

SCHOTT Vitryxx® Bioactive Glass

Material Data

Vitryxx® Bioactive Glass:

Vitryxx® is a cosmetic ingredient entirely made up of elements that also naturally occur in the human body; such as silicon, calcium, sodium and phosphorous. It is an inert material with an amorphous structure. While these elements are closely integrated into its material structure, Vitryxx® has properties that are unique and more than the sum of its single elements.

As is true for all glasses, Vitryxx® is inorganic and does not age or deteriorate with time. Therefore, it is insensitive to light and temperature extremes, and there are no preservatives added to the glass powder.



SCHOTT Vitryxx® Bioactive Glass

Material number:	MD01
Classification:	Glass
Form of delivery:	Powder, grain sizes upon request
INCI-name:	Calcium Sodium Phosphosilicate

Component

CAS	65997-17-3
EINECS	266046-0
Mass %	100 %

Vitryxx® Bioactive Glass is suitable for waxy, solid, powder and highly viscous formulations.

Vitryxx®M Bioactive Glass with Mica:

Pre-blending of Vitryxx® with Mica improves its dispersibility and enhances the appearance of the formulation. It is ideal for formulations like emulsions, liquids and low-viscous formulations.



SCHOTT Vitryxx®M Bioactive Glass

Material number:	G018-270
Classification:	Glass/Mica
Form of delivery:	Powder, grain sizes upon request
INCI-name:	Calcium Sodium Phosphosilicate/Mica

Component	Vitryxx®	Mica
CAS	65997-17-3	12001-26-2
EINECS	266046-0	310-127-6
Mass %	95-99 %	1-5 %

Other modifications available on request.

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Appearance:

Vitryxx® Bioactive Glass is a fine white powder that is odorless and tasteless. Due to its hydrophilic properties, it must be stored under dry conditions.

Grain Sizes:

SCHOTT offers Vitryxx® in the following standard grain size. Customized grain sizes are also available on request.

SM4.0 specified by d50: $(4.0 \pm 1.0) \mu\text{m}$ d95: $\leq 20 \mu\text{m}$

Chemical Properties:

Vitryxx® is composed of four inorganic oxides:

Name	[mass %]
SiO ₂	45 ± 5
CaO	24.5 ± 3
Na ₂ O	24.5 ± 3
P ₂ O ₅	6 ± 2

Purity:

The melting process is conducted at over 1.200°C to eliminate organic impurities left in the material. Strict production procedures are also adhered to in order to minimize the presence of inorganic impurities.

Specifications for elements as stated in the cosmetics directive

- Lead (Pb) < 20 ppm
- Mercury (Hg) < 5 ppm
- Arsenic (As) < 5 ppm
- Antimony (Sb) < 5 ppm
- Beryllium (Be) < 10 ppm

The sum of all heavy metal impurities, namely lead (Pb), mercury (Hg), bismuth (Bi), arsenic (As), antimony (Sb), tin (Sn), cadmium (Cd), silver (Ag) and copper (Cu) is less than 50 ppm.

(Pb, Hg, Bi, As, Sb, Sn, Cd, Ag, Cu) < 50 ppm



Microbiological Properties:

Maximum content of micro-organisms:

- Total viable count ≤ 100 cfu/g
- Yeasts and molds ≤ 100 cfu/g

Solubility:

Depending on the grain size used, the solubility of Vitryxx® varies. Example: Solubility for grain size SM4.0 10%

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