

# LAB-GROWN DIAMONDS

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SUSTAINABILITY

CONFLICT-FREE

**ECO-CONSCIOUS** 

CERTIFIED

#### LAB-GROWN DIAMONDS

#### What are Lab-Grown Diamonds?

Lab-Grown Diamonds are identical to mined diamonds. They share the same physical, chemical and optical properties as diamonds extracted from the Earth; the only real difference is origin. Consequently, they should never be compared to simulants like Moissanite, and Cubic Zirconia (CZ), which only attempt to imitate the "look" of a diamond.

	Chemical Composition	Crystalline Structure	Refractive Index	Dispersion	Hardness	Density
DIAMONDS	3					
GROWN	С	Cubic	2.42	0.044	10	3.52
MINED	С	Cubic	2.42	0.044	10	3.52
SIMULANT	S					
CZ	ZrO <sub>2</sub>	Cubic	2.20	0.066	8.25	5.70
MOISSANITE	SiC	Hexagonal	2.65	0.104	9.25	3.21
WHITE SAPPHIRE	Al <sub>2</sub> O <sub>3</sub>	Hexagonal	1.77	0.018	9	3.97
YAG	Y3AI5O <sub>12</sub>	Cubic	1.83	0.028	8.25	4.60

#### What are Type IIa Diamonds?

Both Lab-Grown and mined diamonds are scientifically classified by type. The "type" separates diamonds into categories based upon the variety and amount of chemical impurites they contain.

Type IIa diamonds are considered the purest of all diamond types and are almost or completely free of impurities. Type IIa diamonds comprise only 1–2% of all mined diamonds. Our entire inventory of colorless and pink lab-grown diamonds are classified as Type IIa diamonds.

Some examples of large, famous, Type IIa diamonds are shown below.



KRUPP DIAMOND 33.19 carats Elizabeth Taylor's ring



CULLINAN II 317.40 carats Imperial State Crown of Great Britain



CULLINAN 1 530.20 carats Royal Sceptre of Great Britain

#### SUSTAINABILITY

#### Growing Sustainable Diamonds

Just like the most exotic flower found in nature, the flower carefully grown in a greenhouse is just as real and as beautiful. The same can be said for lab-grown diamonds.

The process used for growing diamonds is similar to a greenhouse. The environment is carefully controlled, replicating the natural growing process to create rare, beautiful, and sustainable diamonds.

#### Diamond Growing Technology

Lab-grown diamonds are cultivated through two gemquality diamond growing processes: Chemical Vapor Deposition (CVD) and High Pressure-High Temperature (HPHT).

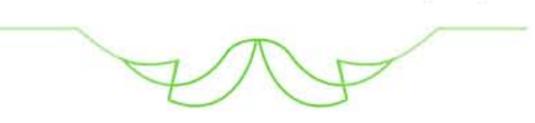
Both processes begin with a small carbon seed which is placed in a growth chamber. A rough diamond begins to grow, layer by layer, until it becomes a diamond crystal ready for cutting and polishing.



"Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment.

Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations."

- The Environmental Protection Agency



## CONFLICT-FREE



## Guaranteed Conflict-Free

Lab-grown diamonds are perfect for those who seek a truly beautiful and socially responsible diamond of the highest quality, purity and rarity. There are many reasons to consider a lab-grown diamond as an alternative to mined diamonds.

Those who aspire to make socially responsible purchasing decisions don't have to worry about "conflict" diamonds. Our lab-grown diamonds have a guaranteed conflict-free origin.

## ECO-CONSCIOUS

## **Environmentally Conscious**

Since diamond mining operations don't fulfill environmentally-friendly philosophies, lab-grown diamonds are the preferred choice for eco-conscious consumers.

Lab-grown diamonds are cultivated in a technologically advanced facility, within a controlled environment that has a smaller carbon footprint than diamond mining.

Growing diamonds doesn't undermine the sustainability of natural systems or our environment, which will allow future generations to have the natural resources they need.



## CERTIFICATION

# Lab-Grown Diamond Grading

diamond's origin.

Lab-grown diamonds are graded to the same standards as mined diamonds, including the "4C's". They are accompanied by grading reports from well-known and respected independent gemological laboratories.

These grading reports are identical to mined diamond reports and include full disclosure of the lab-grown

In addition to the grading report, each lab-grown diamond is laser-inscribed on the girdle with the words "Lab Grown" and the unique report number; further confirming a conflict-free origin.

Lab-grown diamonds are affordable without giving up the quality and beauty of a diamond. Although they are man-made, lab-grown diamonds are identical to mined diamonds; including chemical composition, refractive index and the "4C's".

The only real difference is origin.