

The following SSCP (Summary of Safety and Clinical Performance) is applicable to the following product(s):

VITA SUPRINITY® PC

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Revision History

Version	Changes
001	Initial version

Identification of the device



Device trade name	VITA SUPRINITY® PC
Manufacturer	VITA Zahnfabrik H. Rauter GmbH & Co. KG Spitalgasse 3 D-79713 Bad Säckingen
Manufacturers SRN	DE-MF-000005906
BASIC-UDI-DI	++J017CC3Q2
Medical device nomenclature (EMDN)	Q010699 - MATERIALS FOR THE PREPARATION OF CUSTOM-MADE DENTAL DEVICES – OTHER
Class of device	Ila
Year of first CE certificate	2012
Notified Body including identification no.	DEKRA Certification GmbH, identification no.: 0124

Indications, Intended Purpose and Target populations

Intended purpose	VITA SUPRINITY PC products are ceramic materials for dental treatments.								
Indication	<table border="1"> <tr> <td>Anterior and posterior crowns on implant abutments</td> <td></td> </tr> <tr> <td>Anterior and posterior crowns</td> <td></td> </tr> <tr> <td>Inlays / Onlays / Partial crowns</td> <td></td> </tr> <tr> <td>Veneers</td> <td></td> </tr> </table>	Anterior and posterior crowns on implant abutments		Anterior and posterior crowns		Inlays / Onlays / Partial crowns		Veneers	
Anterior and posterior crowns on implant abutments									
Anterior and posterior crowns									
Inlays / Onlays / Partial crowns									
Veneers									
Contraindication	<ul style="list-style-type: none"> General: <ul style="list-style-type: none"> Inadequate oral hygiene 								

	<ul style="list-style-type: none"> ▪ Inadequate preparation results ▪ Insufficient remaining natural tooth substance ▪ Insufficient space available • Parafunction (Restorations made of VITA SUPRINITY PC are contraindicated for patients diagnosed with excessive masticatory functions, in particular teeth grinders and clenchers. Restoring devitalized teeth of patients with hyperfunctions is absolutely contraindicated.) • Bridges • Veneering (Full veneers on molar crowns using veneering ceramic.)
Intended user	Dental technician, Dentist, Professional User, Rx only

Device description

a) Description of the medical device(s)

VITA SUPRINITY® PC is a glass ceramic CAD/CAM block. The customer receives a pre-crystallized product between glass and ceramic which can be easily machined. After machining the second heat treatment has to be carried out by the customer. Caused by crystal growing the restoration receives its final strength and tooth color.

Due to CTE and softening temperature the material can be individualized with VM11. For characterization VITA Akzent Plus can be used.

VITA SUPRINITY® PC for... / VITA SUPRINITY® PC UNIVERSAL: The different variations of the product have different attachments for the processing in the various milling machines of our partners:

- CEREC® /inLab®, PlanMill®, KaVo ARCTICA®, Ceramill® Motion 2
- VITA SUPRINITY® PC UNIVERSAL are suitable to the following milling machines: CORiTEC Serie (imes-icore GmbH), CS 3000 (Carestream Inc.), K-/S-Modelle (vhf manufacture AG).

b) Previous generations of the medical device(s)

VITA SUPRINITY is the previous product of VITA SUPRINITY PC. Comparing the two products, VITA SUPRINITY PC has a slightly different oxide formulation. It contains a low amount of lanthanum oxide (< 1 %) as a replacement for praseodymium oxide compared to the previous product VITA SUPRINITY.

c) Accessories / other products which are intended to be used with the medical device(s)

The following products can, but do not have to be used with the product. For a detailed description of how to use the products in combination, please refer to the product's instructions for use.

Name of accessory (manufacturer)	Short description
VITA VM 11	Layering with veneering materials other than VITA VM 11 fine structure feldspar ceramic, which has been matched especially with VITA SUPRINITY PC.
VITA SUPRINITY Polishing Sets (clinical and technical)	After crystallization, the surface of the restoration can be polished manually using the instruments of the VITA SUPRINITY Polishing Sets technical or clinical.
VITA AKZENT Plus	When using the staining technique, stains and glaze materials are applied

	<p>to complete the fully anatomical milled restorations.</p> <p>The following materials can be used:</p> <ul style="list-style-type: none"> – VITA AKZENT Plus POWDER – VITA AKZENT Plus PASTE – VITA AKZENT Plus SPRAY
VITA KARAT diamond polishing paste	<p>The glazed restoration can also be mechanically polished.</p> <p>For this purpose, for example, VITA KARAT diamond polishing paste (for extraoral use only) can be used.</p>
VITA INTERNO	<p>Depending on the requirements, the crown is coated with VITA VM 11 materials of the DENTINE or CREATIVE Kit.</p> <p>The VITA INTERNO materials can be mixed in to intensify the shade</p>
VITA VACUMAT 6000	<p>For crystallization, furnaces of the VITA VACUMAT 6000 series are perfectly suited.</p>
VITA SMART.FIRE	<p>VITA SUPRINITY PC is approved for crystallization in the VITA SMART.FIRE.</p>

Possible therapeutic or diagnostic alternatives

Diagnostic/therapeutic alternative with conditions of use	Possible benefit/advantage and possible risks/disadvantages as far as known
<p>Therapeutic alternatives to VITA SUPRINITY can be a corresponding construction made of lithium disilicate, zirconium dioxide, hybrid ceramics, composite, feldspar ceramics, gold casting or NEM casting.</p>	<p>Risks of these therapeutic alternatives could be allergic reactions to the NEM - or gold alloy. Allergy to the adhesive cementation (or the residual monomer content present in it) may occur in restorations made of hybrid ceramics, composite, or feldspar ceramics, where this type of cementation is necessary.</p> <p>Gold, non-precious metal, zirconium dioxide can be conventionally cemented. Lithium disilicate and zirconium dioxide-reinforced lithium silicate can also be cemented, although adhesive cementation is recommended here for stability reasons.</p> <p>With conventional zinc phosphate cement, chemical noxae from phosphoric acid can cause pulp damage and the roughness of the cement can lead to local gingivitis due to increased plaque accumulation.</p> <p>Due to its acid components, conventional glass ionomer cement should not be used in the immediate vicinity of the pulp or the pulp should be covered in advance to protect it.</p>

Reference to harmonized standards and CS applied

Common specifications are not used for the product VITA SUPRINITY PC. The following standards are applied for these products at VITA:

- *DIN EN 1641 10:2009 Dentistry – Medical devices for dentistry – Materials;*
- *DIN EN 22248 02:1993 Packaging Complete filled transport packages, Vertical impact test by dropping*
- *DIN EN 62366 08:2021 Medical devices - Application 01 usability engineering to medical devices*
- *DIN EN ISO 10993-1 05:2021 Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management system*
- *DIN EN ISO 10993-10 10: 2014 Biological evaluation of medical devices – Part 10: Tests for irritation and skin sensitization*
- *DIN EN ISO 10993-11 09:2018 Biological evaluation of medical devices – Part 11: Tests for systemic toxicity*
- *DIN EN ISO 10993-12 08:2021 Biological evaluation of medical devices – Part 12: Sample preparation and reference materials*
- *DIN EN ISO 10993-13 11:2010 Biological evaluation of medical devices – Part 13: Identification and quantification of degradation products from polymeric medical devices*
- *DIN EN ISO 10993-14 08:2009 Biological evaluation of medical devices Part 14: Identification and quantification of degradation products from ceramics*
- *DIN EN ISO 10993-16 02:2018 Biological evaluation of medical devices – Part 16: Toxicokinetic study design for degradation products and leachables*
- *DIN EN ISO 10993-17 08:2009 Biological evaluation of medical devices Part 17: Establishment of allowable limits for leachable substances (*
- *DIN EN ISO 10993-18 03:2021 Biological evaluation of medical devices Part 18: Chemical characterization of materials*
- *DIN EN ISO 10993-2 10:2006 Biological evaluation of medical devices – Part 2: Animal welfare requirements*
- *DIN EN ISO 10993-3 02:2015 Biological evaluation of medical devices – Part 3: Tests for genotoxicity, carcinogenicity and reproductive toxicity*
- *DIN EN ISO 10993-4 12: 2017 Biological evaluation of medical devices– Part 4: Selection of tests for interactions with blood*
- *DIN EN ISO 10993-5 10:2009 Biological evaluation of medical devices – Part 5: Tests for in vitro cytotoxicity*
- *DIN EN ISO 10993-6 09:2017 Biological evaluation of medical devices – Part 6: Tests for local effects after implantation*
- *DIN EN ISO 10993-9 03:2022 Biological evaluation of medical devices – Part 9: Framework for identification and quantification of potential degradation products*
- *DIN EN ISO 13485 12:2021 Medical devices – Quality management systems – Requirements for regulatory purposes*
- *DIN EN ISO 14971 04:2022 Medical devices – Application of risk management to medical devices*
- *DIN EN ISO 15223-1 02:2022 Medical devices – Symbols to be used with information to be supplied by the manufacturer – Part 1: General requirements*
- *DIN EN ISO 20417 03:2022 Information to be supplied by the manufacturer of medical devices;*
- *DIN EN ISO 4180 03:2020 Packaging – Complete filled transport packages – General rules for compilation of performance test schedules*
- *DIN EN ISO 6872 01:2019 Dentistry – Ceramic materials*
- *DIN EN ISO 7405 03:2019 Dentistry – Evaluation of biocompatibility of medical devices used in dentistry*
- *ISO 10993-1 10:2018 Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process*

- *ISO 13485 03:2016 Medical devices – Quality management systems: Requirements for regulatory purposes*
- *ISO 2206 04:1987 Packaging – Complete filled transport packages – Identification of parts when testing*
- *ISO 7405 10:2018 Dentistry – Evaluation of biocompatibility of medical devices used in dentistry*
- *ISO TR 24971 06:2020 Medical devices – Guidance on the application of ISO 14971*
- *ISO 109931 Devices-Guidance FDA 2020*
- *MEDDEV 2_7_1_rev4_en 06:2016*

Summary of clinical data

a) Clinical studies of the medical device(s)

According to Article 61 European Medical Device Regulation, (EU) 2017/745 (MDR) the requirement to perform clinical investigations pursuant to paragraph 4 shall not apply to implantable devices and class III devices:

- which have been lawfully placed on the market or put into service in accordance with Directive 90/385/EEC or Directive 93/42/EEC and for which the clinical evaluation is based on sufficient clinical data, and
- is in compliance with the relevant product-specific CS for the clinical evaluation of that kind of device, where such a CS is available; or
- that are sutures, staples, dental fillings, dental braces, tooth crowns, screws, wedges, plates, wires, pins, clips or connectors for which the clinical evaluation is based on sufficient clinical data and is in compliance with the relevant product-specific CS, where such a CS is available.

The products under evaluation have been lawfully placed on the market and put into service in accordance with Directive 93/42/EEC and the clinical evaluation of these products is based on sufficient clinical data and is in compliance with the relevant product-specific CS for the clinical evaluation of that kind of device. Therefore, clinical investigations are not necessary to proof clinical safety and clinical evaluation is performed.

b) Clinical evaluation

Extract from the final summary of the clinical evaluation “Clinical evaluation report VITA SUPRINITY PC VITA Zahnfabrik H. Rauter GmbH & Co. KG” at novineon CRO GmbH, July 2022, Rev. 03: “[...] On the basis of the documentation provided by VITA, we conclude that the potential risks of the VITA SUPRINITY PC are acceptable residual risks for the patient and the user. The main risks, chipping, cracking or fracture of the dental restorations manufactured from zirconia reinforced lithium silicate glass ceramics, are describe in detail in the scientific literature. On the basis of the relevant scientific literature, we conclude that the risks of the use of the generic device group of zirconia reinforced lithium silicate glass ceramic (ZLS) CAD/CAM blocks are well-documented in the published literature, thus being known to dentists or adequately trained staff. When complying with all warnings and precautions, VITA SUPRINITY has an acceptable benefit-risk profile. [...]”

c) Post market clinical follow-up

PMCF studies may not be required when the medium/long-term safety and clinical performance are already known from previous use of the device or where other appropriate post-market surveillance activities would provide sufficient data to address the risks.

The indication and treatments of VITA dental medical devices are well-known clinical procedures.

The basic principles of using dental material are the same since the beginning of the 20th century. The compliance to the DIN EN ISO 6872 applicable for VITA SUPRINITY PC ensures the safe use of the products also in the clinical aspect.

The VITA post market monitoring collects clinically relevant data to an extent that fulfills the requirements of the European Medical Device Regulation, (EU) 2017/745 (MDR) in order to adequately assess and confirm the safety of medical devices. Therefore, no PMCF studies are required for VITA SUPRINITY® PC and therefore, also not part of this SSCP.

d) Conclusion of clinical performance and safety of the medical device(s)

VITA always ensures the clinical safety of its products, even after they have been placed on the market, by constantly updating the clinical evaluation of its medical products and monitoring them on the market in accordance with the requirements of the European Medical Device Regulation, (EU) 2017/745 (MDR) and according to MEDDEV 2.7/1 revision 4.

For VITA SUPRINITY® PC it can be said that the clinical evaluation of the products clearly states the clinical safety and performance. There is no doubt about the safety and reliability of the products. They can be used safely in the manner communicated by VITA with regard to indications, contraindications, compliance with safety instructions and residual risks.

Suggested profile and training of users

VITA dental products are designed for use by professional users. This specification is made clear by the labeling of VITA products with the symbol "Rx only". The specialist users are dentists and dental technicians who have excellent prior knowledge in the use of our products due to their many years professional training and/or university education. Follow-up training is the responsibility of the expert users and is offered by VITA specifically for VITA products. This guarantees safe handling of VITA products at every point in the application process.

Information on residual risks, undesirable effects and warnings and precautions

a) Residual Risks

Information on product-specific residual risks can be found on the VITA homepage at [Downloadcenter. Produktsicherheit \(vita-zahnfabrik.com\)](https://www.vita-zahnfabrik.com)

Please be aware, that these are possible complications and residual risks of the dental product group in general, and not specific to VITA materials.

These risks must be communicated to the patient by trained personnel (e.g., dental professionals).

b) Undesirable effects

There are no known undesirable effects for the products.

c) Warnings and precautions

- **When working with the products, wear suitable safety goggles/face protection and light respiratory protection.**

These warnings and precautions can also be found in the corresponding instructions for use of the product(s).

