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Semper Fides Diamonds GmbH: PUREdiamond – more than a diamond!

1 What do our organism consists of?

Fundamentally, our organism and the organism of our companion animals consist of carbon (C), oxygen (O), hydrogen (H), nitrogen (N), calcium (Ca) and phosphor (P). All other elements for example potassium, sulfur, chlorine, sodium and magnesium are less than one percent by weight of our body.

The percent by weight of carbon is nearby 20%.

2 Which elements are parts of gems? And where do the elements of man-made gemstones come from?

Gem	Base elements	Where do these elements come from?
Diamond*	C	Carbon derives from the hair or cremation ashes of your companion animal
Sapphires & Rubies	Al ₂ O ₃	Aluminium derives from industrial production
Zirconia	ZrO ₂	Zirconium derives from industrial production
Rock crystal	SiO ₂	Silicon derives from industrial production

* Semper Fides diamonds are chemically, optically and physically identical with natural diamonds.

The diamond is the only man-made gemstone cultivated out of endogenous elements.

3 What is the role of Semper Fides?

We transform individual carbon sources into personal diamonds.

We transform individual carbon sources into personal diamonds – the PUREdiamond. We extract the carbon out of the ashes, hair or fur of your companion animals -we do not add anything.



4 What do we need to create a PUREdiamond?

For your PUREdiamond we need at least 5 grams of coat/hair respectively plumage or 300 grams of cremation ashes (equivalent to approximately 10-kilogram live weight).

If you do not have enough hair or cremation ashes, there are different ways to create your personal PUREdiamond:

- The combination of hair and cremation ashes
- Adding carbon extracted from individual second sources e.g. favorite toy, the collar or the vaccination card of your pet.
- Combination of different ashes or coat/hair samples

As of today, we have always found an individual solution! All organic material is based on carbon. Therefore, it is possible to extract carbon from all organic sources.

Basically, carbon can be obtained from any carbon source. In the standard, the PUREdiamond grows from one carbon source. Please note: The use of different carbon sources for the PUREdiamond (e.g. ashes plus hair) leads to increased work in the laboratory. This additional effort will be invoiced by us. If two PUREdiamonds from one carbon source are ordered, we grant a discount on the total order value.

Don't hesitate to ask us. We will clarify the possibilities, the individual costs and procedure.

5 Can you create a PUREdiamond during lifetime?

Yes, we can extract carbon from coat/hair or plumage. Thus, it is possible to create a PUREdiamond during lifetime of your companion animal. We are glad to advise you on the possibilities and costs of other individual carbon sources (e.g. hoof horn).

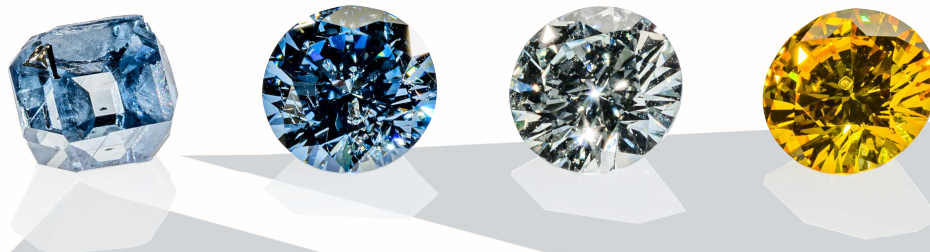
6 Where do the colors come from and which colors are possible?

The unique color of the diamonds from the ashes, coat or plumage of your pet depends on the specific growth process and the individual carbon source.

You determine the base color – the definite tint of your personal PUREdiamond evolves during the individual growth process.

The colorization of the diamond is achieved by the inclusion of a few individual elements, such as nitrogen or boron, in the diamond crystal lattice structure. The difference in the inclusion of a few particles (measured in ppm: parts per million) leads to large differences in the color's intensity. The difference of a few ppm Boron in the lattice structure of your personal PUREdiamonds leads to significant differences in the intensity of the color. A few of ppm Boron are the reason why your diamond sparkles like a blue sky or a dark steel blue.

The following base colors are available: yellow, blue and white*



* Slight shades of color may appear when the white PUREdiamond grows.

The various processes that lead to the respective color are connected to different steps and costs. For more details please contact (quod vide: www.semperfides.eu / Prices & GTC / Order Form PUREdiamond).

7 How long does the whole process take?

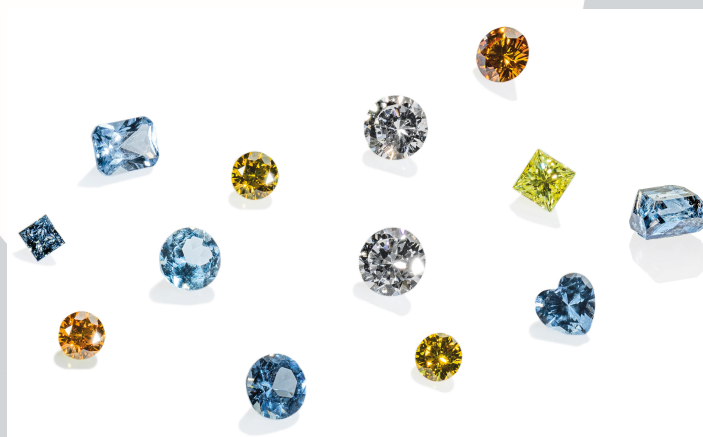
We usually need 4 to 8 months from the order to the handover of the PUREdiamond.

The creation of a PUREdiamond is always a very individual project. It is divided into many work steps with different time requirements (see also question 11 work steps).

Phases such as carbon extraction can take days, weeks, but also periods of time well over a month. It can always happen that we have to repeat work steps, for example the growth synthesis. Special occurrences do not mean that we cannot hand over the PUREdiamond, but that the time from acceptance of the order to handover may be longer.

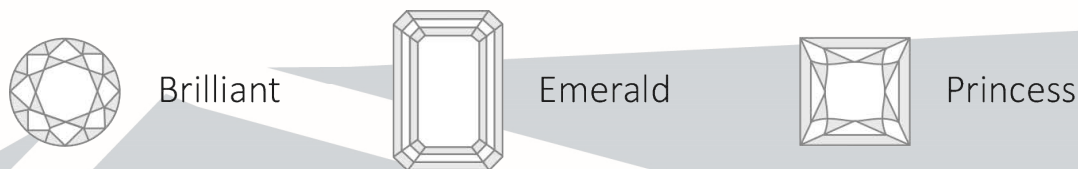
8 Which cuts do we offer?

Different cut and uncut PUREdiamonds:





We will hand over your diamond as a rough or cut diamond. You are free to choose the variant of your diamond cut. The most requested and popular cut types are:



9 Which sizes could be realized?

The standard sizes are available from 0.25 up to 1.0 carat. If you are interested in other sizes, cuts or special offers, don't hesitate to contact us.

size overview									
weight in ct	0,25	0,30	0,40	0,50	0,60	0,70	0,80	0,90	1,00
Ø in mm	4,1	4,5	4,8	5,2	5,5	5,8	6,1	6,3	6,5

10 Why do Semper Fides diamonds have inclusions?

The carbon required for the growth of your personal PUREdiamond is extracted for example from the cremation ash or the coat (individual carbon source) in very complex processes. The carbon gained is the basis for the growth of your personal diamond. Many steps of purification and graphitization are done between the carbon source and the carbon extracted from it.

Sometimes, in addition to the carbon, some very small trace elements of the cremation remains enter into the crystal lattice and appear in the diamond as inclusions. We regard this as a special proof and feature of the individual origin and the personal character of your unique diamond.

Most of Semper Fides personal diamonds are better than SI1 (small inclusions) on the diamond clarity scale. Though we cannot guarantee a certain quality level due to the special origin of the carbon.

**11 Which steps are necessary to make a synthetic diamond?**

Basically, growth of a diamond is a complex challenge for Semper Fides, as there is a mixture of carbon and other elements in an organic compound, which need to be cleaned and turned into a diamond in an octagonal carbon lattice.

The production of ordinary synthetic diamond requires high purity graphite, as a raw material. This eliminates a lot of upstream work steps.

Working steps	Semper Fides Diamond	synthetic / industrial diamond
Basic material	hair/coat / plumage / cremation ashes → individual carbon source	High purity pure graphite (industrial material)
Processing of the basic material	Dissolving the basic material (compound of elements), possibly cremation	- not necessary -
Extraction of carbon	Extraction of carbon with special chemical and physical methods of separation → acid-/base-digestion	- not necessary -
Treatment / Processing	Graphitization, to prepare the amorphous carbon for growth	- not necessary -
Calculation and adjustment of individual catalysts	Detailed adjustment in reference to the individual parameters of the element compound	Standard parameters
Structure of the growth cell	The growth cell consists of over 20 components that are made by hand and with highest precision. Impurities or minimal deviations can make the growth of the diamond impossible.	Standard parameters
Process of growing	HPHT- method (with a high power consumption, single order production)	CVD-method (mass production)



Removal of rough diamond	After expiry of the calculated growth time for the respective diamond size, the growth cell is removed from the press. The growth cell is then removed layer by layer. Individual components of the cell are cleaned and reused in the sense of sustainability.	Standard parameters
Cut and polish	By hand	Machine-made
Certification and engraving	Final inspection of the quality parameters and creating an individual certificate, engraving (if possible)	Quality control
Result	Individual personal diamond ▶ individual production	Diamond from standardized production ▶ "mass production"

Please note that we carry out additional work steps for individual requests, such as individual color wishes.

12 Is it possible to set the PUREdiamond into jewellery?

Yes, the PUREdiamond can be set into jewellery by a jeweler or goldsmith. If the partner of your choice is uncertain, he/ she is welcome to contact us. Semper Fides diamonds have already been set in rings, necklaces, wristbands, earrings and so on.

(Quod vide: www.semperfides.eu/impressions)





13 Why should you choose a diamond/PUREdiamond – and not another gemstone?

- The diamond is the “noblest” of all gemstones
- The diamond consists to nearly 100% of the element of the life - carbon
- The diamond is the only gemstone which grows from an organic element
- The diamond is absolutely unique
- The diamond is more valuable than all other gems

14 Why Semper Fides?

There are many aspects for a good call:

- Because we cultivate PUREdiamonds since 2006
- Because we have an in-depth and extensive know-how
- Because the PUREdiamond grows solely out of the carbon from your beloved companion animal
- Because the chemical and physical characteristics of the PUREdiamond are identical with a natural diamond
- Because we produce in Switzerland and you are warmly invited to visit our manufactory
- Because our procedures and workflows are certified
- Because our projects in favor for the German Cancer Support Organisation (Satchmo-, Goldfever- and Shutterfly-Diamond) are highly esteemed!
- Because we cherish feelings which cannot be put into words
- Because you have a unique and permanent remembrance
- Because we allow you to carry your companion animal by your side every time and every where
- Because we give you a very special pleasure
- Because we create unique gifts

... Ultimately for gratitude, respect and tribute to the partner!



15 How can diamonds be evaluated?

The value of your personal PUREdiamond could only be defined by yourself. We cultivate a unique and distinctive diamond in our manufactory according to your wishes. A PUREdiamond is always something more than a natural or a simple synthetic diamond. Only you can decide the value of your personal PUREdiamond.

There are 4 parameters (the 4 C's) which serve to evaluate diamonds:

- Carat
- Color
- Clarity
- Cut

The value or price of a Semper Fides diamond is a result of the highly individual genesis of every personal PUREdiamond – the value is revealed upon completion of the process.

Taking into consideration the complexity of the cultivation process, personal consultation, services and the operating expenses of the individually grown unique diamond, the personal PUREdiamond cannot be compared to a mined regular diamond, nor to an ordinary industrially manufactured synthetic diamond.

As indicated, - the price reflects one aspect – but the individual value of a PUREdiamond is unique. Many traits mirror the individual growth process like the imperfection of a growing lattice or an inclusion. Even such events create something very special and unique echoing the exceptional character of the beloved companion animal.

The value of your personal PUREdiamond can only be determined by you, just as you can judge what your companion animal means to you.

16 How can you place an order for a PUREdiamond?

- Please make an appointment.
- We advise you on the selection of your PUREdiamond and complete the order form together.
- You hand over the required proportion of the ashes, hair or feather.
- After settling the deposit, we start with your Personal PUREdiamond.
- After completing the individual transformation, we hand over your personal PUREdiamond.

More Information:

www.semperfides.eu
office@semperfides.eu
+49 (0) 5341 / 22 391 22