

Pva glue report

Business



PVA GLUE REPORT SCIENCE ASSIGNMENT We take three types to the breaking point, Shattering some common wisdom in the process. PVA GLUE REPORT SCIENCE ASSIGNMENT We take three types to the breaking point, Shattering some common wisdom in the process.

PVA GLUE REPORT SCIENCE ASSIGNMENT PURPOSE The purpose of this investigation is to test the strength of three commercial PVA glues to find the strongest and the most financially viable option. HYPOTHESIS The bond between wood to wood will have a better bond strength than the wood/plastic. MATERIALS: 1. GLUE 2. WOOD 3.

PLASTIC 4. WEIGHTS (500G, 1KG, 2KG) . RETORT STAND 6. BUCKET 7. CHAIR (FOR SAFETY REASONS) 8. PADDLEPOPSTICKS 9.

CLAMP METHOD: 1. Drill a hole in three of the paddle pops and all of the rulers. 2. Glue holed paddle pops to paddle pops and rulers to paddle pops. 3. Allow to cure for at least 24 hours.

4. Set up a retort stand on side of bench and clamp it there. 5. Fasten the paddle pop into the stand, making sure the hole is at the bottom. 6.

Suspend weights from the hole in the paddle pop. 7. Measure the breaking point of the bond. 8. Record all the results and repeat the process for all other tests.

RESULTS:

TOTAL| GLUE A| GLUE B| GLUE C| AVERAGE| 2195 g| 955. 6g| 2505. 5g|
AVERAGE WITHOUT ANOMALIES| 1656. 25g| 657. 2g| 1935.

7g| GROUP GLUE A GLUE B GLUE C *MEANS THAT THE RESULT IS AN ANOMALIE. HOW DOES THIS ANOMALIE CHANGE THE DATA (refer to this graph ^^) ANALYSIS: ITEM: 1 - The purpose of this experiment was to test the strength of the bond between three types of glue on two different surfaces. ITEM: 2- The amount of glue was kept the same by keeping it to one drop. The measurement between/overlapping of the paddle pop sticks we kept were the same measurement at 2cm and 1cm for the drop of glue.

The duration of the experiment conducted was the same. It was done in the morning.

ITEM: 3 - The relationship between the dependent and independent variables, the dependent were the surface roughness, load (kg), the cleanliness of the surface and the dependent variables are temperature and curing time. The independent variables also were humidity, temperature and time. These aren't parameters which we can analyze but it was also considered. From this graph we can determine that glue c performed the best in this experiment.

But we can also say that glue c from wood to plastic has held at the maximum of 2500kg.

ITEM: 4- The difficulty encountered in the setup of the experiment was to get the same overlap between the clamp and paddle pop. It had an adverse impact on the outcome of the experiment. These difficulties have impacted a fair test by making it unfair as the overlap between the clamp and the paddle pop. These difficulties have impacted the experiment. It was

inappropriate as the overlap of the clamp can give an extra force for the paddle pop to hold weight.

The different overlap in which the paddle pop was stuck on can be a bigoted advantage as well which allows the paddle pop to be stuck on; can be a one-sided advantage which allows the paddle pop to hold more weight. Another problem we have encountered was that there was insufficient weight to suspend because the bond of the glue was too strong to get decent results for the wood/ wood experiment. We also could have repeated the experiment if we had more time at our disposal. This repeat of the experiment would have us enabled access with decent results and an excellent report. ITEM: 5 -

From analyzing the results you can see that there are quite a few anomalies.

This can affect the graph and results in various degrees. It can be a good sign or a bad sign. In this experiment it is a bad sign because we needed decent results to justify which glue is the best for Padua's use at school. If there are anomalies it is easier to continue with our experiment rather than focusing on every parameter because the range is so broad and it is easier as scientists to justify and come to a conclusion. You can also analyze the results and see that the anomalies have a big impact especially on the graph.

In the graph you can see that there are two bars, one for with anomalies and one without anomalies.

When you add the anomalies to the data you can see you receive absurd results and you can compare to a similar scientific example, the outcome

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you receive when you put different kinds of petrol in the same car. Those results won't fit in the trend. It's the same situation here in this data. The anomalies act as petrol giving variation in results when put in data. ITEM: 6- The experiment could do some tinkering.

We could have improved it if the variables were made constant.

The variable that could have made constant were the amount of glue used for the overlap between clamp and the paddle pop. From what I have done so far I would have carried further experiment to test the all-round ability of the glues by testing it on other surfaces. It could be tested in different atmospheric conditions like lower / higher temperature or lesser humidity. Subsequently we could also have had additional resources to improve up on the experiment.

For example, like more weights to test the extra strength of the bond between wooden paddle pops.

CONCLUSION; In conclusion the experimental results which I have received were the results I was expecting, as our results showed that the most expensive glue held the maximum weight, which was as stated in the hypothesis (that the strongest glue is going to be the most expensive). The aim of this experiment was also achieved which was to test three commercial glues in order to find a technically feasible and economically viable option which through the experiment was found out to be PVA GLUE C which is the PARFIX PVA GLUE at a cost of \$4. 8 for 250 ml. It has higher strength, dries clear and can be cleaned up with water.

The PARFIX PVA GLUE is a PVA based adhesive suitable for general interior woodworking joinery and other craft work uses. It is also non - toxic, will not stain timber and dries clear. This glue has performed the best in the experiment and is the most viable option for Padua College. This glue will cover all the needs of our college. From this experiment I have cultured myself in the field of PVA glues and the scientific insight behind this experiment.