand
- Formula:  $\text{Cl}^-$
- Name: Chloro

## 6. Hydroxide ( $\text{OH}^-$ )

- Type: Anionic ligand
- Formula:  $\text{OH}^-$
- Name: Hydroxo

## 7. Nitrosyl ( $\text{NO}$ )

- Type: Neutral ligand
- Formula:  $\text{NO}$
- Name: Nitrosyl

## 8. Ethylene diamine (en)

- Type: Bidentate (neutral ligand)
- Formula:  $\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2$

- Name: Ethylene diamine

#### 9. Oxalate ( $\text{C}_2\text{O}_4^{2-}$ )

- Type: Bidentate (anionic ligand)
- Formula:  $\text{C}_2\text{O}_4^{2-}$
- Name: Oxalato

#### 10. Thiocyanate ( $\text{SCN}^-$ )

- Type: Ambidentate ligand (can bind through S or N)
- Formula:  $\text{SCN}^-$
- Name: Thiocyanato

This list provides a basic overview of ligands, classified into neutral, anionic, and ambidentate types, along with their common names and formulas. You can find more specific information on ligands in the textbooks you uploaded.