

LEATHER 101

— WITH THE LEATHER GUY



SEE THE DIFFERENCE

NEW TO LEATHER WORKING?

We all start somewhere...
Let us help you on your way!

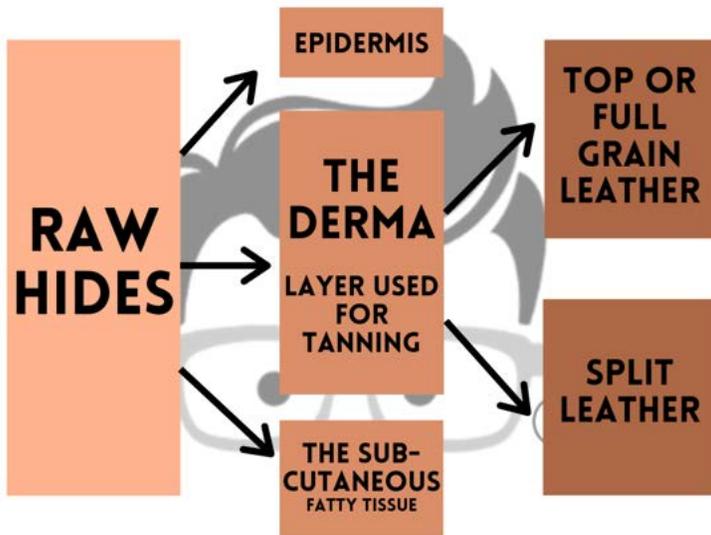


MANY PEOPLE STRUGGLE TO SHOP FOR LEATHER WITH ALL THE NEW TERMS, TOOLS, AND MEASUREMENTS THAT COME ALONG WITH THEIR NEW HOBBY.

WE WANT TO WALK YOU THROUGH SOME OF THE BASICS WHEN IT COMES TO LEATHER "KNOW-HOW", SO YOU CAN BE ON YOUR WAY FROM NOVICE TO PRO IN NO TIME FLAT!

We'll cover tannage, parts of the hide, thickness, temper, usage, and measurements.,

SPLITTING LEATHER IN THE TANNING PROCESS



Leather is created by treating hides and skins with a variety of chemicals that preserves the hide so that it can be used for a number of different products.

FYI: THE TERM HIDE REFERS TO THE SKIN OF A LARGE ANIMAL (LIKE COWHIDE) WHERE SKIN REFERS TO SMALLER ANIMALS (LIKE SHEEPSKIN).

Leather is made from the Derma, or Dermis, of the animal's hide. This layer lies under the epidermis but above the subcutaneous fat layer. Both the top and bottom layers are removed before the tanning process begins.

Tanning happens when chemicals dissolve the fats, remove the moisture and strengthen the collagen bonds in the hide. Removing the liquids from the hide stops the decaying process and creates a usable material.

The tanned derma is then split into top-grain leather and split leather. Often this process is done to get the top grain hide to a specific thickness. However, the split hide is still usable and is what often becomes suede leather. It can also be embossed with a grain or pattern. You will see these leathers listed as split hides.

HOW LEATHER IS MADE

What part of the hide becomes leather?

What's the difference between top grain and full grain?

TOP GRAIN VS FULL GRAIN

You may have come across a lot of arguments online about which leather is better, Top or Full grain. Truthfully, they can be exactly the same thing.

Top grain is simply the top layer of the tanned leather. After you remove the split, you are left with the top. This will have the natural grain, as well as scars and other natural defects. Top grain is the strongest part of the hide, and thus very desirable.

Full-grain means that the grain of the leather has not been altered in any way. If you have a top grain leather that has not been embossed or buffed, you have leather that is both top and full-grained.

If the grain has been altered or embossed, you will see it listed as a corrected grain.

THE TYPES OF TANNAGE

Most modern leather is tanned in one of the following ways.

Vegetable Tanned- This tanning process is ancient. There are records of it in scrolls from ancient Egypt.

This is a long tanning process that can take several weeks to months. This is why you will see that the cost tends to be more than other leathers. The leather produced tends to be stiff, but flexible. While it can come dyed, you will typically see it in a natural, buff color. It is most often used for tooling, molding, and dyeing.

Chrome Tanned- Created in 1858, this process became popular due to the quick turnaround. An entire shipment of hides can be tanned, dyed, and finished in as little as a day. That speed is what led to this being the most widely used tannage today.

This quick process typically produces soft and pliable leather in a wide variety of vibrant colors, perfect for clothing, handbags, and more.

Oil-Tanned- It starts out as chrome tanned but then goes through a process where the hide is packed with oil and wax which gives it its distinctive hand feel. The process makes the leather more supple than the chrome tan it started out as.

Latigo- This tannage is what is known as re-tanned or combination tanning. It is first chrome tanned, then tanned again using the veg tanning process. This creates leather that is more pliable like chrome tanned but with some of the rigidity of a veg tan.



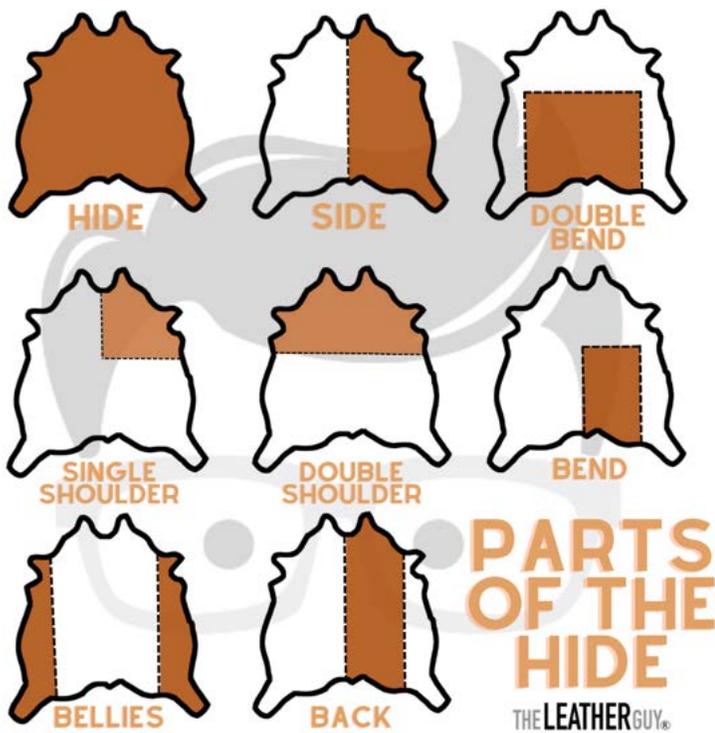
Vegetable Tanned



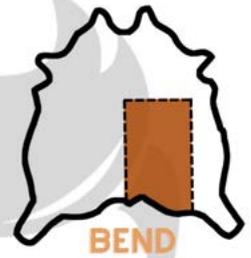
Chrome Tanned



Oil Tanned



THE BEND (OR BUTT) IS VERY GOOD QUALITY LEATHER.



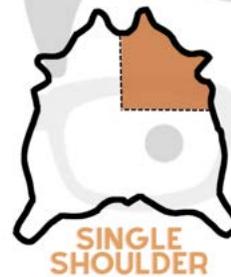
THE THICKEST AND MOST DURABLE PART OF THE HIDE. MINIMUM STRETCH.



SHOULDERS ARE GOOD QUALITY LEATHER.

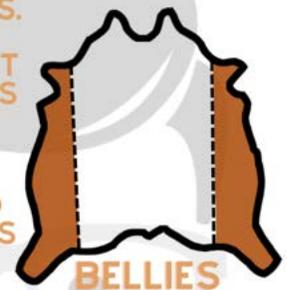


YOU MAY FIND MORE NATURALLY OCCURRING BLEMISHES ON THEM, SUCH AS FAT WRINKLES OR SCRATCHES.



THE BELLY CONSISTS OF LOOSER AND SOFTER FIBERS. IT CAN HAVE INCONSISTENT THICKNESS AS WELL.

SOMETIMES CONSIDERED WASTE, IT HAS MANY USES INCLUDING COLLARS, SMALL LEATHER GOODS, OR PRACTICE PIECES.



THE CUTS OF LEATHER.

You may find some leathers listed by the part of the hide they are cut from.

Some parts of the hide are of better quality than the others

Take bellies, for example. Just like us, when a cow overindulges in food or births a baby, its stomach stretches and retracts. This means that when their skin is tanned, the belly leather has a looser fiber and larger grain due to how often that skin has been stretched and healed.

It doesn't make it totally useless, but it may not be the right leather for some specific projects where the leather needs to have minimal stretch. Keep this in mind when selecting the leather for your next project!



SOFT TEMPER



SEMI-SOFT TEMPER



SEMI-STIFF TEMPER



STIFF/FIRM TEMPER

LEATHER TEMPER RATINGS

Is your leather soft or firm?

The pliability and softness of leather is referred to as the "Temper".

The temper of leather is not dictated by the thickness of leather, but rather how it is tanned. You will need to check the leather descriptions to ensure you are getting the right thickness and temper when buying leather online.

Temper is usually rated with the four following terms:

Soft: Leather that is extremely flexible and pliable. It does not tend to hold its shape. Often used on clothing or upholstery.

Semi-Soft: This type of leather is soft and flexible. Typical of sneakers or handbags.

Semi-Stiff: Leather that is slightly stiff and less rigid. Tends to hold its shape. Often found on boots or motorcycle bags.

Stiff: This type of leather has a hard and rigid feel. Stiff leather is not easily bent or folded. Think heavy-duty belts, straps, and so on. It can be used for wet forming.

LEATHER WEIGHT & THICKNESS

Leather thickness is not measured in the same way as fabrics but has its own unique system.

OUNCE CONVERSION GUIDE

A REFERENCE CHART FOR LEATHER THICKNESS

OUNCE	MM	INCH	IRONS
1	0.40	1/64"	0.75
2	0.80	1/32"	1.5
3	1.20	3/64"	2.25
4	1.60	1/16"	3.0
5	2.00	5/64"	3.75
6	2.80	3/32"	4.5
7	3.20	7/64"	5.25
8	3.60	1/8"	6.0
9	4.00	9/64"	6.75
10	4.40	5/32"	7.5

Leather thickness is traditionally measured in ounces. You will read or hear people refer to the weight of the leather when discussing the thickness.

One ounce is equal to .4 mm or 1/64th of an inch.

You might also encounter the term "Irons". This is an old school measurement term for leather thickness that is mostly used by shoemakers and cobblers today. Outside of those realms, you likely won't see it used..

Thickness is measured with a pressure gauge specific to the leather industry.

You will often see thickness listed in ranges. For example, 4oz-5oz. As leather is a natural material, it can have variations throughout the hide. These variations can also occur from the splitting process.

Regardless, there will usually be some variation in your hide's thickness unless you manually skive it down.

Leather Thickness Hack

by: The Leather Guy



USE THIS CLEVER HACK TO GET A FEEL FOR THE LEATHER THICKNESS WHILE SHOPPING ONLINE.

LEATHER

THICKNESS USAGE GUIDE



1-2 OZ

Lining Leather
Shoe Uppers
Garments
Pouches
Watch Bands
Inlays
Light Handbags
Furniture Upholstery

3-5 OZ

Wallets
Clutches/Handbags
Aprons
Knife Sheaths
Jewelry/Watch Bands
Shoe/Boot Uppers
Molding
Furniture Upholstery

6-7 OZ

Keychains
Tooled Leather Goods
Boot Uppers
Camera Straps
Guitar Straps
Pet Collars
Sheaths
Thin Armor

8-9 OZ

Belts
Holsters
Dog Collars
Guitar Straps
Bridles
Saddle Bags
Sword Scabbards
Light Armor

10+ OZ

Tool Belts
Shoe Soles
Dog Collars
Guitar Straps
Bridles
Heavy Armor
Holsters
Saddles

Please bear in mind, these are suggestions made by many leatherworkers through the years. Should you prefer a thicker or thinner weight for any of these projects, give it a try!

STANDARD LEATHER USES

Different projects need different thicknesses to look and function their best.

While leather is a very durable material, regardless of thickness, thin leather just won't do the same job as very thick leather.

Some projects are going to need leather that is very thick and capable of taking a beating, where others are going to need a thinner and more pliable leather to function on the wearer.

This short guide will help you determine the leather to be used for some of the most frequently made projects.

You can always experiment by making a project with thinner or thicker leather, but this is a great jumping-off point!

YARDAGE ESTIMATOR CHART

HOW MUCH LEATHER DO YOU NEED?

YARD	SQUARE FT	YARD	SQUARE FT
1	18	11	252
2	36	12	270
3	54	13	288
4	72	14	306
5	90	15	324
6	108	16	342
7	126	17	360
8	144	18	378
9	216	19	396
10	234	20	414

FYI: FOR EVERY YARD OF FABRIC YOU NEED FOR A PROJECT, YOU WILL NEED ROUGHLY 18 SQUARE FEET OF LEATHER TO MATCH IT. HOWEVER, IT IS BEST TO WORK WITH THE EXACT DIMENSIONS OF YOUR PROJECT AS OPPOSED TO YARDS. THIS WILL LEAD TO LESS WASTE.

Unlike fabric, leather is not sold by the yard. As a natural material, it does not come with straight edges and can only be as large as the animal it came from. Because of this, the area of the leather hide is measured and sold by the square foot.

Tanneries have special lasers that measure the entirety of the hide, including the rough edges and legs. They print this size on the back of the hides.

To figure out the SF of a hide you have on hand, you need to measure the length and the width. Be sure to add in the rough edges. Then use this equation:

L (in inches) X Width (in inches) = A

A divided by 144= SF

Example: 64 X 42 = 2688

2688 / 144 = 18.7 SF

Should you come across leather being sold by the yard, be sure to double-check as it is most likely faux leather or pleather.

HOW IS LEATHER MEASURED

How much leather are you getting?



THE PIECES OUTSIDE OF THE SQUARE SHOULD BE FACTORED INTO THE HOLES INSIDE THE SQUARE, GIVING YOU A SQUARE MEASUREMENT.



**THE SECRET TO
GETTING AHEAD IS
GETTING STARTED.**

MARK TWAIN