

Felt

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Felt is a textile that is produced by matting, condensing and pressing fibres together. Felt can be made of natural fibres such as wool, or from synthetic fibres such as acrylic.

Contents

- 1 History
- 2 Manufacturing methods
 - 2.1 Wet felting
 - 2.2 Needle Felting
 - 2.3 Carroting
- 3 Uses
 - 3.1 Felt in musical instruments
 - 3.2 Industrial uses
 - 3.3 Felt in arts and crafts
 - 3.4 Felt in art and design
 - 3.5 Felt in fashion
- 4 Bibliography
- 5 See also
- 6 References
- 7 External links



Samples of felt in different colours



Kazakh felt yurt



Making a feltrobe for Bakhtiari shepherds

History

Felt is considered to be the oldest known textile.^[1] Many cultures have legends as to the origins of felt making. Sumerian legend claims that the secret of feltmaking was discovered by

Urnamman of Lagash.^[2] The story of Saint Clement and Saint Christopher relates that while fleeing from persecution, the men packed their sandals with wool to prevent blisters. At the end of their journey, the movement and sweat had turned the wool into felt socks.^{[3][4]}

Feltmaking is still practised by nomadic peoples (Altaic people: Mongols; Turkic people) in Central Asia, where rugs, tents and clothing are regularly made.^[5] Some of these are traditional items, such as the classic yurt (Gers),^[6] while others are designed for the tourist market, such as decorated slippers.^[7]

In the Western world, felt is widely used as a medium for expression in both textile art and contemporary art^[3] and design, where it has significance as an ecologically responsible textile and building material.^[8]

Manufacturing methods

Wet felting

in the wet felting process, hot water is applied to layers of animal hairs, while repeated agitation and compression causes the fibers to hook together or weave together into a single piece of fabric.^[9] Wrapping the properly arranged fiber in a sturdy, textured material, such as a bamboo mat or burlap, will speed up the felting process. The felted material may be finished by fulling.

Only certain types of fiber can be wet felted successfully. Most types of fleece, such as those taken from the alpaca or the Merino sheep,^[10] can be put through the wet felting process. One may also use mohair (goat), angora (rabbit),^[11] or hair from rodents such as beavers and muskrats.^[12] These types of fiber are covered in tiny scales, similar to the scales found on a strand of human hair.^[13] Heat, motion, and moisture of the fleece causes the scales to open, while agitating them causes them to latch onto each other, creating felt.^{[14][15]} There is an alternative theory that the fibers wind around each other during felting.^[16] Plant fibers and synthetic fibers will not wet felt.^[17]

Needle Felting

Needle felting produces felt without the use of water, using special barbed or "notched" needles. Needle felting is used in industrial processes as well as in individual craft processes.^{[18][19]}

Carroting

Invented in the mid 17th century^{[20][21]} and used until the mid-20th centuries, a process called "carroting" was used in the manufacture of good quality felt for making men's hats. Beaver, rabbit or hare skins were treated with a dilute solution of the mercury compound mercuric nitrate.^[21] The skins were dried in an oven where the thin fur at the sides turned orange, the colour of carrots.^[20] Pelts were stretched over a bar in a cutting machine, and the skin was sliced off in thin shreds, with the fleece coming away entirely.^[22] The fur was blown onto a cone-shaped colander and then treated with hot water to consolidate it.^[23] The cone then peeled off and passed through wet rollers to cause the fur to felt. These 'hoods' were then dyed and blocked to make hats. The toxic solutions from the carrot and the vapours it produced resulted in widespread cases of mercury poisoning among hatters.^[20] This is the origin of the phrase "mad as a hatter" which was hilariously used by Lewis Carroll in the chapter "A Mad Tea Party" (Alice in Wonderland)

Uses

Felt is used in a wide range of industries and manufacturing processes, from the automotive industry and casinos to musical instruments and home construction.

Felt in musical instruments

Many musical instruments use felt. It is often used as a damper.^[25] On drum cymbal stands, it protects the cymbal from cracking and ensures a clean sound. It is used to wrap bass drum strikers and timpani mallets.^[26] Felt is used extensively in pianos; for example, piano hammers are made of wool felt around a wooden core. The density and springiness of the felt is a major part of what creates a piano's tone.^{[27][28]} As the felt becomes grooved and "packed" with use and age, the tone suffers.^[29] Felt is placed under the piano keys on accordions to control touch and key noise; it is also used on the *pallets* to silence notes not sounded by preventing air flow.^{[30][31][32]}

Industrial uses

Felt is frequently used in industry as a sound or vibration damper,^[33] and in machinery for cushioning and padding moving parts.^[34]

Felt in arts and crafts

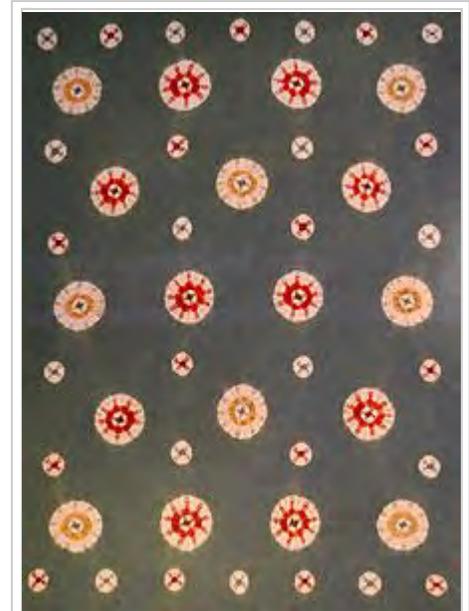
Felt is used for framing paintings. It is laid between the slip mount and picture as a protective measure to avoid damage from rubbing to the edge of the painting. This is commonly found as a preventive measure on paintings which have already been restored or professionally framed. It is widely used to protect paintings executed on various surfaces including canvas, wood panel and copper plate.

A felt-covered board can be used in storytelling to small children. Small felt cutouts or figures of animals, people, or other objects will adhere to a felt board, and in the process of telling the story, the storyteller also acts it out on the board with the animals or people. Puppets can also be made with felt. Felt pressed dolls were very popular in the nineteenth century and just after the first world war.

Felt in art and design

German artist Josef Beuys used felt in a number of works.^{[3] [35]}

Felt in fashion



Mosen felt textile, Tibet, 19th century. Similar textiles from western China were used as rugs.^[24] Shibori-dyed.

During the 18th and 19th centuries gentlemen's top hats made from beaver felt were popular.^{[22][36][37]} In the early part of the 20th century, cloth felt hats, such as fedoras, trilbies^[38] and homburgs,^[39] were worn by many men in the western world. Felt is often used in footwear as boot liners, with the Russian valenki being an example.^{[40][41]}

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See also

- Bowler hat
- Fuzzy felt
- Nuno felting
- Joseph Beuys
- Roofing felt
- Valenki

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External links

- Wtifelt.com (<http://www.wtifelt.com/pressedfelt.html>), What is felt, felt history, how felt is made



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