



# IDENTITY LEATHER CRAFT

*for people who make, mend or adapt things out of leather*

## Leather and Leathercraft Glossary

### The definition of leather

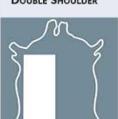
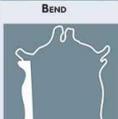
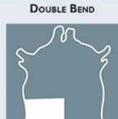
Animal (animal, reptile, bird or fish) hides or skin that have been tanned or otherwise processed to make them durable and non-perishable. The process involves a transformation of the intact complex of collagen fibre structures. If the leather has a surface coating, the mean thickness of this surface layer, however applied, has to be 0.15mm or less. It can be produced at manufacturing scales ranging from artisan to modern industrial scale.

Leather is used to make a variety of articles, including footwear, automobile seats, clothing, bags, book bindings, fashion accessories, and furniture. It is produced in a wide variety of types and styles and decorated by a wide range of techniques. The earliest record of leather being used dates back to 5000 BC.

- Skin** Whole skin of a small animal (sheep, hair-sheep, pig or goat), usually thinner substances/thickness and smaller overall sizes, up to around 10 sq ft.
- Hide** Whole skin of a larger animal (cow, buffalo, horse, yak), in a choice of thicknesses where the hide is split (stratification) after tanning. Whole hides tend to be used for upholstery to give the largest possible cutting yield, of up to approximately 50-60sq ft. Otherwise the hide is cut and sold in shoulder, sides, belly or butts. (See separate chart)



Approximate size guides for The Identity Store leather skins and hides.

Leather Hide Parts:		Weight/Thickness Conversion			
		Ounces	Irons	Inches	Millimeters
		1 oz.	0.75	1/64	0.4 mm
		2 oz.	1.50	1/32	0.8 mm
		3 oz.	2.25	3/64	1.2 mm
		4 oz.	3.00	1/16	1.6 mm
		5 oz.	3.75	5/64	2.0 mm
		6 oz.	4.50	3/32	2.4 mm
		7 oz.	5.25	7/64	2.8 mm
		8 oz.	6.00	1/8	3.2 mm
		9 oz.	6.75	9/64	3.6 mm
		10 oz.	7.50	5/32	4.0 mm
		11 oz.	8.25	11/64	4.4 mm
		12 oz.	9.00	3/16	4.8 mm
		13 oz.	9.75	13/64	5.2 mm
		14 oz.	10.50	7/32	5.6 mm
		15 oz.	11.25	15/64	6.0 mm
		16 oz.	12.00	1/4	6.4 mm

## Grain



### Grain

Leather has two sides: the surface (topside) is known as the 'grain' side, and the rough underside is called the 'flesh' side. Leather is firmer in the centre of the hide and loose towards the edges, so choose the most appropriate area before you cut your design



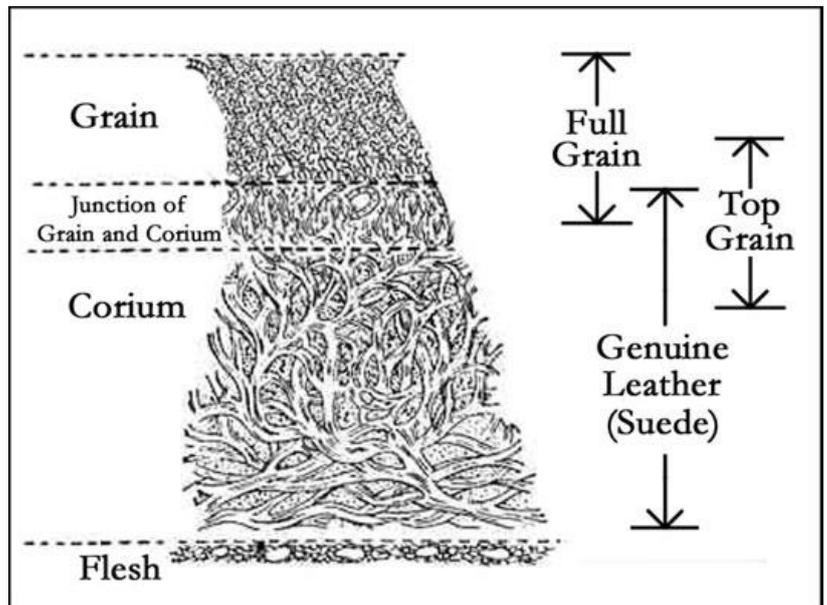
### Full Grain

Only full grain vegetable tanned leather will absorb water and so tool correctly. Leather carving and tooling should ideally be done on full grain leather.



### Top Grain

Top grain leather has often been sanded to remove scars and blemishes and is then sprayed or pasted to even up the surface. Top Grain IS NOT the same as "Full Grain" leather.



## Thicknesses

In an effort to make leather a uniform thickness, hides are run through a splitting machine called a skiver. However, each animal is different and there is always variations in thickness even within a hide. Below, we have broken-down the different thicknesses of leather and what they are generally used for. You can use this information to help guide you to the right leather.



Source: [District Leathers](http://DistrictLeathers.com)



Aniline leather

This term refers to a full grain leather that has been dyed exclusively with soluble dyes. The dye colours the leather without producing the uniform surface of a topcoat paint or insoluble pigmented sealant. The resulting product retains the hide's natural surface.

Usually the grain surface is soft and light to touch with a matt look and no apparent finish or glaze.



Alum Tan

Tawing is a method of tanning with aluminium salts (alum). It is a naturally occurring double salt, but which is also artificially produced. ...

After tanning with alum, the dried leather is stiff and firm. To make it softer, the leather is then tumbled and greased. Typically it is white in appearance and was used in the Napoleonic era (and for re-enactment now) as well as the modern day for items such as gymnastic equipment.



Brain tanned (Buckskin)

Brain tanned leathers are made by a labour-intensive hand process which uses emulsified oils, often those of animal brains. They are known for their exceptional softness. There are many examples of this method in Native American, Inuit and other indigenous cultures.

The addition of smoke tanning can then give water-proof properties.



Bridle Leather

Bridle Leather refers to the way that a piece of leather (cow hide) is finished at the tannery. Bridle leather has both the Flesh and Grain side of the leather stuffed with greases and finished with wax. It often comes with cloudy waxy layer that can be buffed up.



Calfskin

Made from the skin of a calf and usually of very high quality, soft to the touch, providing a well-seasoned feeling even when new. The grain pattern is dense enough to give a very smooth appearance. Luxury high end calfskins are usually vegetable tanned or combination tanned.



Chamois

Usually the skin of sheep or goat that has been split (to give a suede effect) and tanned with oils (usually fish oil) by a process of oxidation. This gives a very soft feel leather that is very absorbent and has almost no abrasive properties making it ideal for cleaning and polishing fine surfaces such as glass or automobiles.



Chrome tanned or Mineral Tanned

A process invented in 1858 and using soluble chromium salts in the tanning process which acts much faster than vegetable tanning to convert the collagen fibres into leather. Today it refers to leathers that are tanned with solutions of chemicals, minerals, acids and salts - it is usually more supple and pliable than vegetable-tanned leather and does not discolour or lose shape as drastically in water as vegetable-tanned leathers. It is used for approximately 85% of the worlds leather goods.

It can be made to embody specific properties such as heat, abrasion or water resistance.



Cordovan (Shell)

Shell cordovan (or cordovan) is a type of leather commonly used in high-end shoemaking. It is an equine leather made from the fibrous flat connective tissue (or shell) beneath the hide on the rump of the horse and is traditionally vegetable tanned. Unusually it is normally made to used with the flesh side up and finished against the 'shell'.



**Corrected /Embossed Grain**

Corrected grain leather refers to hides that have been buffed or sanded on the grain surface in order to remove marks or imperfections. It is created by splitting a piece or pieces of full grain leather, removing the imperfections and using embossing plates to add grain patterns on to it.



**Crust Leather**

This term refers to leathers that have gone part way through the tanning process, that is hides and skins that have been partially tanned but have not been dyed and finished, most commonly 'wet blue leather' but it can refer to vegetable tanned leather also.



**Crocking**

Removing the 'crock' refers to the process rubbing off excess pigment and colouring off a newly dyed hide.



**Deerskin**

Deerskin is a tough leather, possibly due to the animal's adaptations to its thorny and thicket-filled habitats. Deerskin has been used by many societies, including indigenous Americans. Most modern deerskin is no longer procured from the wild, with deer farms breeding the animals specifically for the purpose of their skins. Often the leather would be brain-tanned using the oily brain matter of the animal which gave a very soft, water resistant leather.



**Gloving Leather**

Hair sheep skins which give a very fine, incredibly soft and tactile leather, typically aniline (see entry for aniline definition.) The soft nature and gentle stretch made it ideal for traditional glove making.



**Horween Leather**

Horween Leather Company is an American company specializing in the manufacturing and refining of leather and related products. It is one of the oldest continuously running tanneries in the United States of America. Since its founding in the early 20th century it has been located in Chicago and is considered a luxury leather.



**Hair-on**

Refers to leather that has been tanned to leave the hair or fur in place, typically cowhides for rugs and interiors. It can also refer to reindeer, rabbit and other hair as opposed to wool animal skins.



**Kangaroo**

This leather has a very high strength over a thinner thickness due to the particular muscle and collagen fibre density. It is used for high end sports footwear such as football and cycling shoes (mineral tanned), and also used for falconry (vegetable tanned).



**Kip (Kipside)**

The skin of a large calf, in between a calf and mature cow, usually 9 - 17 sq.ft. It tends to have a tight smooth grain and is often 1.2mm or less in thickness making it useful so high end small leather goods such as wallets.



**Latigo**

Latigo leather is cowhide leather that is combination tanned. First it is chrome tanned, then it is vegetable tanned. Before modern combination tanning, latigo had been combination tanned with alum and gambier. Latigo is usually infused with oils and waxes, making it ideal for outdoor goods and saddlery.



**Morocco**

Traditionally goat skin that has been tanned exclusively with sumac, which gives it a distinctive brown colour, though over time it has come to refer to goat skins of any tannage.



**Nubuck**

Nubuck is top-grain cattle leather that has been sanded or buffed (snuffed) on the grain side to give a slight fine nap of short fibres. This gives a soft, tactile, velvet-like surface. It has a shorter pile than suede and a matt look.



**Oil tanned**

This leather is tanned using oils to create a very soft pliable finish that often has a characteristic patina. This type of tannage makes it good for outdoor uses.



**Nappa**

Usually kid, sheep, hair-sheep or lamb skins given a special soft finish on the full grain side. Typically used for garment making and accessories and the type of finish means it can be made in a wide variety of colours.



**Patent (Japanned)**

Leather that has been treated on the top grain, traditionally with successive coats of pigment and linseed oil, oven dried to harden to form a high gloss smooth waterproof finish.



**Patina**

The aura or lustre that develops in leather as it ages with use, picking up natural oils from handling and colouring from exposure to daylight.



**Pigmented leather**

Pigmented (protected) leather is the most durable but is less natural in appearance. It has a polymer coating of fine pigmented particles applied to it, over a thick opaque colour.



**Pull-up finish**

When treated with a combination of oils, waxes and dyes the leather can become lighter in areas as it is pulled and stretched giving it a rich tone of layers and increased patina with use. It can be considered a mark of high quality.



**Rawhide**

Rawhide is made by scraping the skin thin, soaking it in lime, and then stretching it while it dries. Rawhide is not technically "leather" but is usually classified in with the other forms. Rawhide feels stiffer and more brittle. It's primarily found in uses such as where it does not need to flex significantly. It is also cut up into cords for use in lacing or stitching. Re-wetting the hide will make it soft and mouldable, re-drying will shrink and harden making it good for drumskins, tool wraps, and knife sheaths inners.



**Retan (Combination Tanning)**

Depending on the characteristics required leather can be re-tanned using different tannins from those used in the primary stage. This process is called combination tanning or double tanning.

Re-tanning also has a fading effect which can be enhanced by lightening tannins. This is important for light aniline leather without pigmentation. After chrome tanning, leather is greenish-bluish. The leather dye has no opacity. White leather would then be always greenish-bluish. By re-tanning, the leather can be bleached to get better results. In the process

of re-tanning, pigments can be added into the drum, which equalises the surface colouration.



**Semi-Aniline**

Semi-aniline leather is leather which is only slightly pigmented (the addition of colour). The natural leather grain and the hair pores are not allowed to be concealed by the pigmentation. These can be only be slightly protected and must remain visible.



**Splits**

Leather made from the lower layer of a hide that have been split (shaved) away from the upper or grain layer, generally not as durable as the collagen fibres become less dense the further away from the upper surface you go. Splits are either laminated with a top finish or evened out and kept as suede.



**Skiver**

Refers to the top grain side of sheep or goat that has been split before tanning to give a very thin and even skin – typically used for desk surfaces and book binding.



**Snuffed (Buffed)**

Usually done through the process of abrasion, if the leather is snuffed it means that it has had its top surface removed and levelled out leaving a lightly smooth pile rather than a flat smoothed grain, the process used to create leathers such as Nubuck.



**Suede**

Leather that has been sanded on the top grain to provide a napped, velvet soft effect, usually from pig, sheep or calf. Sometimes is made from split hides. (See entry for split leather).



**Veg-tan**

Hides and skins that are tanned using a traditional process which involves soaking over several months in organic materials such as oak and mimosa barks which allow the fibres to be tanned by the naturally occurring tannins. This gives the leather properties that allow it to be wet shaped and moulded and also carved, tooled and embossed using cold water methods.

It is usually from bovine animals (eg: cow and buffalo) and comes in a natural state that will take dyes and colours. It is also sold as dyed-through in different colours, usually black, brown or tan.



**Vellum**

Calf skin (un-tanned) that has been limed, dried and prepared, typically to be used as pages to written on. It has a very smooth surface making it an ideal medium for detailed botanical drawings. It is generally considered to be of a higher quality than parchment. Used in the UK to write the parliament decrees and laws.



**(Parchment)**

Most commonly sheepskin (un-tanned) that has been limed, dried and prepared. Again, it has a smooth surface that was made for use a writing material.



**Upholstery Leather**

Full size cowhide leathers made to be around 1-1.5mm, comes in a variety of colours and usually pre-finished to a high abrasion specification. The very large size of the hide makes it most commonly used for upholstery though it is also suitable for bags, motor-cycle leathers, chaps and outerwear.



**Wet-blue leather**

Wet blue is the process of converting raw hides and skins to tanned leather using chromium salts. Wet Blue refers to moist chrome-tanned leather. In this phase, the leather is tanned, but neither dried, dyed nor finished. The bluish colouring is produced by the chrome tanning agent (Chromium (III) oxide). Dried wet blue is called crust leather.



**Wool-on**

Sheep skins that have been tanned to leave the wool fibres intact.



**WR100 (Stay-soft)**

A specially tanning process invented by Dr Peter Laight at the Pittards Tannery this leather has the unique property of staying soft after getting wet, and has water resistance. It is used for sports gloves, footwear and outdoor wear.

### Tool/Techniques:



**Awl**

Round and diamond tip stitching awls are the most commonly used tool - a stitching awl has a diamond shaped blade to give a opening for stitching that then closes tight around the stitch. A round end awl is used for marking up the leather and for making simpler stitching holes or opening up holes while stitching, sometimes also called a scratch awl.



**Beveler (Edge)**

This tool thinly shaves off the corners of the edge of the leather to allow the edge to round over when slicked. Used as part of the edge finishing process, most typically on vegetable tanned leather.



**Carving / Tooling**

The art of stamping and cutting into dampened vegetable full grain leather, (usually cowhide shoulder) to create surface pattern designs that have texture and a dimensional effect. The most commonly seen patterns are Sheridan Style, with South West American origins, using floral and leaf motifs.



**Casing**

This term refers to the method of raising the humidity and water content of the leather to prepare it for tooling or wet forming. The simplest method is to dampen the leather, then put into a plastic bag and left for half an hour or so to allow the water content to evenly disperse through the leather. For dyed leather or bridle leather a similar effect can be achieved by leaving the leather overnight in a box of damp sawdust.



Cuir-bouli

Boiled leather, often referred to by its French translation, cuir bouilli, was often used as material for various uses common in the Middle Ages and Early Modern Period. Typically used for armour to make the leather very hard. It is used as a technique today to shrink and harden leather when those properties are desired. The leather ideally needs to be vegetable tanned for best results.



Eyelets/Grommets

Used to make reinforced holes in the leather for lacing, falconry and more. Eyelets typically are a one-part metal ring that 'peens' back to hold in place. Grommets are two parts, the eyelet and a washer which stops the fabric or leather from tearing or stretching. You will need the correct size setting tool for each size.



Grooving (Groover)

other names *channelling*, *gouging* and *racing* - a groove or channel is set into the leather for the stitches to go into. Traditional used on saddles to avoid the stitches wearing. Can also be done on the reverse side to make a clean fold.



Glover's Needle

Diamond tipped extremely sharp needle for hand sewing fine leathers such as lambskin or sheepskin nappa, hair-sheep (gloving leather) or pig suedes. Also useful for sewing hair-on leather.



Harness Needle

Blunt ended needle for hand sewing leather. Has a small narrow eye allowing the needle to remain a constant diameter across the length making it easier to pass through the leather for saddle stitch.



Maul

For longevity of tools and working with leather it is advised to work with a maul, a poly head or wooden mallet. The dense heavy head of the maul allows for a targeted hitting power, good for using with drive punches and stamping tools. It also reduces the vibrations up through the arm.



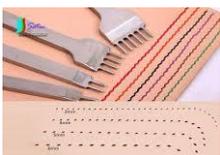
Moulding

Shaping and manipulating dampened vegetable tanned leather, commonly used to make cases, masks, pouches. The leather hardens as it dries. Different degrees of hardness can be achieved by varying the temperature of the water used.



Paring (skiving)

When joining seams or folding back strap ends it is often advisable to take away some of the thickness to avoid bulkiness. Paring or shaving creates a sloping edge. Can be done with a flat angled knife or a safety beveller, like peeling a potato. Typically used for setting buckles on belts and straps, for thinning edges for turning on wallets and book binding.



Pricking Iron/Stitching Chisel

A pricking iron is designed to leave evenly spaced prick marks ready for making stitching holes with an awl. A stitching chisel will make evenly spaced holes in one go. Note the terms have often become inter-changeable over time and often a pricking iron will also make holes.



Rivets (Rivet and burr)

These are used either in addition to, or instead of stitching. Rivets are a very strong and effective way of holding two or more pieces of leather together. They come in a variety of sizes, types and finishes, and will require a setting tool. The term 'burr' refers to the type of copper or brass rivet that has a washer or burr to fix.



Saddle Stitch

A method of hand stitching leather to give an even stitch when viewed from front and back. One length of thread is used with a needle on either end. Both needles are passed through the hole from opposite sides and pulled tight giving a very strong neat stitch.



Slicking

Used with vegetable tanned leathers only. Using a wood or bone folder onto the edge of leather and rubbing to create a smooth polished (burnish) edge which seals the leather fibres. This should be done on dampened leather or with a slicking agent such as Gum Tragacanth. *Note: a wood slicker can also be used to burnish waxes on a mineral tanned leather edge after edge treatment.*

**Sources:** Dr Peter Laight, Ph.D Leather Science, and leather specialist and consultant

<https://www.leather-dictionary.com/index.php/> , <https://www.pittards.com/about/performance-leather/performance-leathers/wr100-and-wr100x/> , [www.mooreandgiles.com](http://www.mooreandgiles.com) , [www.wikipedia.com](http://www.wikipedia.com) , <https://www.equusleather.co.uk/what-is-bridle-leather> , <https://www.worldofleathers.com/glossary-of-leather-terms/> , <https://makezine.com/2016/12/01/learn-the-lingo-fine-leatherworking/> , <http://www.all-about-leather.co.uk/what-is-leather/leather-types.htm> ,

Leather Goods Manufacture – G C Moseley (Published under the auspices of the National Leather Goods and Saddlery Manufacturers' Association)

**Useful Links/Further reading:**

<https://www.sciencedaily.com/releases/2010/06/100609201426.htm> The world's oldest shoe

<https://bestleather.org/types-of-leather/chrome/>

<https://vegleatherhub.com/>

<https://leatheruk.org/>

<https://www.leathernaturally.org/>