



Historical Medieval Battle  
International Association

**HMBIA** Authenticity  
Committee

# Fibers, textile and leather use in HMB kits

Regulations and guidelines

## Fibers, textile and leather use in HMB kits

Visible leather and textile elements of the weapon and protective equipment are a subject to authenticity assessment, as they form a historically plausible image. They should have a historical source and the fibre content should be based on archeological artefacts, narrative and visual sources.

All elements of the protective equipment hidden under a tabard and outer layers of the armour are not submitted to authenticity check.

Textile and non-metal elements of HMB kit are a very important component of this sport, not only when it comes to visual impression but also when it comes to durability and quality.

With great numbers of archeological textile finds, paintings and images from manuscripts it is not that difficult to form an image about medieval use of these elements.

## Visible textile and leather elements



Tabard  
Slides 4-6

Brigandine  
cover  
Slides 4-7, 10

Belts and bags  
Slide 11

Padded armour  
Slides 4-6

Straps and  
arming points  
Slide 10



# Linen

We recommend to use historically accurate fiber content textiles for your kit.

- **Linen fabrics:**
- **Heavyweight (canvas)** can be used as a base for brigandine elements of the armour, as a main or complementary fabric for tabard, padded elements of the protective equipment, coifs and padded hose
- **Midweight** - for aventail, padded elements of the protective equipment, as a main or complementary fabric of the tabard, and as a cover for hidden protection in Eastern kits
- **Lightweight** - for braies and cover of hidden protection for Eastern armour.

# Wool and Wool blends

We recommend to use historically accurate fiber content textiles for your kit.

- **Plain weave and felted wool** can be used as a base for brigandine elements of the armour, as a main or complementary fabric for tabard, padded elements of the protective equipment, coifs and padded hose

\*Wool is not typically used for tabards and brigandine bases, but due to its commodity and proven use as one of the most common textiles in the Middle Ages, it is allowed for these purposes.

- **Cords, belts, trimming** can be made of wool thread

Budget-friendly substitutes: Wool blends are permissible. In general we advise to use the blends with natural fibre content above 70 %, but depending on the quality of the material and general look the blends of slightly lower natural fibre content may be allowed.

# Silk and silk blends

It is recommended to use authentic, natural fabrics as materials for your kit

- **Silk fabric** can be used for tabards, as an outer layer of brigandine, for gambeson and padded elements of the protective equipment and as a supplementary fabric for decorative elements.
- **Cords** can be made of silk thread

Budget-friendly substitutes:

Silk blends with cotton and linen are allowed. Cotton velvet, cotton brocade, and silk-rayon mixture with historically plausible patterns can be used as a substitute for the silk textiles.

## Natural fabric - silk velvet



**Left:** Before 1489, 'St. Ursula Shrine' by Hans Memling, Memling museum, Sint-Janshospitaal, Bruges, province of West Flanders, Belgium

**Right:** Mid 16 century brigandine, From the collection of Count Hans Wilczek, Castle Kreuzenstein, Austria



## Mixed fibers and modern substitutes:

Wool blends with cotton and linen are allowed in any proportion

Wool blends with synthetic fibers are allowed if the natural fibers content is over 70 % or synthetic fibre is indistinguishable visually

Linen - cotton, silk - linen, cotton - silk, silk - rayon blends are allowed.

Linen canvas can be replaced with cotton canvas of similar density

Linen plain weave fabric can be replaced with cotton imitation of linen

Silk velvet can be replaced with 100 % cotton velvet.

Hemp textiles can be used as a substitute for linen.

In any cases synthetic fiber content up to 3-5 % is allowed.



# Synthetic fabric

It is **forbidden** to use woven and non-woven textiles made of **synthetic polymeric fibers** for any visible parts of the kit.

These materials are not only modern and historically inaccurate, but they tend to be inflammable, absorb smells, the mono-fibers do not trap air pockets like cotton and provide poor insulation, they are prone to damage by hot washing, they are not skin friendly, can cause allergies and they tend to produce electrostatic charge when rubbed.

# Leather

**Leather** is one of the oldest used multipurpose raw materials.

**Leather** can be used

- as a base for brigandine elements of the armour
- for arming points and straps
- for belts, badges, pouches and decorative elements
- for period shoes

High quality natural leather has a pronounced ability of air permeability, water vapor, insulation and accumulation of moisture.

# Belts, bags and pouches

- Leather, woven silk base belts



Late XV century, Aachen museum



1350-1400, Italian belt, Metropolitan museum



## Period shoes

Shoes, covered with sabatons, are not a subject to authenticity check. We recommend to use genuine leather shoes repeating the silhouette of the period footwear. Rubber protector covering leather sole is **allowed**, however, modern boot outsoles with rubber lugs will be **rejected**. Only flat rubber soles can be used for these purposes.



Far left: Late XIV century  
Museum of Dordrecht



Left: 1350-1400  
Museum of London



Right: Mid-late XIV century  
Museum of London

# Synthetic leather

Artificial leather is a multi-layered material that resembles processed natural leather in its appearance and properties.

Disadvantage of plastic-coated artificial leather is that it is not porous and does not allow air to pass through; thus, sweat and water can accumulate causing mold.

It is **not recommended** to use any kind of synthetic leather with HMB kit.

It is **forbidden** to use **patent leather**, due to its modern end of the XVIII century and beginning of the XIX century origins.

# Colours and dyeing agents



All colours should resemble the ones achievable with accessible medieval dyeing agents.

Almost any shade is acceptable except for fluorescent (neon) colours.

**Left:** natural fabric dyes

**Right:** **prohibited** colour palette



## Decoration techniques:

All period decoration techniques are allowed. They include:

- **embroidery** (both modern and machine)
- **patches / applique**
- **patterns**
- **painting**

Acceptable substitutes:

- **Woodblock printing** (printing is a period technique, which was used for cloth of various use, however, there is a very limited proof that it was applied to adult garments).





## Embroidery

Was used for ceremonial garments, banners and coats-of-arms. Regular garments could be embroidered with borders and repetitive motifs along the edges.

Modern substitute: **machine embroidery**

Budget-friendly substitute: **woodblock prints**

**Patterns must be historically plausible**

Left: 1415, BL Egerton 912 Paulus Orosius, f202, Paris, Collection of British Library, UK



1230, psautier called Saint Louis and Blanche de Castille, from the BnF collections, Arsenal Library

## Techniques of decoration:

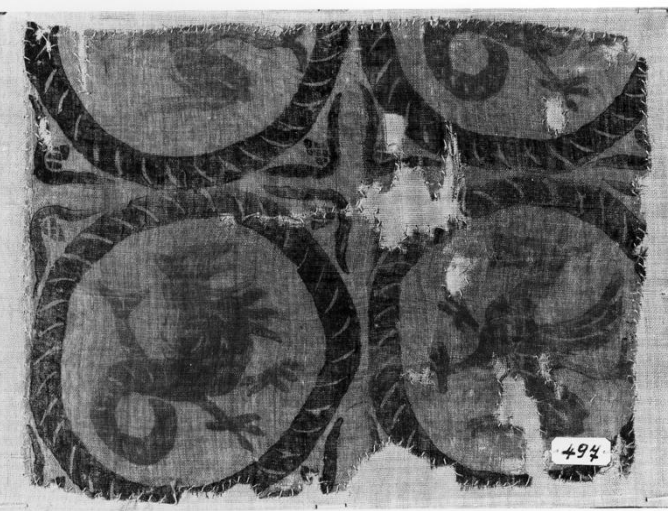
**Patches / applique** - Is most common technique in decorating tabards. It is the easiest way to achieve decorative and heraldic impression on medieval kit. It is recommended that patches be from similar material. Both base and supplementary fabrics must comply with this document.



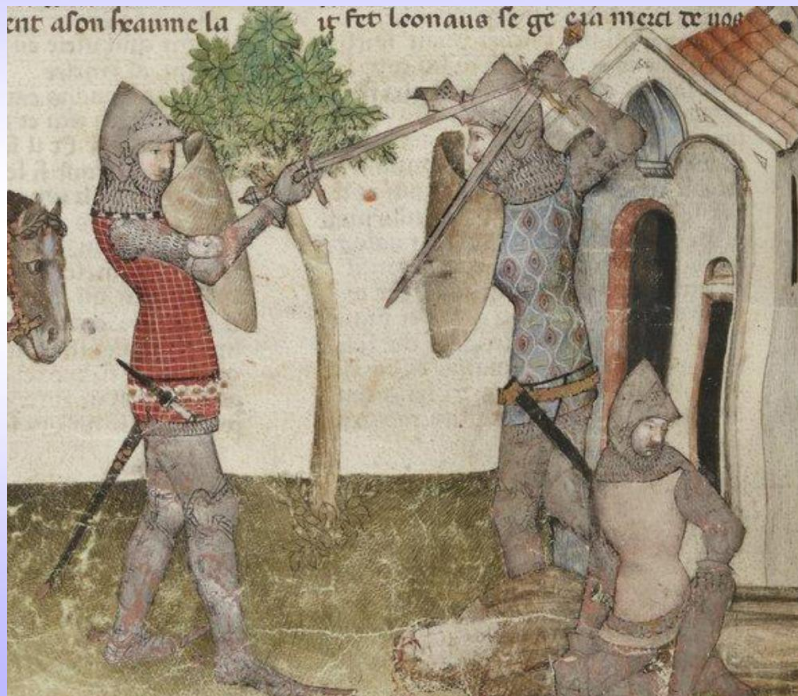
Beginning of the 16 century,  
German herald tabard with  
applique decoration,  
Hermitage, Russia

## Techniques of decoration:

**Woodblock printing** - There are a lot of historical visual sources and preserved textile fragments regarding the woodblock printing patterns. It is **not recommended** to use early medieval printing patterns in late century armor kits.



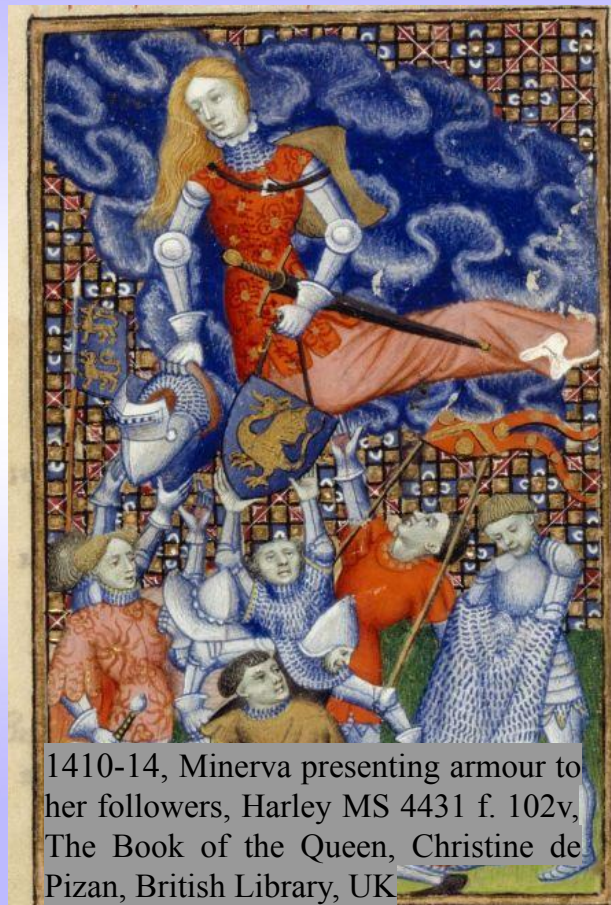
# Textile pattern examples



1380-85, BNF Français 343 *Queste del Saint Graal* Tristan de Léonois, f47v, Milan, Italy, Biblioteque Nationale



1370, Rudolf von Sachsenhausen, St. Bartholomeus Cathedral, Frankfurt, Germany



1410-14, Minerva presenting armour to her followers, Harley MS 4431 f. 102v, *The Book of the Queen*, Christine de Pizan, British Library, UK



Above: Italy, XIV-XV. Silk.  
The State Hermitage Museum

Left: Italy, XIV-XV. Linen  
The State Hermitage  
Museum



Above: Italy, XV. Silk velvet.  
The State Hermitage Museum



Above: Italy, XIII. Linen, wool.  
The State Hermitage Museum



Above: Sicily, XIII Linen, silk  
The State Hermitage Museum



Above: Germany, XV, Linen  
The MET Collection

## List of references

**Crowfoot, E. (2001)** Textiles and Clothing : Medieval Finds from Excavations in London, c.1150-c.1450

**Thursfield, S. (2015)** The Medieval Tailor's Assistant, 2nd Edition: Common Garments 1100-1480

**Grew, F., Neergaard de, M. et al. (2006)** Shoes and Pattens (Medieval Finds from Excavations in London) (Volume 2)

The State Hermitage Collection <http://collections.hermitage.ru/>

Museum of London Collection <https://www.museumoflondon.org.uk/collections>

The Metropolitan Museum Collection <https://www.metmuseum.org/art/collection>

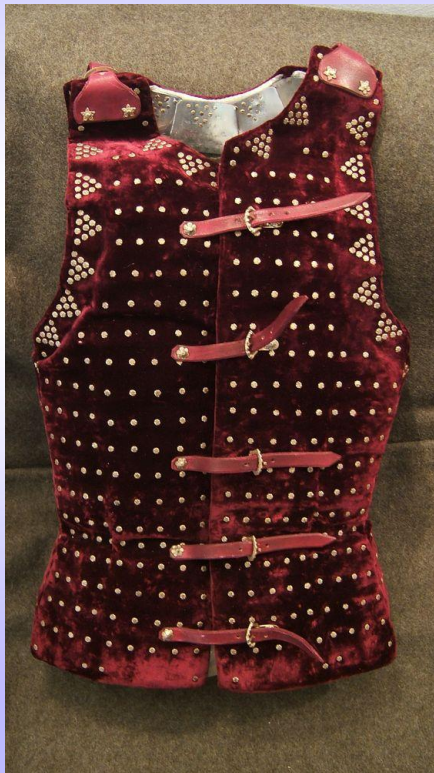


Historical Medieval Battle  
International Association

**HMBIA** Authenticity  
Committee

# Appendix I: Modern examples (allowed)

# Examples of velvet, wool, leather and silk brocade base brigandines





# Silk and silk brocade with examples of historical patterns



# Woodblock printing



# Embroidery and patches

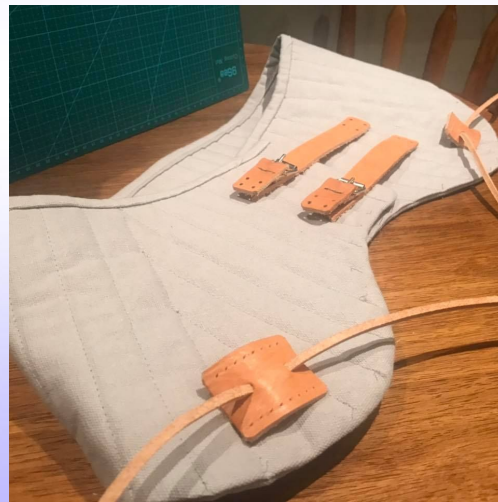
Combined patching and embroidery  
technique of decoration



# Padded elements, arming points and braies



# Padded elements, aventail and straps



# Belts examples



# Bags and pouches examples



# Appendix II:

## Rejected application of textiles (declined)



## Addendum II: **Rejected** application of textiles

Modern nylon cords

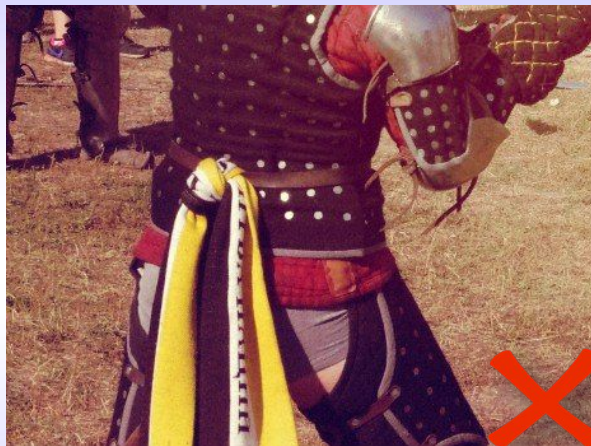


Modern leggings



Tabards made from light  
cotton and synthetic  
materials

## Addendum II: **Rejected** application of textiles



Modern memorabilia  
Modern shorts



Shoelaces



Modern boots

## Addendum II: **Rejected** application of leather

Belts with no plausible  
historical source



# Short guideline for fibers, textile and leather use in HMB kits

## DISCLAIMER:

This guideline presents a summary of the acceptable most popular materials for every **visible** element of the HMB gear including **visible** elements of civilian garment and accessories.

Please note that even though we recommend to use historically plausible materials for concealed elements of your kit they will not be assessed on authenticity compliance.

This document does not regulate the use of the textiles in HMB kits, for detailed regulations please refer to the full document on leather and textiles.

**Wool** = wool blends with natural fiber content above 70 %

**Linen** = 95 - 100 % linen or cotton imitation visually resembling linen fabric

**Silk** = silk blends with vegetable fibers or wool in any proportion, or 65 % or more silk blends

**Velvet** = cotton and silk velvet

**Brocade** = patterned silk, wool, linen fabric and cotton imitations

Element of the kit	Recommended materials	Comments
Tabard	<p><b>Lining:</b> linen or cotton canvas</p> <p><b>Outer layer:</b> Heavyweight or middleweight linen, cotton canvas, wool, silk</p> <p><b>Buttons:</b> metal, cloth-covered, horn, bone or leather.</p> <p><b>Decoration:</b> machine embroidery, applique, freehand painting, woodblock printing, coaching, scalloping.</p>	Refer to the guideline on tabards for the acceptable patterns
Brigandine cover	<p><b>Outer layer:</b> leather, cotton or linen canvas, wool, velvet or silk</p> <p><b>Straps:</b> leather</p> <p><b>Decoration:</b> embroidery, brocade, woodblock printing.</p>	Applied to any brigandine elements of the protective equipment including body protection, vambrace and rerebrace, cuiss, greave, gauntlets (refer to the Gauntlets document for the details), sabatons.

<p>Gambeson and padded elements</p>	<p><b>Outer layer:</b> linen, wool, silk  <b>Buttons:</b> metal, cloth-covered, horn, bone or leather.  <b>Decoration:</b> machine embroidery, applique, woodblock printing</p>	<p>Applied to every padded element of the kit: gambeson, padded legs protection, arming belts, padded coifs, padded aventail (see the document on aventails for further details).</p> <p>We recommend using historically plausible materials for hidden parts of your kit, but they are not a subject to authenticity check. Please make sure no modern textiles are visible around the joints in any position.</p>
<p>Cords and laces</p>	<p>Silk and wool braided cords          Leather cords</p>	<p>We do not recommend using shoelaces and nylon cords for your kit. The kit with visible nylon cords will be rejected.</p>
<p>Straps and belts</p>	<p>Leather</p>	<p>Chin straps, brigandine straps hidden under a tabard are not a subject to authenticity check, however, we advise to use leather and metal buckles for safety and durability</p>

<p><b>Braies</b></p>	<p>White or unbleached linen, hemp or substitutes</p>	<p>Please make sure that modern leggings are not visible in any position. This recommendation will not be applied if the element of the kit was damaged during the fight.</p>
<p><b>Puttees / leg warmers</b></p>	<p>Woven or knitted woollen thread</p>	<p>We recommend to refrain from using tight leg warmers sewn with the use of modern knits, or from the use of medical supports and compression sleeves as a visible layer of your kit.</p>
<p><b>Weapon grip wraps and wrist straps</b></p>	<p>Leather Textile tape</p>	<p>Please refrain from using modern polymer tapes for both manufacturing and reparation of your weapon. Textile adhesive tape of neutral colours is acceptable.</p>
<p><b>Arming points</b></p>	<p>Leather Fabric thread (late armor)</p>	<p>We recommend to use waxed thread for sewing leather to attach arming points to the gambesons and arming belts</p>