

# 14th-Century Armor Materials – Builder’s Field Guide

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*A practical reference for build weekends in the shop. This is not a beginner’s tool guide. It focuses on materials: what to buy, why, and the trade-offs. Written for people using shared shop tools under supervision.*

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## How to Use This Document

- Read the section relevant to what you’re building (mail, plate, fabric).
  - Use **Pros / Cons** to decide what fits your budget, skill level, and historical target.
  - Use **When I Recommend This** as the armorer’s opinion.
  - Vendor links are suggestions, not endorsements (availability changes).
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## MAIL (CHAINMAIL)

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*Mail is a major investment. The wrong choice costs money twice. For SCA combat and regular use, strength and durability matter more than convenience.*

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## Ring Construction Types

### Butted Mail (Not Recommended)

#### Summary

Butted mail is rings pressed closed without mechanical locking.

#### Why I Do Not Recommend It

- Rings open easily under load
- Fails quickly in SCA combat
- Requires constant repair
- False economy: you will replace it

#### Bottom Line

*I do **\*\*not\*\*** recommend butted mail for armor. Ever.*

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### Welded Mail

#### What It Is

Rings are welded closed, producing a very strong modern alternative to riveted mail.

#### Pros

- Extremely durable
- No rivets to fail
- Low maintenance
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## Cons

- Modern construction
- Visually less accurate than riveted mail

## When I Recommend This

*Excellent choice for SCA combatants prioritizing durability and low upkeep.*

## Source

- Master Canute – weldedChainmail.com
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## Riveted Mail (Recommended)

### What It Is

Each ring is mechanically closed using a rivet or wedge. This is the historical standard and remains extremely durable.

### Pros

- Historically correct
- Very strong
- Survives real use

### Cons

- More expensive
- Repairs take longer

## General Recommendation

*For most builders: **\*\*get some form of riveted mail\*\***. Details beyond that are largely personal preference.*

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## Rivet & Ring Styles

### Solid Rings vs Riveted Rings

- **Solid rings**: punched from sheet; no joint
- **Riveted rings**: closed with a rivet or wedge

Most historical mail uses a **mix** of solid and riveted rings.

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### Rivet Types

- **Pin riveted (round rivet)**
  - Earlier styles
  - Historically accurate through the 14th century
- **Wedge riveted**

- Flattened ring ends with a wedge-shaped rivet
  - Very accurate to the **late 14th century**
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### Ring Profiles

- **Round wire rings**
    - Common in earlier periods
    - Still accurate for the 14th century
  - **Flat rings**
    - Certainly period to the 14th century
    - Likely less accurate for earlier periods
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## Mail Materials

### Mild Steel Mail

#### Pros

- Historically accurate appearance
- Generally cheaper

#### Cons

- Requires regular oiling
  - Rust can be a constant issue
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### Stainless Steel Mail

#### Pros

- Much lower maintenance
- No rust concerns
- Excellent durability

#### Cons

- Slightly brighter appearance

#### Recommendation

*Stainless mail is often the **\*\*better practical choice\*\***. The reduced upkeep makes it well worth it for most users.*

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## Practical Buying Guidance

### Ring Size (Inner Diameter)

Mail is commonly sold in **6 mm to 9 mm** inner diameter rings.

- **6 mm rings**
  - Denser weave
  - Slightly heavier

- Period-appropriate
- Typically more expensive
- **8–9 mm rings**
  - More common
  - Slightly lighter
  - Less dense weave
  - Still period-appropriate and visually correct

#### General Guidance

*For most people, **8–9 mm** is the practical sweet spot. **6 mm** is excellent, but costs more and adds weight.*

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#### Mail Shirt / Hauberjon Sizing

Mail needs **ease** to move correctly over padding.

#### Sizing Rule (Shop Standard)

*Final mail shirt circumference should be **10 inches larger** than your chest measurement **while wearing your gambison**.*

#### Example

- Gambisoned chest: **48 inches**
  - Minimum mail shirt circumference: **58 inches**
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#### Aventail Sizing (for Bascinet)

When purchasing an aventail, look for a **cone with an attached tube**.

#### Minimum Recommended Dimensions

- Tube height: **6 inches minimum**
  - Top diameter of cone: **32 inches minimum**
- This sizing fits the majority of helmets and allows proper drape and coverage.
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## PLATE ARMOR STEELS

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*This section prioritizes function, durability, and build efficiency over strict historical accuracy. Material choice affects thickness, weight, tool wear, and long-term maintenance.*

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## Mild Steel (Low Carbon: A36 / 1018 / 1020)

### What It Is

Low-carbon steel (generally ~0.05–0.25% carbon). It cannot be meaningfully heat treated for hardness and strength, so performance comes primarily from **thickness, shaping, and curvature**.

### Pros

- Predictable and forgiving to work
- Easy to cut, drill, punch, dish, and planish
- Widely available and inexpensive
- Repairs easily

### Cons

- Must rely on thicker gauges for strength
- Will rust if not protected

### Thickness Guidelines by Armor Type (Shop Standard)

- Helmets: **12 ga minimum**
- Breastplates: **16 ga**
- Upper Leg Armor (Cuisses): **16 ga**
- Limb Armor (Arms / Lower Leg): **18 ga** (sometimes **16–18 ga** depending on design/use)

### When I Recommend This

*Default material for most builds, especially helmets and learning projects where reliability and forgiveness matter.*

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## 4130 (Chromoly / Spring Steel)

### What It Is

A chromium-molybdenum alloy steel capable of being **heat treated and tempered** to significantly higher strength than mild steel.

### Pros

- Much higher strength when properly heat treated
- Allows use of **much thinner gauges**
- Excellent resistance to denting when treated correctly

### Cons

- Requires proper heat treatment *and* tempering
- Time-consuming process
- Harder on tools
- Will rust if unprotected
- Performance depends heavily on correct process

### Thickness Guidelines by Armor Type (Heat Treated, Shop Standard)

- Helmets: **14 ga**
- Breastplates: **18 ga**
- Upper Leg Armor (Cuisses): **18 ga**
- Limb Armor (Arms / Lower Leg): **20 ga**

### Equivalency (Rule of Thumb)

- 16 ga mild steel ≈ **20 ga heat-treated 4130**
- 18 ga mild steel ≈ **22 ga heat-treated 4130**

### When I Recommend This

*For experienced builders who understand heat treatment and want significant weight savings without sacrificing protection.*

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## Stainless Steel (304)

### What It Is

An austenitic stainless steel alloy. Not heat treatable for strength, but **naturally corrosion resistant** and slightly stronger than mild steel in annealed condition.

### Pros

- Rust resistant / low maintenance
- Marginally stronger than mild steel
- Allows slightly thinner gauges
- Polishes well

### Cons

- Harder to move and planish than mild steel
- Tough on tools
- More expensive

### Thickness Guidelines by Armor Type (Shop Standard)

- Helmets: **12–14 ga**
- Breastplates: **16–18 ga**
- Upper Leg Armor (Cuisses): **16 ga**
- Limb Armor (Arms / Lower Leg): **18 ga**

### Buying Tip

*Look for **\*\*2B finish\*\*** sheet. Do **\*not\*** pay extra for brushed or polished finishes—you will remove it anyway.*

### When I Recommend This

*For builders prioritizing corrosion resistance and reduced maintenance on **\*\*formed plates\*\*** (not codpieces).*

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## Aluminum (6061)

### What It Is

A lightweight structural aluminum alloy. Not suitable for exposed impact areas but extremely useful for **hidden internal components**.

### Thickness Guidelines by Armor Type (Shop Standard)

- Helmets: **N/A**
- Body Armor (hidden plates): **0.06"**
- Limb Armor (hidden splints): **0.08–0.09"**

### Pros

- Very lightweight
- Easy to cut and shape
- Corrosion resistant

### Cons

- Not suitable for visible or high-impact armor
- Softer than steel

### Common Uses

- Hidden splints in limb armor
- Splints in codpieces / codaplates
- Internal reinforcement where steel weight is undesirable

### When I Recommend This

*Internal, hidden components where weight savings matter more than impact resistance.*

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## Kydex (Thermoplastic)

### What It Is

A modern thermoformable plastic sheet. **Not period correct**, but widely used in the shop for fast, lightweight internal armor structures.

### Typical Thickness

- **1/8"** (≈3 mm) is standard
- Can be slightly thinner depending on application

### Pros

- Extremely fast to shape
- Requires minimal tooling
- Lightweight
- Very consistent results

### Cons

- Not historically accurate
- Must never be used exposed
- Can deform under high heat

### Common Uses

- Internal cores for vambraces
- Internal cores for greaves
- Fake splint armor when covered

### Covering & Finish

- Always covered in **leather**
- Finished with **fake rivets / nails** to simulate splinted construction

### When I Recommend This

*When speed, weight savings, and ease of shaping matter more than historical construction.*

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## RIVETS & MECHANICAL FASTENERS

*Rivets confuse new builders more than almost anything else. This section reflects what we actually use in the shop for armor that needs to survive real use.*

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### Common Solid Rivets

#### Head Styles

- **Round head rivets**
- **Flat head rivets**

Both are functionally equivalent. Choice is primarily **aesthetic** and based on the look you want.

#### Standard Sizes We Use

- **1/8" diameter × 3/8" shank**
- **3/16" diameter × 3/8" shank**

#### Materials

- Mild steel
- Stainless steel
- Brass

#### Corrosion & Material Compatibility

- **Stainless steel, brass, and aluminum** are corrosion resistant
- **Mild steel** will rust and requires protection

#### Practical Guidance

- If the base armor material is **stainless**, use **stainless or brass rivets**
- If the base armor material is **mild steel or spring steel**, mild steel rivets are acceptable
- Avoid mixing **rusting rivets** into **non-rusting armor**, as it complicates maintenance and corrosion control

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### 1/8" Rivets (Fine Work)

#### Typical Uses

- Gauntlets
- Hinges
- Small lames
- Light articulation

#### Notes

- Cleaner appearance
- Easier topeen
- Not intended for high-load joints

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### 3/16" Rivets (Structural Work)

#### Typical Uses

- Helmets
- Knee and elbow cops
- Heavy articulation points
- Load-bearing joints

#### **Notes**

- Much stronger than 1/8"
  - Slightly harder to peen
  - Default choice when strength matters
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### **Truss Head Rivets**

#### **What They Are**

Rivets with a much larger, flatter head that reads as more decorative.

#### **Typical Uses**

- Visual detailing
- Aluminum armor components

#### **Notes**

- Larger head spreads load
  - Often chosen for appearance as much as function
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### **Roofing Nails (Practical Substitute)**

#### **What They Are**

Common aluminum or steel roofing nails used as improvised rivets.

#### **Typical Uses**

- Splinted armor
- Projects requiring a large number of fasteners

#### **Pros**

- Cheap
- Easy to find

- Fast to install

#### Cons

- Not ideal for hard articulation
- Less correct appearance on exposed joints

#### Bottom Line

*Roofing nails work extremely well for splinted and high-rivet-count projects, even if they're not ideal everywhere.*

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## FABRICS & SOFT GOODS

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*We do very little sewing in the shop. This section exists so people know what to buy, not how to tailor garments. Think of this as material awareness, not garment construction.*

### Linen

#### What It Is

A plant-based fiber made from flax. The most common and practical fabric for 14th-century European arming garments.

#### Pros

- Period correct
- Breathable
- Strong when wet
- Excellent for arming garments and linings

#### Cons

- Shrinks if untreated
- Quality varies wildly

#### Notes

- Look for **tightly woven, heavyweight** linen
  - Wash and dry before cutting
-

## Wool

### What It Is

An animal fiber fabric used historically for outer garments and padding.

### Pros

- Historically accurate
- Excellent padding when layered
- Retains warmth even when damp

### Cons

- Hot
  - Can be itchy
  - Quality varies by weave and finish
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## Cotton (Modern Substitute)

### What It Is

A modern plant-based fabric. **Not period correct** for 14th-century Europe, but commonly used today due to cost and availability.

### Pros

- Cheap
- Easy to sew
- Widely available

### Cons

- Not period correct
- Compresses badly over time
- Poor long-term padding compared to linen or wool

### Notes / Acceptable Substitutes

- **Osnaburg cotton:** a coarse cotton with a linen-like appearance
  - **Linen–rayon or cotton–rayon blends:** visually closer to linen, often more affordable
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# LEATHER

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*Leather was widely used in the 14th century in multiple forms, including hardened leather (cuir bouilli). It is a valid historical armor material when used correctly.*

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# LEATHER

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*Leather is structural in armor. Thickness, tannage, and cut matter far more than decoration.*

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## Understanding Leather Thickness (Ounces)

Leather thickness is measured in **ounces (oz)**.

- **1 oz ≈ 1/64 inch ≈ 0.4 mm**

Ounces	Approx. Thickness
3–4 oz	~1.2–1.6 mm
5–6 oz	~2.0–2.4 mm
7–8 oz	~2.8–3.2 mm
9–10 oz	~3.6–4.0 mm

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## Vegetable-Tanned Leather (Veg Tan)

### What It Is

Traditional, untreated leather that can be shaped, dyed, and tooled.

### Splinted Armor & Limb Components

#### Preferred Thickness

- **5–8 oz veg tan**

#### Why

- Stiff enough to support splints

- Forms well when wet
  - Takes tooling and dye evenly
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## Straps & Structural Leather

### Preferred Thickness

- 8–10 oz veg tan

### Notes

- Strong and durable
  - Can be tooled, stamped, and dyed
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## Latigo Leather (Straps)

### What It Is

Combination-tanned leather, pre-oiled and very strong.

### Pros

- Extremely durable
- Excellent for straps
- Beautiful factory-dyed colors

### Cons

- Cannot be tooled
- Limited color range

### Typical Use

*Strap leather when tooling is not required*

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## Chap Sides (Thin Leather)

### Preferred Thickness

- 3–5 oz

#### Typical Use

- Coat of plates armor
- Flexible coverings and shells

#### Why

- Conforms easily
  - Keeps weight down
  - Accepts rivets cleanly
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## BUCKLES & STRAP HARDWARE

*Buckles are functional first and decorative second. In the shop we prioritize fit, strength, and availability.*

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### Buckle Types

#### Buckle Style Matters (Read This)

##### **Avoid center-bar buckles.**

For armor straps, you want **heel buckles** (also called frame buckles without a center bar).

##### **Why Heel Buckles**

- Correct geometry for armor straps
- Easier to tension and adjust under load
- Visually simpler and more period-appropriate
- Far less bulky under armor

**Center-bar buckles** are common in modern leatherwork but tend to:

- Sit awkwardly on armor
- Add unnecessary bulk
- Look noticeably modern

##### **Rule of Thumb**

*The simpler the buckle, the more period it looks.*

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## Period-Style Cast Buckles

### What They Are

Reproduction buckles based on historical finds, usually cast brass or bronze.

### Pros

- Historically appropriate appearance
- Elevates the finished look of armor

### Cons

- More expensive
- Limited sizes and availability

### When I Recommend These

*Visible areas where appearance matters.*

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## Plain Modern Heel Buckles

### What They Are

Simple modern heel buckles without a center bar.

### Pros

- Cheap
- Strong
- Read visually period when kept simple

### Cons

- Modern manufacture

### When I Recommend These

*Most armor straps, especially where buckles are partially or fully visible.*

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## Plain Modern Buckles

### What They Are

Simple steel or brass buckles without decorative elements.

### Pros

- Inexpensive
- Easy to source
- Strong and reliable

### Cons

- Visually modern

### When I Recommend These

*Hidden locations or anywhere function matters more than looks.*

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## Strap Width Standards (Shop Norms)

Correct buckle size starts with correct **strap width**.

- **Arms & Greaves: 5/8"** (standard)
- **Cuisses (upper leg): 3/4"** preferred
  - 5/8" can work if necessary
- **Breastplates: 3/4" – 1 1/4"** depending on load and design

### Guidance

*Match buckle width to strap width. Oversized buckles add bulk; undersized buckles fail early.*

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## LEATHER DYE & FINISHES

*Dye affects appearance, longevity, and maintenance. Most armor leather is dyed for uniformity and to hide wear.*

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## What Leather Dye Is

Leather dye is a penetrating colorant designed to soak into veg-tan and similar leathers. Unlike paint, dye **does not sit on the surface**—it colors the fibers themselves.

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## Common Types of Leather Dye

### Alcohol-Based Dye

#### What It Is

Traditional spirit dyes that penetrate deeply and dry quickly.

#### Pros

- Strong, even color
- Penetrates well into veg-tan
- Widely available

#### Cons

- Can dry leather out if overused
- Strong fumes

#### Typical Use

*Most shop dyeing for armor leather*

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### Oil-Based Dye

#### What It Is

Dye suspended in oil carriers to reduce drying and streaking.

#### Pros

- More forgiving application
- Less drying to the leather

#### Cons

- Slower drying
  - Slightly less penetration than alcohol dyes
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## Water-Based Dye

### What It Is

Modern, low-VOC dyes suspended in water.

### Pros

- Low odor
- Safer for indoor use

### Cons

- Lighter colors
  - Less penetration
  - Can raise grain
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## Practical Shop Guidance

- Dye **after cutting and shaping**, before final assembly
  - Expect some color variation—this is normal
  - Seal dyed leather with oil, wax, or finish as appropriate
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# HOW MUCH SHOULD I ORDER?

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*This section exists to stop people from under-ordering and stalling builds. These are shop rules of thumb, based on how we actually work.*

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## Sheet Metal (2' × 4' Sheets)

*All metal quantities below assume **\*\*2' × 4' sheets\*\***, which is our standard working size.*

## Helmets

- **1 sheet ≈ 1.5 closed-faced helmets**
- In practice: **1 full sheet per helmet** gives comfortable margin

## Limb Harness

- **1 sheet = full arms or full legs**

## Body Armor

- **1 sheet = coat of plates or body harness**
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## Leather

### Veg-Tan (Splinted Armor & Limbs)

- **Single shoulder:** covers **part of a limb harness**
- **Double shoulder:** covers **an entire limb harness**

### Coats of Plates / Covered Chest Defense

- Requires **20+ square feet** of leather
  - In practice: **one full side per coat of plates**
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## Buckles

- **Limbs (arms or legs): ~10 buckles per pair**
- **Breastplates / Coats of Plates: 4 buckles total**

*Always order extras. Buckles are cheap; re-ordering is not.*

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## Rivets

Rivet count varies wildly based on construction.

### Typical Numbers

- **Coat of plates: ~150 rivets**
- **Heavily splinted coats / decorative builds: 300+ rivets**

*Rule of thumb: \*If it's splinted, count rivets in the hundreds.\**

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### Leather Dye (Practical Coverage)

Coverage varies by color and application method, but these numbers are safe shop guidance.

- **4 oz bottle (alcohol or oil dye): ~8–10 sq ft**
- **8 oz bottle: ~16–20 sq ft**

### Practical Advice

- One **8 oz bottle** comfortably dyes **one coat of plates** or equivalent area
  - Always buy extra—running out mid-piece causes color mismatch
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## PRE-BUILD SHOPPING CHECKLIST

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*Use this checklist before build weekends. This is meant to prevent last-minute runs, stalled builds, and mismatched materials.*

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### Plate Armor (Sheet Metal)

- Correct material (mild steel / 4130 / stainless / aluminum)
- Sheets are **2' x 4'**
- Quantity:

- Helmets:  1 sheet per helmet
  - Full arms:  1 sheet
  - Full legs:  1 sheet
  - Coat of plates / body harness:  1 sheet
-

## Maille

- Riveted or welded maille ONLY
  - Ring size chosen (6 mm / 8–9 mm)
  - Material chosen (stainless or mild)
  - Mail shirt sized **+10 inches over padded chest**
  - Aventail sized correctly:
  - Cone + tube construction
  - Tube  $\geq$  6 inches
  - Cone top  $\geq$  32 inches circumference
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## Leather

- Veg-tan leather for splints / limbs (5–8 oz)
  - Single shoulder (partial limb)
  - Double shoulder (full limb)
  - Coat of plates leather:
  - Full side (20+ sq ft)
  - Strap leather:
  - Veg-tan 8–10 oz **or** latigo
  - Thin leather (chaps sides 3–5 oz) if required
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## Buckles

- Heel / frame buckles only** (no center-bar buckles)
- Correct strap width:
- Arms / greaves: 5/8"
- Cuisses: 3/4" preferred
- Breastplate: 3/4"–1 1/4"

Quantity:

- Limbs: ~10 buckles per pair
  - Breastplates / coats of plates: 4 buckles
- 

## Rivets & Fasteners

Solid rivets:

- 1/8" × 3/8" (fine work)
- 3/16" × 3/8" (structural)

Rivet material matches armor material:

- Stainless/brass for stainless armor
- Mild steel acceptable for rusting armor

Quantity:

- 150 rivets (minimum coat of plates)
- 300+ rivets (splinted builds)

Roofing nails (if doing splinted armor)

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## Plastics (Kydex)

1/8" Kydex sheet

- 12" × 24" per pair of arms or legs
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## Leather Dye, Oils & Finishes

Leather dye (alcohol or oil based)

- 8 oz bottle per coat of plates

Conditioning oil:

- Neatsfoot oil
- Mink oil (for water resistance)

Finish / sealant:

- Beeswax or wax blend
  - Resolene (if needed)
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## Final Sanity Check

- All materials ordered **before** build weekend
  - Nothing critical left to "pick up later"
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# MATERIAL SOURCES

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*These are suppliers we actually use or regularly recommend. Availability and pricing change, but all of these vendors are reliable.*

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## Leather – Vegetable Tanned (8–10 oz Sides, Shoulders, Double Shoulders)

- **Buckskin Leather Company** – Veg-tan sides and shoulders in heavy weights  
<https://www.buckskinleather.com/vegetable-tanned-leather>
- **The Leather Guy** – Veg-tan sides, double shoulders, and panels  
<https://theleatherguy.org/collections/vegetable-tanned-leather>
- **BuckleGuy** – Veg-tan hides and premium leather stock  
<https://www.buckleGuy.com/veg-tan-leather/>
- **Acadia Leather** – Full sides and heavier veg-tan hides (often good value)  
<https://www.acadialeather.com/>
- **Montana Leather** – Excellent prices on the MTL veg tan sides  
<https://www.montanaleather.com>

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## Leather – Latigo (Straps & Belt Leather)

- **Springfield Leather** – Latigo sides and pre-cut straps in common widths  
<https://www.springfieldleather.com/products/latigo-straps>
- **Weaver Leather Supply** – Hermann Oak latigo sides and strap leather  
<https://www.weaverleathersupply.com/products/hermann-oak-latigo-leather>
- **Tandy Leather** – Latigo sides and strap stock  
<https://tandyleather.com/products/latigo-veg-tan-leather>

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## Leather – Chap Sides / Thin Leather (3–5 oz)

- **Zack White Leather** – Chap sides and lighter leather stock  
<https://www.zackwhite.com/Leather-Hides-Skins>
- **Acadia Leather** – Chap leather and lighter hides  
<https://www.acadialeather.com/>
- **Frogjelly Leather** – Veg-tan panels, chap sides, and assorted leather stock  
<https://frogjellyleather.com/collections/vegetable-tanned-leather>

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## Buckles (Heel / Frame Buckles)

*Avoid center-bar buckles. Look for simple heel or frame buckles.*

- **Montana Leather** – Plain heel buckles in common strap widths  
<https://www.montanaleather.com/product/heel-buckle-nickel-5/>
- **Springfield Leather** – Heel / frame buckles in steel and brass  
<https://www.springfieldleather.com/Heel-Buckles>
- **Weaver Leather Supply** – Heavy-duty frame buckles  
<https://www.weaverleathersupply.com/collections/frame-buckles>
- **BuckleGuy** – Clean, simple frame buckles (higher-end hardware)

<https://www.buckleguy.com/frame-buckles/>

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## Period Buckles & Historical Hardware

*For visible straps and higher-end kits. Simpler forms read as more period.*

- **Kult of Athena** – Large selection of medieval buckles and fittings  
<https://www.kultofathena.com/product-category/clothing/belts-baldrics-buckles/buckles-fittings/>
  - **Lord of Battles** – Cast medieval buckles in brass and steel  
<https://lordofbattles.com/accessories/buckles/>
  - **MedieWorld** – Medieval buckles and belt accessories  
<https://medieworld.com/cat/buckles/>
  - **Battle-Merchant** – Historical buckles and leather fittings  
<https://www.battlemerchant.com/en/leather/buckles/>
  - **PERA PERIS** – Budget-friendly medieval buckles and strap ends  
<https://www.peraperis.com/en/Belt-Accessories-15/Belt-Accessories/Mediaeval-Buckles/>
  - **Medieval-Shop (UK)** – European supplier of medieval belt buckles  
<https://www.medieval-shop.co.uk/727-belt-buckles>
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## Maille (Riveted & Welded)

*Maille is expensive and labor-intensive. Buy once, buy correctly.*

- **AllBestStuff** (India) – Riveted maille shirts, aventails, and components at very competitive prices  
<https://allbeststuff.com/>
- **Master Canute – Welded Chainmail** – Extremely durable welded maille for SCA combat  
<https://weldedchainmail.com/>
- **Kult of Athena** – Riveted maille shirts and components (European suppliers)  
<https://www.kultofathena.com/product-category/armor/chainmail/>
- **Lord of Battles** – Riveted maille (wedge and round rivet styles), good price-to-quality ratio  
<https://lordofbattles.com/armor/chainmail/>

- **Battle-Merchant** – European riveted maille shirts and aventails  
<https://www.battlemerchant.com/en/armor/chainmail/>

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## Sheet Metal Sources (Armor Stock)

*Best pricing is often local. When ordering online, compare shipping, cut fees, and whether you're getting 2B stainless or a brushed finish.*

### Stainless 304 (2B finish)

- **Shapiro Metal Supply** – Great small-sheet selection; 304 2B is clearly labeled  
<https://www.shapirosupply.com/stainless/sheets-plates>
- **All Metals Inc (AllMetalsOnline)** – Cut-to-size 304 stainless sheet (2B/mill finish)  
<https://allmetalsinc.com/products/stainless-sheet-14-grade-304>
- **Speedy Metals** – 304 stainless sheet (various gauges)  
<https://www.speedymetals.com/pc-1917-8279-24ga-0024-304-stainless-steel-sheet-2-finish.aspx>
- **Metals Depot** – Stainless sheet/plate in small quantities  
<https://www.metalsdepot.com/stainless-steel-products/stainless-steel-sheet-plate>

### 4130 Chromoly Sheet (annealed/normalized)

- **Shapiro Metal Supply** – 4130 chromoly sheet/plate in multiple thicknesses  
<https://www.shapirosupply.com/4130-chromoly/sheets-plates>
- **Aircraft Spruce** – 4130 sheet stock (aircraft supply, good variety)  
<https://www.aircraftspruce.com/catalog/mepages/4130sheet.php>
- **OnlineMetals** – 4130 sheet/plate (custom cuts)  
<https://www.onlinemetals.com/en/buy/alloy-steel-sheet-plate-4130>
- **Fix Supply** – 4130 sheets/plates (often competitive on common sizes)  
<https://www.fixsupply.com/raw-materials/metals/metal-sheets-plates/alloy-steel-sheets-plates/4130-alloy-steel-sheets-plates/>

### Mild Steel Sheet (A36 / cold roll)

- **Shapiro Metal Supply** – Cold roll sheet options (good for armor work)

<https://www.shapirosupply.com/steel/cold-roll/sheets-plates>

- **OnlineMetals** – Mild steel sheet/plate (custom cuts)  
<https://www.onlinemetals.com/en/buy/steel-sheet-plate>
- **Metals Depot** – Mild steel sheet/plate in small quantities  
<https://www.metalsdepot.com/steel-products/steel-sheet-plate>

### Aluminum 6061 Sheet

- **Midwest Steel & Aluminum** – 6061 sheet; stock-size pricing is often the best deal  
<https://www.midweststeelsupply.com/store/6061aluminumsheet>
- **OnlineMetals** – 6061 sheet/plate (custom cuts)  
<https://www.onlinemetals.com/en/buy/aluminum-sheet-plate>
- **TW Metals** – 6061 sheet stock (bulk/stock-size sourcing)  
<https://www.twmetals.com/products/coil-and-sheet/aluminum-alloys-sheet/6061.html>

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### Plastics – Kydex (Thermoplastic Sheet)

- **U.S. Plastic Corp** – KYDEX® T sheet (good pricing on common sizes)  
<https://www.usplastic.com/catalog/item.aspx?itemid=125200>
- **KnifeKits** – KYDEX® sheet (.125" and other thicknesses; multiple colors)  
<https://www.knifekits.com/vcom/kydex-sheet-black-125-2ft-4ft-p-6429.html>
- **HolsterSmith** – KYDEX® sheet in multiple gauges (0.060"–0.125")  
[https://www.holstersmith.com/vcom/kydex-sheet-colors-black-c-546\\_54\\_551\\_596.html?view=all](https://www.holstersmith.com/vcom/kydex-sheet-colors-black-c-546_54_551_596.html?view=all)
- **Maritime Knife Supply** – 12"×24" KYDEX® sheets (multiple thickness options)  
<https://maritimeknifesupply.com/products/kydex>

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### Rivets & Fasteners (Armor)

#### Solid Rivets (Steel / Stainless)

- **McMaster-Carr** – Reliable, fast shipping (shop staple)

<https://www.mcmaster.com/rivets/>

- **Hanson Rivet & Supply** – Huge selection of solid rivets and odd sizes  
<https://www.hansonrivet.com/rivets/solid-rivets/commercial-solid-rivets/>
- **Jay-Cee Sales (RivetsOnline)** – Solid rivets in steel, stainless, brass, aluminum; quotes & bulk  
<https://www.rivetsonline.com/solid-rivets/solid-steel-rivets>
- **Aspen Fasteners** – Solid rivets (flat head / round head) in stainless and steel  
<https://www.aspenfasteners.com/1-8-x-3-8-solid-rivets-flat-head-aisi-304-stainless-steel-18-8/>

#### Leather Rivets / Caps (if you need them)

- **BuckleGuy** – Leather hardware, tubular rivets, cap rivets, setters  
<https://www.buckleGuy.com/rivets/>

#### Roofing Nails (cheap rivet substitute for splints)

- **Home Depot** – Roofing nails (steel or aluminum)  
<https://www.homedepot.com/b/Building-Materials-Roofing-Supplies-Roofing-Nails/N-5yc1vZc8l3>

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*This list will be updated as vendors change or better sources are found.*