

Name _____ Section _____ Date _____

Chemistry Activity 06-09

Determining Bond Types from Properties

Seven chemicals were observed for their properties. In table 1, for each of the three bond types, record the general property for the classification type. Then, using the observed properties in table 2, classify the seven chemicals according to their properties.

General Properties of Bond Types

	Ionic Bonds	Covalent Bonds	Metallic Bonds
Appearance			
Solubility in Water			
Relative Melting Point			
Solid Conductivity			
Molten Conductivity			
Conductivity in Solution			

Table 1

Classify Bond Types from General Properties

	NaCl	Sucrose	Copper	Calcium Chloride	Diamond	Mercury	C ₁₀ H ₈
Appearance	white, crystalline	white, crystalline	brown shiney	white	colorless crystals	Shiny silver liquid	Tan powder
Solubility in water	yes	yes	no	yes	no	no	no
Relative Melting Point	very high	low	very high	very high	does not melt	N/A	low
Solid Conductivity	no	no	yes	no	no	N/A	no
Molten Conductivity	yes	no	yes	yes	N/A	yes	no
Conductivity in Solution	yes	no	N/A	yes	N/A	N/A	N/A
Classification							

Table 2