

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® Bioactive Glass/Mica

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 %	97-99%	1-9 %

Other modifications available upon 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 dry.

Grain Sizes:

SCHOTT offers Vitryxx® in the following standard grain size. Customized grain sizes are also available upon 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 anorganic 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 more than 1200°C, thus there are no organic impurities left in the material. Strict production procedures are also adhered 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 $\leq 100 \text{ cfu/g}$
- Yeasts and molds $\leq 100 \text{ cfu/g}$

Solubility:

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

Electronic Packaging
SCHOTT AG
Christoph-Dorner-Strasse 29
84028 Landshut
Germany
Phone: +49 (0)871/826-329
Fax: +49 (0)3641/288-89096
tanja.wituschek@schott.com

www.schott.com/epackaging

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