

Substance

Covalent Network
diamond, graphite

Metal
Fe, Na, Cr

Ionic
NaCl, CaO, MgF₂
(metal + non-metal)

Molecular
CCl₄, HBr, NH₃, O₂, He, Ne
(only non-metals)

H + N,O,F

polar

non-polar

covalent
bonds

>

metallic
bonding

≈

ion-ion
attraction

>

H-bonding,
dipole-dipole,
dispersion

>

dipole-dipole,
dispersion,

>

dispersion

Strongest attraction

Weakest attraction