



Materials



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 - Hardwoods
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- Adhesives
- Paper and board
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Adhesives



There are a lot of different adhesives all manufactured all for various purposes. Adhesives work on several different purposes.

Adhesives table

	Fabric	Plastics	Metals	Woods
Woods	PVA	Contact Adhesive	Contact Adhesive	PVA or Synthetic resin
Metals	Contact Adhesive	Contact Adhesive	Epoxy Resin	Contact Adhesive
Plastics	Contact Adhesive	Solvent Cement	Epoxy Resin	Contact Adhesive
Fabric	Latex Adhesive	Contact Adhesive	Contact Adhesive	PVA

PVA – (wood to fabric)

Polyvinyl acetate is a water based adhesive which is coloured white. PVA works when it soaks into the surface of the wood and sets once all the water is absorbed. PVA makes an extremely strong bond and is often stronger than the actual wood fibres itself. PVA is good to for gluing wood to fabric.

Synthetic resin – (wood to wood)

Synthetic resin is a waterproof adhesive. It needs to be mixed into a creamy consistency with water for it to set hard. Chemical hardening then takes place and the adhesive will set as a hard but brittle adhesive. Synthetic resin will set hard within a pipe, so ensure you don't wash the residue down a sink or basin. Synthetic resin is good to for gluing wood to wood.

Solvent cement – (plastic to plastic)

There are many types of solvent cement however the most common is dichloromethane. Dichloromethane works by dissolving the surface of hard plastics such as Acrylic and High impact polystyrene. Solvent cement is very dangerous and will give off fumes so it is important to use this within a well ventilated room. Solvent cement is good to for gluing plastic to plastic.

Hot glue guns – (Card to card / modelling)

Hot Glue guns are used a lot in schools for quick modelling of work. However these can be rarely used on final products as it is not strong enough. Hot Glue guns are good to for gluing card to card and modelling materials together.

Epoxy resin – (Plastics to metal, metal to metal)

Epoxy resin is a very flexible but very expensive adhesive. Epoxy resin will glue most dry and clean materials together. The Epoxy resin sets when equal amounts of resin and hardener are mixed together. It then chemically sets to form a very hard material. Epoxy resin is good to for gluing plastics to metals and metals to metals.

Contact adhesive - (plastics, woods to metals, metals to fabrics, metals to plastics and plastics to fabrics)

Useful web links



This to that

An excellent resource for finding out how to glue this to that!

[View the this to that page >>](#)

Adhesive quiz

Take the adhesive test from warren design and technology.

[View the adhesive quiz page >>](#)

BBC bitesize adhesive pages

Test your adhesive knowledge on the BBC bitesize web site.

[View the adhesive bitesize pages >>](#)

Contact adhesive works when both material surfaces are coated and are allowed to become touch dry. Adhesion works as soon as the two touch dry surfaces meet. Contact adhesives solvent fumes are tremendously dangerous and good ventilation is imperative. Contact adhesive is good to for gluing woods to plastics, woods to metals, metals to fabrics, metals to plastics and plastics to fabrics.



Quiz time!

Mr DT says 'Read the text above and then answer these questions below'. Write your answers on a sheet of paper, dont forget to write your name on the sheet!:-

- 1.) What does PVA stand for?
- 2.) Write a brief description about synthetic resin?
- 3.) How does solvent cement work?
- 4.) What are glue guns good for?
- 5.) How does epoxy resin set?
- 6.) What is epoxy resin good for gluing?
- 7.) What is contact adhesive good for gluing?
- 8.) How does contact adhesive work?
- 9.) Which adhesive above can glue together the most amounts of different materials?
- 10.) How does PVA work?



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