

Culminating Activity: CHEMISTRY

Polyethylene is a very resistant compound that has many uses. It is used in the production of numerous common items; however, its stability poses an environmental problem because these products are not biodegradable.

Answer the following questions in the form of a report with the following subtitles.

Introduction

1. What is polyethylene? [1]
2. Which elements are found in a molecule of polyethylene? [2]

Physical Properties

3. Describe the appearance of polyethylene. [2]
4. What is the melting point of polyethylene? [1]
5. What is the density of polyethylene? [1]

Chemical Properties

6. Identify a chemical property of hydrogen. [1]
7. Identify a chemical property of carbon. [1]
8. Draw the Bohr diagrams of an atom of hydrogen and an atom of carbon. [4]
9. Describe the stability of polyethylene. [1]

Uses/Benefits

10. Identify 5 current uses of polyethylene. [5]

Disadvantages

11. Identify the danger that the stability of polyethylene poses to the environment. Provide an example of a common product that is made of polyethylene. Suggest an environmentally conscious alternative product that can be used to replace the one made of polyethylene. [3]

Application

Read the article 'Waterloo student develops plastic bag decomposer'.

<http://www.thestar.com/article/452278>.

12. Write a summary (1/4 of a page) and a critique (1/4 of a page) of the article. [4]
13. What is bio-derived polyethylene? What is it made of? Identify 2 advantages of this type of polyethylene. [4]

Comments: