

# Clarity

A diamond's clarity is a reflection of how 'clean' it is. All diamonds have natural inclusions, some more than others. Inclusions within the diamond can absorb any light trying to pass through the stone. This may affect the sparkle of the diamond.

Inclusions can be found inside the diamond or can be identified as blemishes on the surface of the diamond. It is important to remember that inclusions occur as part of the formation process in natural diamonds and should not be seen as flaws, merely birthmarks.

All diamonds are unique and their clarity grade can play an essential part in identifying your diamond. Grading diamonds for clarity under 10x magnification is the standard across the diamond industry

This means that most inclusions are not visible to the naked eye.

## GIA CLARITY SCALE

FLAWLESS	INTERNALLY FLAWLESS	VVS <sub>1</sub>	VVS <sub>2</sub>	VS <sub>1</sub>	VS <sub>2</sub>	SI <sub>1</sub>	SI <sub>2</sub>	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>
		VERY VERY SLIGHTLY INCLUDED		VERY SLIGHTLY INCLUDED		SLIGHTLY INCLUDED		INCLUDED		

This forms the basis for what we grade as the clarity.

Considering the incredible process a diamond must go through, why are we so quick to judge a stone based on its clarity? And, if all diamonds have varying degrees of clarity, how is it that two diamonds with the same clarity grade be priced differently?

Understanding how a diamond is formed is the first step to appreciating the varying clarity grades awarded.

It takes millions of years for a diamond to form in Nature. During the growth process, Carbon is exposed to extreme heat and pressure, creating a diamond. Inclusions can become apparent either inside the diamond or on the surface as a result of the process.

Markings found inside the diamond are known as inclusions and those found on the surface of the diamond are known as blemishes. Both affect the clarity grade.

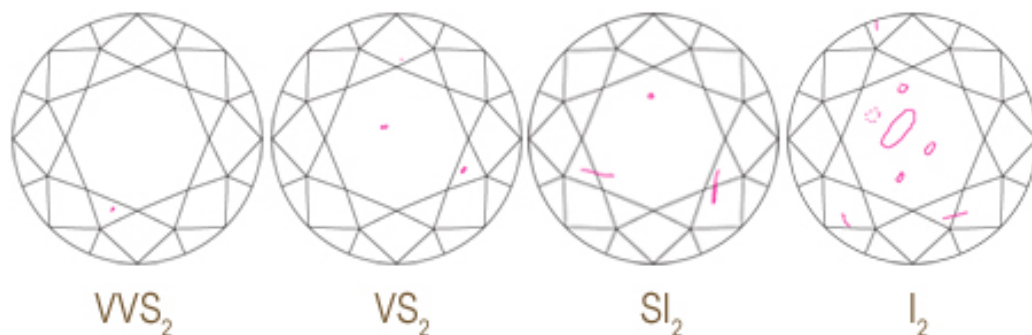
Finding a diamond with very few or no inclusions is very rare. The higher the clarity grade a diamond has been awarded, the higher the price.

Inclusions are assessed and marked for clarity based on a few factors.

The size and position of the inclusion plays a vital role in the clarity grade, as do the colour and nature of the inclusions along with the amount seen under 10x magnification.

As a general rule, diamonds ranging from Flawless to Si1 have inclusions that cannot be seen with the naked eye. A trained diamond grader may be able to see Si2 clarity inclusions and lower without the aid of magnification.

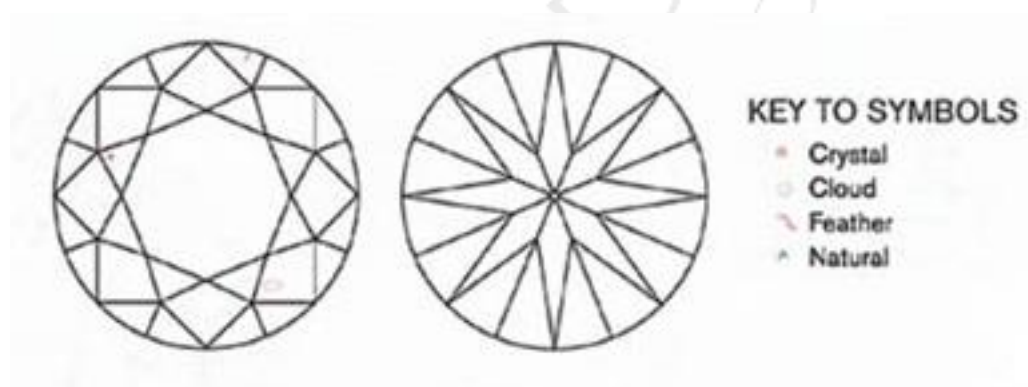
This chart gives an example of differing clarity grades.



There are many types of inclusions found in natural diamonds. Understanding what these inclusions are can help you appreciate why some diamonds are more expensive than others based on their clarity alone.

Most grading laboratories only indicate the primary inclusions which are considered to be the basis for the clarity grade and do not attempt to indicate all of the inclusions within the diamond.

An international diamond grading report such as those issued by GIA will assist you to identify the diamond clarity and its inclusions by providing a plot on the diamond report. This plot of inclusions assists in the identification of the diamond's characteristics.



Inclusions are many and varied, as a guide we have listed some of the more common clarity definitions.

 Laser Drill Hole	 Feather
 Crystal	 Chip
 Needle	 Cavity
 Pinpoint	 Bruise
 Cloud	 Etch Channel
 Twinning Wisp	 Indented Natural
 Knot	 Natural

**Diamond Crystals:** Diamond crystals are small diamonds that were trapped within a larger diamond crystal as it formed. Common types of diamond crystals are described as crystals, needles, clouds and pinpoints.

**Pinpoints:** a "pinpoint" is a tiny diamond crystal that looks like a pinpoint of light when viewed under higher magnification such as 20x and higher. Pinpoints are often not indicated on the plotting diagram on diamond grading reports because they can be difficult to locate, you might see the comment "pinpoints not shown" under the "comments" section of the diamond report. Pinpoints are indicated on diamond grading reports as small red dots that are about the size of a pinpoint.

**Clouds:** a "cloud" is a small group of pinpoint size diamond crystals. In most cases, a "cloud" will consist of three or more pinpoint size diamond crystals located in close proximity. Since smaller diamond crystals tend to be translucent, most clouds are not a reason for concern. If a single cloud appears to cover a third or more of a diamond it should be looked at very closely as it may affect the reflection of light through and from the diamond. Clouds are indicated on diamond grading reports as circles or formations comprised of small red dots or pinpoints.

**Needle:** a "needle" is simply a long, thin, diamond crystal. Instead of being circular in shape, it is long and thin.

**Knots:** a "knot" is an inclusion that extends to the surface of the diamond. It is a diamond crystal inclusion, which reaches the polished surface of a finished diamond. Under magnification you may be able to see the boundary between the knot and the diamond, which contains it. Knots sometimes resemble raised areas on a facet surface or group of facets. Differences in the polish quality may be visible on the surface of the knot and the facet where it is located.

**Feathers:** A "feather" is essentially a tiny fracture. Feathers are indicated on the plotting diagram on diamond grading reports as tiny red lines or hash marks. The presence of a few small feathers are not necessarily a bad thing, however feathers which are substantial or which break the edge of the diamond may present a future durability risk to the diamond.

### **Naturals & Indented Naturals**

**Natural:** A "natural" is part of the original "skin" of the diamond that was left on the diamond instead of being removed during the cutting and polishing process. The skin is part of the original diamond rough. Most often a natural is left on a diamond because removing it would reduce the weight of the finished diamond unnecessarily. Most naturals are located along the girdle edge of a diamond

**Indented Natural:** an "indented natural" is a natural, which is indented into the surface of the diamond. Indented naturals are often mistaken for chips. If an indented natural were actually a nick, pit, chip or cavity that it would be described as such on the key to symbols, as those are different types of clarity characteristics.

### **Grain Lines: Internal & Surface Graining**

**Internal Graining:** The comment on a lab report indicating "Internal Graining Not Shown" refers to a clarity characteristic, which is usually not visible without the use of extremely high magnification. Internal graining refers to part of the grain structure of the diamond, which was visible as a kind of transparent line. How visible the grain line is will have an effect upon the clarity grade of the diamond and if no other clarity characteristics are present then the graining may be the basis for the clarity grade of the diamond.

**Surface Graining:** Surface graining is a transparent line that is part of the grain of the diamond, which is mainly visible across a facet junction. It is essentially the same thing as Internal Graining but it resides on the surface of the diamond instead of being within the crystal structure of the stone. Most surface graining is so insignificant that it is rarely visible. In the case of a diamond graded as Internally Flawless in clarity, as a general rule it is likely that the diamond may have been graded as Flawless instead of Internally Flawless if the surface graining were not present.

**Twinning Wisps (Intergrowth):** Twinning Wisps are the formation of inclusions, which have twisted together within a twinning plane. The formation might include inclusions such as pinpoint size diamond crystals, fractures, crystals, feathers and clouds. Twinning often looks like white striping within the diamond. Twinning wisps are most often found in fancy shape diamonds such as pear shapes, heart shapes and

triangles because they are often fashioned from twinned crystals. Twinning wisps will rarely appear in ideal cut diamonds.

**Chips:** A chip is a mark or inclusion located on the surface of the diamond made by breaking off or gouging out of a small piece. A chip in the surface of a diamond most often occurs as the result of a slight impact. Most chips are minor and can be removed from the surface of the diamond by re-cutting or polishing the gem with a minimal loss of weight.

Considering diamonds are cut to reflect lights through their facets like little mirrors, we also have to keep in mind the very real possibility that a diamond can mirror the inclusions through out the stone as well. This is known as reflections of inclusions.

The design and facet structure of a diamond can cause this effect and make it difficult to identify the actual inclusion.