

Hoof glue

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Hoof glue is an adhesive made by boiling down the hooves of ungulates. It is a partially hydrolyzed keratin. It is a type of animal glue.

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History

Hoof glue was widely used throughout human history. The oldest known bow was 10,000 years old and made using hoof glue. Hoof glues have been used for things like stiffening bow strings, adhering fabric to wood, stiffening fabric, creating thin lacquers to protect valuable objects (Feugere 2002),^[1] as well as sealing glass into frames, and sealing ceramic containers to name just a few. Hoof glue is still used today in cabinetry and other fine woodworking projects where the joints must be extremely fine if not invisible.^[2]

Formulation

The general process is to take the hooves of ungulates and break them into small chunks and then boil them in water until all the hoof material has been liquefied. An acid is then added to create a thick gel. The resultant product is

then cooled and allowed to harden.^[3] Once melted, it is necessary to heat the glue substance until it is the required consistency – thin hoof glue can be used to stiffen fabrics; thicker glue is used in cabinetry.

Usage

The storable form of hoof glue is a hard block of resin-like material. To use it one would break off a suitably sized chunk and mix it with hot water and allow it to melt. Once melted it can be simmered to reduce to the appropriate thickness and then applied to the object in question. Very thin glue can be used as a resin coating to stiffen and strengthen cordage, such as chair backs and seats. Hoof glue is not waterproof, it can be dissolved by water, so moisture or even high humidity will affect it. But hoof glue does not become brittle when dry; it retains some flexibility, thus making it ideal for applications where some give in the joint or covering is required.

References

1. Feugere, Michel (1993). "Arms of the Romans" (pdf). *Translation Summary*. Errance. Retrieved 2007-08-22.
2. <http://www.highlandwoodworking.com/woodworkingwithhideglue.aspx>
3. <http://www.nacltd.co.uk/making.html>

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