

Polymers

Report Recommendations

Report

Submit a report to the toy company describing the properties observed for each of the polymer materials studied. Your description should include data collected and a description of the intermolecular forces involved in each of these materials. This report does not necessarily have to follow the standard report guidelines from the supplemental laboratory packet.

This format/style of this report is very open. You are submitting a report to a toy company on the properties of the polymers

Data/Results:

For each of the polymers studied you should include qualitative data/descriptions such as:

<u>Slime (Poly(vinyl alcohol))</u> Color Consistency Smell Viscosity Bounciness Feel Appearance Re-moldability Color transfer Intermolecular forces (be pretty forgiving on this one) H-bonding Dipole-dipole London/dispersion Cross-linking
<u>Silly Putty 1 (glue and borax)</u> Color Consistency Smell Viscosity Bounciness Feel Appearance Sheer strength Re-moldability Color transfer Intermolecular forces (be pretty forgiving on this one) H-bonding Dipole-dipole London/dispersion

<u>Cross-linking</u>
<u>Silly Putty 2 (glue and borax with water)</u>
<ul style="list-style-type: none"> Color Consistency Smell Viscosity Bounciness Feel Appearance Sheer strength Re-moldability Color transfer Intermolecular forces (be pretty forgiving on this one) <ul style="list-style-type: none"> H-bonding Dipole-dipole London/dispersion Cross-linking
<u>Latex</u>
<ul style="list-style-type: none"> Color Consistency Smell Viscosity Bounciness Feel Appearance Sheer strength Re-moldability Color transfer Intermolecular forces (be pretty forgiving on this one) <ul style="list-style-type: none"> London/dispersion Cross-linking
<u>Sodium polyacrylate</u>
<ul style="list-style-type: none"> Color Consistency (with and without salt) Smell Viscosity (with and without salt) Intermolecular forces (be pretty forgiving on this one) <ul style="list-style-type: none"> Ion-ion Ion dipole-dipole London/dispersion
<u>Teflon</u>
<ul style="list-style-type: none"> Color Feel Appearance Sheer strength Which direction the chains are aligned What happens when you pull in either direction Intermolecular forces (be pretty forgiving on this one) <ul style="list-style-type: none"> Dipole-dipole

London/dispersion

Discussion:

In the format of a report to the toy company.

Conclusion:

Conclusion

Should the company make the polymers as toys?

References:

You must include references to any works cited, quoted, or referenced. These should be in the ACS (American Chemical Society) format. The *ACS Style Guide* can be found in the reference section of the library. You may also look in any ACS journal for examples (i.e. The Journal of the American Chemical Society).

Textbook or other reference in ACS style