

GOLD

EVERYTHING YOU NEED TO KNOW

A HANDBOOK



Anpé Atelier cph
JEWELLERY

ALL ABOUT GOLD

Earth produces a dazzling variety of over 4,000 naturally occurring minerals, however none are more prominent and useful than gold.

Throughout all of human history, almost every established culture has utilized gold to symbolize wealth, power, beauty, accomplishment and more. Today, gold is used within finance, electronics, medicine and of course, jewellery.

Around 78% of the gold consumed each year is used within the jewellery industry. Gold has special properties that make it an ideal material

to manufacture fine jewellery, such as a high luster, tarnish resistance, malleability which allows for precise shaping and a desirable yellow color.

Gold has been used to make special ornamental objects throughout history for years, but there are many misconceptions around this incredible mineral.

From 14K and 18K to white gold, rose gold, and yellow gold, this booklet will give you all the information you need to make the right decision for your next fine jewellery purchase.



YELLOW GOLD

18K GOLD

WHAT IS GOLD?

CHEMICAL SYMBOL: AU COLOR: DARK YELLOW

CHARACTERISTICS: DENSE, MALEABLE AND SOFT

Gold is a naturally occurring, chemical element with the symbol Au and ranks at the atomic number 79 on the periodic table. In its pure form, gold is bright, dense, malleable and soft, coming in a slightly reddish yellow color.

Gold is considered a **precious metal** and is a rare element. Without getting too into the science of it all, scientists theorize that all the gold on Earth came from the debris of dead stars. As the earth formed, heavy elements like gold sank towards the planet's core. Around 4 billion years ago, Earth was hit with asteroid impacts, stirring its deepest layers. This occurrence managed to force gold from the core to the mantle and crust, making it possible for gold to be discovered.

MINING:

Gold can be mined in a few different ways and depends on the specific gold deposit. **Lode deposits** are concentrations of gold found in solid rock. If this is located on or under the Earth's surface, miners will use an open-pit technique. This is where holes are drilled into the rock, filled with explosives and are set off to cause an explosion. The detonated pieces are then loaded on trucks to be taken away for extraction.

Placer deposits, however, are mined differently. These are accumulations of loose gold found in the sediments of a stream bed or beach. The gravel and sand are scooped up by miners and are mixed with a generous amount of water. As gold has a high density, it sinks to the bottom faster, so it is easy to find the precious nuggets.



YELLOW GOLD

18K GOLD

GOLD WITHIN THE JEWELLERY INDUSTRY

A common misconception is that fine jewellery is made from 100% gold, but this is not actually the case.

Pure gold is simply too soft to stand up to the stress that is inflicted upon many jewellery items. In order to harden it, it is **alloyed** with a mixture of various metals, like silver, zinc, copper, and palladium, among others.

In order for us to be able to tell

how much a piece of gold is alloyed, jewelers categorized gold into different categories, for example, 14K And 18K.

K stands for **karat**, not to be confused with carat, which is the weight measure used for gemstones. Karat refers to the percentage of gold present in a specific piece and one karat is 1/24 part of the purity of gold. Thus, a ring made from 24K gold means it's made from pure gold.



18K GOLD

ROSE GOLD

14K VS. 18K GOLD

18K and 14K are some of the most popular selections for gold, and are the top choice you will come across when purchasing fine jewelry. The difference between the two is simply the percentage of gold present within the piece. 14K gold is made from 58% gold and is alloyed with the remaining percentage, whereas 18K gold is 75% gold. Alloy metals include zinc, silver, copper and palladium, among others.

COLOR:

There is a slight and subtle difference between 14K and 18K in color. 18K gold will have a slightly more yellow color, while 14K will be a bit lighter in color. This is because pure gold comes in a dark yellow color that even has a slight reddish tone to it. Overall, the color difference is minimal.

DURABILITY:

As previously mentioned, pure gold is a soft and malleable element, but the malleability changes once alloy metals are added into the mix. 14K contains a higher alloy content which makes it more robust, hard and durable. It is also more resistant to tarnishing. 18K gold is still durable, however it is slightly less so than 14K.

VALUE:

As 18K gold contains more gold than 14K, it is always higher in price.



18K YELLOW GOLD

14K YELLOW GOLD

YELLOW, ROSE & WHITE GOLD

Yellow, white and **rose** gold are the three variations of colors you can get within fine jewellery.

As we know, pure gold starts out as a dark and intense yellow color... So how do we get yellow, rose and white gold?

Just like 14K and 18K gold, the way we are able to create different colors is through adding alloy metals to the gold mix.

YELLOW GOLD:

Yellow gold is formed by adding a mixture of metals such as zinc and copper and silver.

ROSE GOLD:

The predominant metal used within rose gold is copper. Copper gives the gold a beautiful and unique pink or red gold. Rose gold is actually the strongest out of the three gold colors, as copper is a sturdy metal. There is a higher amount of copper used in rose gold than in yellow gold.

WHITE GOLD:

White gold contains a mixture of gold and white metals such as palladium, and manganese.

Choosing what color gold you prefer is entirely up to you and should reflect your own style. There is no right or wrong answer here - just preference!



YELLOW GOLD



WHITE GOLD



ROSE GOLD

PLATINUM

Platinum is another highly valuable and desired material available on the fine jewellery market. This naturally occurring white metal is actually rarer than gold, and much heavier and harder. Due to its hardness, platinum can be used in a purer form than 14K and 18K gold and because of this it has a higher value in the marketplace.

Platinum comes exclusively in a white and silver color, meaning it is not possible to mix it with other metals to create a different hue.

It is known as a "noble metal," as it is extremely resistant to tarnishing and corrosion, whilst also being unreactive, meaning it will not oxidize and is unaffected by common acids. The vast majority of platinum comes from South Africa and Russia.

The fashioning of platinum into fine jewellery began in the 1900s and is still used today, however this is not the largest industry utilizing the precious metal. Its main applications range from catalytic converters, elec-

trical contacts, pace makers, drugs and magnets.

PLATINUM VS. GOLD:

Platinum contains 95-98% pure platinum, with minimal alloys mixed in, whereas white gold is alloyed with a varying percentage of metals, such as zinc and copper.

White gold is always given a rhodium plating, which gives an extra bright, silvery white color and protects the jewellery. Over time the rhodium will fade, however you can have it re-stored by a professional jeweler. Usually, platinum maintains its shine for a longer time than white gold.

Overall, platinum and white gold have a very similar appearance, but platinum will hold its shiny appearance for longer, where white gold will have to be re-plated throughout the years. This does not mean that one is strictly better than the other - there is just a bit more work to do when it comes to white gold.



PLATINUM



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