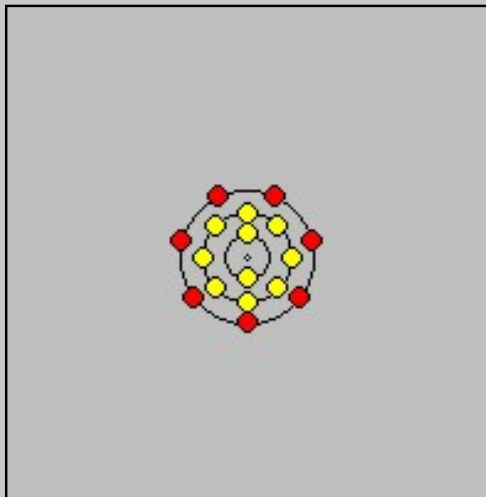




<u>F</u>	<b>Cl</b>	<u>Br</u>	<u>I</u>	<u>At</u>	<u>Uus</u>	<u>Uhs</u>	<u>Bus</u>
9	17	35	53	85	117	167	217

## Chlorine

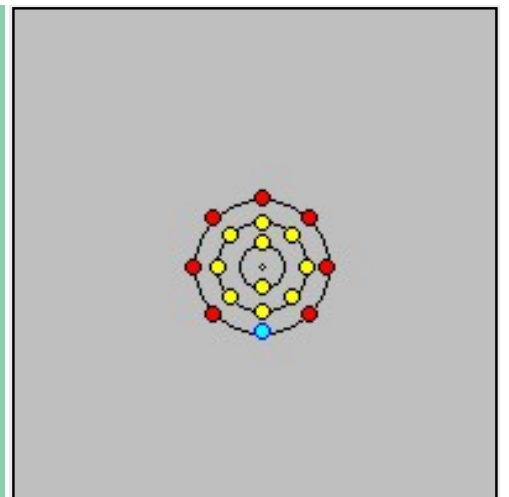
Symbol	Cl
Atomic Number	17
Group	halogens
Relative Atomic Mass $^{12}\text{C} = 12.0000$	35.453
Atomic Radius pm	99
First Ionisation Energy $\text{kJ mol}^{-1}$	1251.1
Ionisation Energy (eV)	12,9676
Electronegativity	3.16
Density $\text{kg m}^{-3}$	2030 [113 K] 1507 [239 K] 3.214 [273 K]
Molar Volume $\text{cm}^3$	17.46 [113 K]
Thermal Conductivity $\text{W m}^{-1} \text{K}^{-1}$	0.0089 [300 K]
Melting Point K	172.17
Boiling Point K	239.18
Number of Isotopes	13
Inner + outer Shells	2 + 1 = 3
Inner + outer Orbitals	10 + 7 = 17
Filling Orbital	3p <sup>5</sup>
Ground State Electron Configuration	[Ne] 3s <sup>2</sup> 3p <sup>5</sup>



2, 8, 7

Ground State Electron Configuration with free Orbitals (n=1)

0, 0, 1



**Ground State Electron Configuration with compressed Orbitals (n=10)**

**0, 0, 10**



**Singularity**

$28 = 10 + 7 + 1 + 10$

	s	p	d	f	g	h	i	j
1	2							
2	2	6						
3	2	5	1	10				
4								
5								
6								
7								
8								

**Term Symbol**

$^2P_{3/2}$

**Discovery**

Discovered by C.W. Scheele (Uppsala, Sweden) in 1774

**Name Derived From**

Greek chloros meaning 'pale green'