

SHATTERPROOF GLASS AND ITS APPLICATIONS

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ABSTRACT

The main objective of this project is to make a shatterproof glass in easy and cost effective way. To form this glass we have used Resin and Hardener as an adhesive . The glass has been successfully tested and can be used as a shatterproof glass for many applications.

Keywords-Shatterproof glass, Resin, Adhesive.

1. Introduction

Shatterproof glass is a glass made with a solution of resin and hardener to prevent shattering of glass. Resin is a sticky and highly viscous organic substance exuded from trees and other plant which is used as adhesive in this project, whereas hardener is used as a crystallizer.

2. Chemical Features

Mixing of resin and hardener in a equal proportion together prompts a chemical reaction, transforming them from liquid to solid on the glass layer.

3. Materials Required

- a. Reflective Glass
- b. Resin
- c. Hardner
- d. Distilled water
- e. Clean piece of cloth
- f. Brush
- g. Beaker and measuring cylinder.
- h. Digital weighing machine

4. Procedure

Take a reflecting glass of 1ft.

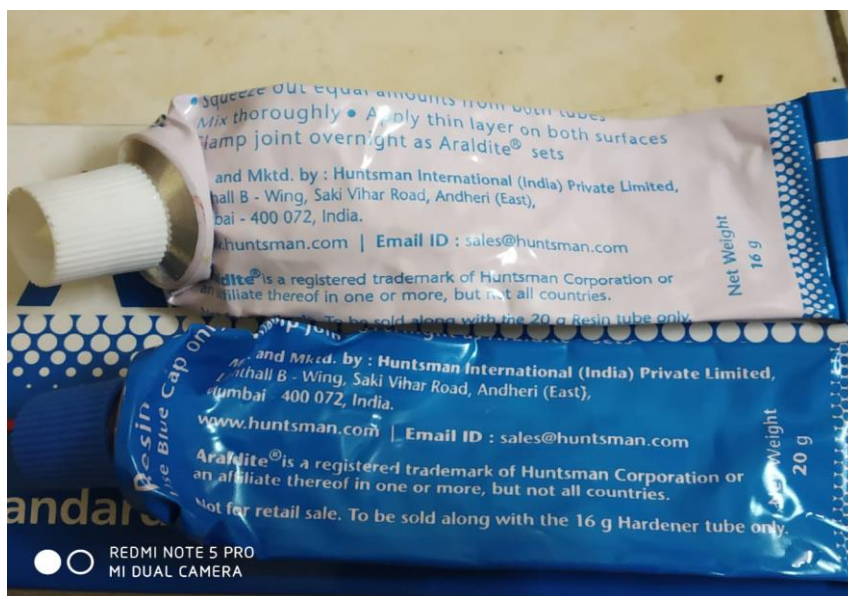
Clean the glass with distilled water and dry it with a clean piece of cloth .

Take solutions of resin and hardener in two separate beakers in equal proportions by weighing them on digital machine.

Now mix both the solutions and stir it well.

#Apply the formed solution on the glass and spread it evenly all over the glass.

#Leave the glass undisturbed for atleast 48 hours.



5. INSTRUCTIONS

- a. Clean the glass thoroughly with water.
- b. Do not apply solutions on damp glass.
- c. Apply the solution at room temperature.
- d. All equipments should be cleaned with water.
- e. Clean up skin contact with soap and water.
- f. Store the glass in cool, dry and well ventilated atmosphere.



6. Observations

It is observed that the strength of the glass increases, if we keep the glass undisturbed for more time. Thus, shatterproof glass is successfully formed.



7. Applications

- #With proposed method we can make windows at our residential place shatterproof at a reasonable cost.
- #It can be used to make mirrors at our home shatterproof.
- #This can be used on photoframe glass.
- #This can be used in glass doors of shops.

7. Limitations

#The coating takes a long time to dry.

#The coating is not completely transparent.

8. Conclusion

This method is a cost effective method to make shatterproof glass which can be used even at home.

It is an easy method of making shatterproof glass.

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10. Reference

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