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

VITA ENAMIC®

Table of content

Revision History

Version	Changes
001	**Initial version**
002	**New version of clinical evalution**
003	**Annual update**
004	**Annual update**

Identification of the device

Device trade name	VITA ENAMIC®
Manufacturer	VITA Zahnfabrik H. Rauter GmbH & Co. KG Spitalgasse 3 D-79713 Bad Säckingen
Manufacturers SRN	DE-MF-000005906
BASIC-UDI-DI	++J017CC0PU (VITA ENAMIC®) ++J017KK2RY (Mixed assortments CAD/CAM)
Medical device nomenclature (EMDN)	Q010699 - MATERIALS FOR THE PREPARATION OF CUSTOM-MADE DENTAL DEVICES – OTHER
Class of device	IIa
Year of first CE certificate	2013
Notified Body including identification no.	DEKRA Certification GmbH, identification no.: 0124

Indications, Intended Purpose and Target populations

Intended purpose	VITA ENAMIC products are ceramic materials for dental treatments.
Indication	VITA ENAMIC is indicated for the fabrication of fully anatomical, esthetic single tooth restorations if • the precondition of the adhesive or self-adhesive bonding technique are fulfilled.

	Overview of indications Anterior and posterior crowns implant-supported*  Anterior and posterior crowns  Inlays / Onlays / Partial crowns  Table tops  Veneers  * The abutments must be designed in a way to meet the requirements for ceramic-specific preparation and to observe the minimum wall thicknesses of crowns made of VITA ENAMIC. Please observe the processing instructions of the manufacturer of the implant and the adhesive bonding material. For more information: VITA ENAMIC implant-supported crowns Working Instructions, Prod. No. 10077 and VITA IMPLANT SOLUTIONS Working Instructions, Prod. No. 10150.
Contraindication	• Bridge restorations • Free-end restorations • Parafunctions (e.g. bruxism)
Intended user	Dental technician, Dentist, Professional User, Rx only

Device description

a) Description of the medical device(s)

VITA ENAMIC® is a CAD/CAM block or disc for single tooth restorations made of a hybrid dental ceramic. In VITA ENAMIC, the dominant ceramic network structure and the reinforcing polymer network structure are merged fully with one another.

Thanks to this dual ceramic-polymer network, the new composite incorporates the benefits of ceramic and composite materials in one product.

VITA ENAMIC® multiColor is made of six different layers to imitate the shade gradient of natural teeth.
VITA ENAMIC® is available in different translucency: VITA ENAMIC® T, VITA ENAMIC® HT and VITA ENAMIC® ST.

The indication, contraindication and material properties are still the same, apart from their translucency, color or attachments for different milling machines.

b) Previous generations of the medical device(s)

VITA ENAMIC was the world's first hybrid ceramic of its kind and has no predecessors.

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 ENAMIC Polishing Sets	Specially developed set for time-saving and efficient polishing of VITA ENAMIC restorations. Includes all instruments for two-stage, well-coordinated polishing.
VITA Polish Hybrid	Diamond polishing paste for extraoral and final high-gloss polishing of restorations made of VITA ENAMIC,composite and polymer.
VITA AKZENT LC	Assortment for characterizing (staining technique) the shade of restorations made of VITA ENAMIC

VITA VM LC	Material for shade individualization (layering technique) of VITA ENAMIC restorations, particularly in the transparent area of anterior restorations or in the vestibular area of posterior restorations.
VITA ADIVA CERA-ETCH	Adhesive bonding of ENAMIC restorations: Extraorally only (!): etching with a 5% hydrofluoric acid gel such as VITA ADIVA CERA-ETCH
VITA ADIVA TOOTH-ETCH	Adhesive bonding of ENAMIC restorations: Starting from the enamel margins, etch the tooth substance with VITA ADIVA TOOTH-ETCH (phosphoric acid gel, 37 %) for 20 sec. Spray clean for 20 sec. and dry for 20 sec.
VITA ADIVA T-BOND	Adhesive bonding of ENAMIC restorations: Apply bonding system to the tooth substance (e.g. VITA ADIVA T-BOND).
VITA ADIVA C-PRIME	Adhesive bonding of ENAMIC restorations: After drying, the etched surfaces have a whitish opaque appearance. Apply silane (e.g. VITA ADIVA C-PRIME) to the etched surfaces. Allow to evaporate completely.

Possible therapeutic or diagnostic alternatives

Diagnostic/therapeutic alternative with conditions of use	Possible benefit/advantage and possible risks/disadvantages as far as known
Therapeutic alternatives to VITA ENAMIC can be corresponding restorations made of zirconia-reinforced lithium silicate, lithium silicate, zirconia, composite, feldspathic ceramic, gold casting and non-precious alloys.	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. 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. 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. 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.

Reference to harmonized standards and CS applied

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

- *MDCG 2021-3 Custom-Made Devices Guideline*
- *ASTM D4332-22 Standard Practice for Conditioning Containers, Packages, or Packaging Components for Testing*
- *ASTM D5276-19 Standardt Test Method for drop Test of Loaded Containers by Free Fall*
- *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 droppinig*
- *DIN EN 62366 08:2021 Medical devices - Application 01 usability engineering to medical devices*
- *DIN EN ISO 10477 02:2021 Dentistry– Polymer-based crown and veneering materials*
- *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 04:2023 Biological evaluation of medical devices – Part 10: Tests for 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 02:2024 Biological evaluation of medical devices - Part 17: Establishment of allowable limits for leachable substances (*
- *DIN EN ISO 10993-18 11:2023 Biological evaluation of medical devices - Part 18: Chemical characterization of materials*
- *DIN EN ISO 10993-2 2:2023 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 17664-1 11:2021 Processing of health care products – Information to be provided by the medical device*

manufacturer for the processing of medical devices – Part 1: Critical and semi-critical medical devices

- *DIN EN ISO 17665-1 11:2006 Sterilization of health care products - Moist heatPart 1: Requirements for the development, validation and routine control of a sterilization process for medical devices*
- *DIN EN ISO 18675 04:2023 Dentistry - Machinable ceramic blanks*
- *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 tranport packages- Gerneral 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 14801 11:2016 Dentistry — Implants — Dynamic loading test for endosseous dental implants*
- *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*
- *MDCG 2018-1 Rev.4 Guidance on BASIC-UDI and changes to UDI-DI*
- *MDCG 2019-16 Guidance on Cybersecurity for medical devices*
- *MDCG 2019-4 Timelines for registration of device data elements in EUDAMED*
- *MDCG 2019-5 Registration of Legacy Devices in EUDAMED*
- *MDCG 2019-7 Guidance on Article 15 MDR-IVDR Person responsible for Regulatory Compliance*
- *MDCG 2019-9 Summary of safety and clinical performance*
- *MDCG 2020:6 Guidance_sufficient_clinical_evidence_en*
- *MDCG 2020-3 Guidance on significant changes*
- *MDCG 2020-7 Guidance on PMCF Plan Template*
- *MDCG 2020-8 Guidance on PMCF Evaluation Report Template*
- *MDCG 2021-1 Rev.1 Guidance solution until EUDAMED is fully functional*
- *MDCG 2021-19 Guidance note integration of the UDI within an organisation`s quality management system*
- *MDCG 2021-25 application of MDR requirements to 'legacy devices' and to devices placed on the market prior to 26 May 2021*
- *MDCG 2022-4 Guidance on appropriate surveillance regarding the transitional provisions under Article 120 of the MDR with regard to devices covered by certificates according to the MDD or the AIMDD*
- *MDCG 2023-3 Questions and Answers on vigilance terms and concepts as outlined in the Regulation (EU) 2017/745 on medical devices*
- *MDCG_2023-7_Guidance_on_exemptions_from_the_requirement_to_perform_clinical_investigations_pursuant_to_Article_61_4_-_6__MDR_and*
- *MEDDEV 2_7_1_rev4_en 06:2016*
- *Recommendation-NB-MED-2_5-2_Rec2_Reporting_of_design_changes_and_changes_of_the_quality*

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 "VITA ENAMIC®VITA Zahnfabrik H. Rauter GmbH & Co. KG" at novineon CRO GmbH April 2023/Rev. 04: "[…]
On the basis of the documentation provided by VITA, we conclude that the potential risks of the VITA ENAMIC and VITA ENAMIC IS are acceptable residual risks for the patient and the user. The main risks are described in detail in the scientific literature. On the basis of the relevant scientific literature, we conclude that the risks of the use of hybrid dental ceramic CAD/CAM blocks are well-documented in the published literature, thus being known to trained medical experts (chapter 8.5.3). When complying with all warnings and precautions, VITA ENAMIC and VITA ENAMIC IS 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 ceramic materials and DIN EN ISO 10477 applicable for polymer-based crown and veneering materials 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 ENAMIC® 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 ENAMIC® 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)

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, gloves and safety clothing.**

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