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| **PROPERTY****IONIC PROPERTIES** | **LOGIC** | **FACTS** |
| **CONDUCTIVITY: IONIC SUBSTANCES ARE CONDUCTIVE IN THE AQUIOUS (aq) AND LIQUID (l) STATES.** | **IONS ARE MOBILE; THE MOBILE CHARGES CAN CARRY A CURRENT.** |  **IONIC SUBSTANCES THAT ARE SOLUBLE AS PER TABLE F ARE ELECTROLYTES, AND ARE AQUEOUS CONDUCTORS.****EX. NaCl (aq), MgCl2 (aq) ETC** |
| **CONDUCTIVITY: IONC SUBSTANCES IN THE SOLD CRYSTAL LATTICE STATE (s) ARE NOT CUNDUCTORS.** | **THE IONS ARE IMMOBILE; THEY ARE TRAPPED IN THE CRYSTAL LATTICE WHICH ALLOWS NO MOVEMENT AND NO CONDUCTION.** | **ANY SOLID SALT** **EX. NaCl (s), MgCl2 (s) ETC** |
| **HARDNESS: IONIC SUBSTANCES FORM VERY HARD SOLIDS (CYRSTAL LATTICE).** | **THE STRONG IONIC (ELECTROSTATIC ATTRACTIONS) DOES NOT ALLOW THE IONS TO MOVE, THAY ARE “GLUED” IN PLACE BY THE STRONG ATTRACTOIONS.** | **ANY SOLID SALT** **EX. NaCl (s), MgCl2 (s) ETC** |
| **BOILING POINT AND MELTING POINT : IONIC SUBSTANCES HAVE VERY HIGH MELTING AND BOILING POINTS.** | **THE STRONG IONIC ATTRACTIONS ARE DIFFICULT TO OVERCOME, THEREFORE THE IONS CANNOT MOVE OR BECOME INDEPENDENT OF EACH OTHER.** | **STRONG ATTRACTIONS OF ANY TYPE REQUIRE GREAT QUANTITIES OF ENERGY TO WEAKEN (MELT) OR BREAK (BOIL). THEREFORE THE BOILING AND MELTING POINTS MUST BE HIGH.** |

PROPERTIES OF IONIC