

Name: _____

Hour: _____ Date: _____

Chemistry: Properties

Recall that *physical properties* can be observed without producing new substances. *Chemical properties* describe how a substance interacts with other substances to produce new substances. *Extensive properties* depend upon the amount of matter in the sample; *intensive properties* do not.

Directions, Part 1: Classify each of the properties listed below as extensive or intensive. Then classify each property as physical or chemical. Write the word out to earn full credit.

Property	Extensive or Intensive Property	Physical or Chemical Property
color		
combustibility		
hardness		
density		
mass		
melting point		
ductility		
volume		
reactivity with acid		
odor		
weight		
malleability		
tendency to corrode		

Directions, Part 2: Some measurements or descriptions of properties are listed below. Write which property is being described in each case. Select properties that are listed in the table from Part 1.

- | | |
|--|----------|
| A. 15 dm ³ | A. _____ |
| B. can easily be hammered into sheets | B. _____ |
| C. 2.8 g/cm ³ | C. _____ |
| D. burns when heated in the presence of O ₂ | D. _____ |
| E. shiny metal forms a chalky white layer on its surface | E. _____ |
| F. can be scratched by a diamond | F. _____ |
| G. 500°C | G. _____ |
| H. can easily be drawn into a wire | H. _____ |

Name: _____ **KEY** _____

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Directions, Part 1: Classify each of the properties listed below as extensive or intensive. Then classify each property as physical or chemical. Write the word out to earn full credit.

Property	Extensive or Intensive Property	Physical or Chemical Property
color	intensive	physical
combustibility	intensive	chemical
hardness	intensive	physical
density	intensive	physical
mass	extensive	physical
melting point	intensive	physical
ductility	intensive	physical
volume	extensive	physical
reactivity with acid	intensive	chemical
odor	intensive	physical
weight	extensive	physical
malleability	intensive	physical
tendency to corrode	intensive	chemical

Directions, Part 2: Some measurements or descriptions of properties are listed below. Write which property is being described in each case. Select properties that are listed in the table from Part 1.

- | | |
|--|-------------------------------|
| A. 15 dm ³ | A. <u>volume</u> |
| B. can easily be hammered into sheets | B. <u>malleability</u> |
| C. 2.8 g/cm ³ | C. <u>density</u> |
| D. burns when heated in the presence of O ₂ | D. <u>combustibility</u> |
| E. shiny metal forms a chalky white layer on its surface | E. <u>tendency to corrode</u> |
| F. can be scratched by a diamond | F. <u>hardness</u> |
| G. 500°C | G. <u>melting point</u> |
| H. can easily be drawn into a wire | H. <u>ductility</u> |