

# Sword & Smithing Glossary

## Glossary

There are many technical terms associated with swords and smithing. We have compiled this glossary to help with some of the more unfamiliar words. Let us know if you have questions about a term you don't see listed here - we'll do our best to answer it!

**Alpha Iron** - Body-centered iron, generally speaking below 1333° F.

**Annealing** - Heating to and holding at a suitable temperature followed by cooling at a suitable rate to produce desired changes in a ferrous alloy's properties. Annealing can produce one or more of the following effects: remove stresses, "soften" by altering mechanical properties, refine the grain structure, or produce definite microstructure.

**Austenite** - A solution of carbon or iron carbide in gamma iron. Its carbon content at maximum solubility (2065° F) can vary from 0 to 1.7 percent. This solubility decreases with temperature to 0.85 percent at 1333° F.

**Backsword** - A sword with a straight, single-edged blade; frequently has a closed hilt.

**Bastard Sword** - A sword longer than a broadsword, but smaller and lighter than a two-handed sword. Can be used with one hand but has a grip long enough to be wielded using both hands.

**Broadsword** - A common weapon that features a straight, double-edged blade.

**Carburizing** - A process in which carbon is introduced into a solid iron-base alloy by heating above the transformation temperature range while in contact with a carbonaceous material which may be a solid, liquid or gas. Carburizing is frequently followed by quenching to harden steel.

**Cementite** - A hard, brittle, crystalline compound, the composition of which is represented by the formula Fe<sub>3</sub>C.

**Cinqueda** - A straight, double-edged blade that is very wide at the hilt.

**Claymore** - Loosely, a Scottish broadsword with a basket hilt. Also refers to a two-handed sword with a double-edged blade, used by Scottish Highlanders in the 16th century.

**Dagger** - A small, double-edged blade. See also Knife.

**Dao** - A single-edged sword with a straight, heavy blade.

**Decarburization** - The loss of carbon from the surface of an iron-base alloy as the result of heating in a medium which reacts with the carbon.

**Falchion** - A heavy, single-edged blade that is curved along its cutting edge.

**Flex** - The measure in degrees of how far a blade can be bent and still return to true. This reflects a sword's toughness and ability to withstand repeated impacts during combat. A blade is flexed by holding the tip in a vice and then moving the tang or grip perpendicular to the plane of the blade.

**Fuchi** - The "collar" of the handle, adjacent to the tsuba, on a katana with traditional construction.

**Fuller** - A groove along that length of a blade used to reduce weight, improve balance and stiffen the blade.

**Gamma Iron** - Face-centered iron, generally speaking above 1333° F.

**Glaive** - A staff weapon with a long, single-edged knife-shaped blade.

**Habaki** - The blade collar on a Japanese sword.

**Hamon** - The temper line on a Japanese sword.

**Hand-and-a-Half Sword** - See Bastard Sword, above.

**Hilt** - The part of a sword or dagger that is comprised of the guard, the grip or handle, and the pommel.

**Kashiri** - The "pommel" on the handle of a Japanese blade with traditional construction.

**Katana** - A long, curved single-edged blade carried edge up thrust through the belt.

**Knife** - A small, single-edged blade. See also Dagger.

**Langets** - Small extensions of the guard that hold the sword secure in the scabbard.

**LOA** - Length over all.

**LOB** - Length of blade.

**Martensite** - A microconstituent in quenched steel characterized by an acicular, or needle-like, pattern. It has the maximum hardness of any of the decomposition products of austenite.

**Pearlite** - A constituent of steel, a decomposition product of austenite on slow cooling, containing about 0.85 percent carbon and consisting of alternate plates or laminations of alpha iron and cementite.

**POB** - Point of balance. The closer the POB is to the hilt, the lighter and more well-balanced a sword will feel in the hand.

**Pommel** - Located at the end of the sword grip, it counter-balances the blade and makes the sword easier to grip.

**Quillon** - The cross piece on a sword, also thought of as a guard.

**Rapier** - Long, relatively light blades designed primarily for thrusting and that employ a variety of hilts.

**Ricasso** - An unsharpened section of blade adjacent to the guard.

**Scabbard** - A wooden covering for the blade of a sword or dagger.

**Sheath** - A leather covering for the blade of a sword or dagger.

**Sorbite** - Best described as a late stage in the tempering of martensite, when the carbide particles have grown so that the structure has a distinctly granular appearance.

**Tang** - The tang connects the blade to the handle.

**Tempering** - Heating a quench hardened or normalized ferrous alloy to a temperature below the transformation temperature range to produce desired changes in properties.

**Troostite** - A formless micro-structural stage between martensite and sorbite.

Tsuba - The guard of a Japanese sword.

Tsuka - The hilt or handle of a Japanese sword.

Two-handed Sword - Very large swords that measure up to 6 feet long.

Wakazashi, Sashi-Zoe - The shorter of the two swords carried by the Japanese samurai.