

# Transform Your smile in one day with

**SAPTeeth**<sup>™</sup>



# **Key Benefits**

- Immediate Results
- Advanced Material
- Patient Comfort
- Longevity



# **Contact us**

+91-9820012621 +91-9820446633 (Mumbai, India)



#### **Dental Laboratory**

Utilizing advanced technology to create long lasting crowns & bridges. Our state-of-art in-house CAD-CAM technology, and 3D printing ensures precision and efficiency. Thus, the team is able to reduce the multiple sittings for your dental treatment.

#### **International Recognition**

Royal Dental Clinics is globally recognized for innovations such as 'Same Day Fixed Teeth', and 'Immediate Loading of Implants'. Continuous research and development allow us to pioneer new solutions in dentistry.

#### **Advanced Dental Materials**

One of the most advanced materials for these artificial teeth are called SAPTeeth $^{\text{TM}}$ . SAPTeeth $^{\text{TM}}$  are a group of highly advanced polymers which are specially made to protect the bone, implant and the natural tooth under the prosthesis.

For a long-term dental prosthesis; SAPT.HighImpact has already been tested in vivo and approved for expected life of over 9 years and is clinically-proven and safe to use. SAPT.HighImpact is plaque-resistant with excellent gingival compatibility and resistant to discolorations and thus leads to a higher level of patient acceptance. SAPT.HighImpact has the most diverse indications, which can be covered with a single material. It has high level of strength and long-term stability. As a high-performance polymer, it does not lose its strength in comparison to ceramic; which "ages". Unlike ceramic, it's easy to satisfactorily repair SAPT.HighImpact if needed.

SAPT.BioPEEK is the new reference for a permanent dental prosthesis as framework. It is monomer-free with no allergic reactions or discolorations of the gingiva known to date. It is light and similar to bone and is a biocompatible material which integrates in the jaw. There is no galvanic effect and no oxidation or metal taste. It can reduce compression and torsion caused by chewing and can partly compensate for this. This results in a periodontal effect and an increase in wearing comfort. It is durable as it has high wear resistance and chewing comfort, with lower implant failure due to shock absorbing qualities.

#### Why Choose SAPTeeth™

- o **Innovation:** Based on research it can be concluded that ceramic, porcelain, metal, titanium teeth exert stresses on bone that are about 24 to 149 times more than SAPTeeth<sup>™</sup>. This difference is due to the shock absorbing capability of SAPTeeth<sup>™</sup>.
- Same Day Treatment: Get fixed teeth with dental implants on same day even in less bone.
- Low Maintenance: They can be easily repaired in the mouth within a few minutes. In most cases, only the relevant part can be treated and refurbished with SAPTeeth™ on the dental chair itself.



#### **Dental Materials**

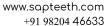
Recent advances in research and development have led to the adoption of high-performance polymers in dental treatments. These innovative materials provide patient with exceptional care from the outset, delivering effective, efficient and successful solutions for their dental prosthesis.

High-performance polymers have revolutionized the field, making traditional materials such as metal, ceramic or zirconia less necessary. SAPTeeth™ polymers offer advantages in aesthetics, processing, durability and patient satisfaction. This modern approach creates a win-win situation for patients seeking top-quality dental treatment, and for doctors committed to providing the best possible care.

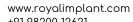
#### Crowns and Bridges Details:

| For Prosthesis | SAPT.Temp           | Produces safe, biocompatible, and aesthetic temporary prosthesis designed for use up to 2 years, to be replaced by higher-performance polymer due to wear and tear.  |
|----------------|---------------------|--|
|                | SAPT.MultiCom       | Aesthetic prosthesis is fixed over a polymer-based framework, designed for 2 to 5 years of use.  |
|                | SAPT.<br>HighImpact | It is a universal genius offering the most elegant, and varied solution for a number of indications. Can be used as a long-term prosthesis with an approved wear-off life span of 9+ years.  |
|                | SAPT.Nano           | A nano-reinforced biopolymer designed for long term use. They offer an ideal solution for individuals with strong bite and habits such as bruxism.   |
| Others         | SAPT. BioPEEK       | Properties of this framework material are only surpassed by nature itself. It's light and thermal conductivity is as that of bone; thereby making patient's feel at ease. Mainly indicated for multiple failure of prosthesis & heavy bite forces. Ideal to be placed over an implant. |
|                | SAPT.CemResin       | Flowable polymer which is poured onto the surfaces of an implant, natural teeth & high-performance polymers thereby creating a single unit for more durable, success- oriented, & efficient prosthetic   |
|                | SAPT. 3Dresin       | Biocompatible resin which are built from 3D printing to deliver surgical guides and splints which can be fitted as a framework or temporary supports.  |

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#### The way we do it!

#### Advanced Consultation with 3D imaging and scanning of the impressions

Once you have decided for the treatment, the doctors will send the impressions, x-rays and other diagnostic data to the laboratory. Based on the requirement, the laboratory shall prepare a diagnostic plan.

#### High resolution virtual design of the required dental treatment surface

After about 30 minutes we create virtual simulations and models of your treatment. This allows the doctor and team to plan the case in advance and execute it predictably.

#### Automated customised fabrication of teeth & prosthesis (Designing & Milling)

Once we receive the final impressions, a complete digital workflow is followed to minimize errors and human contact. With the help of advanced software and CAD-CAM technology, your new teeth are milled in the desired material in approximately 15 minutes per tooth.

#### Hygiene and Quality checks for every milled tooth or framework

Each prosthesis is thoroughly examined and checked by the dental technician. Final touches are applied and the teeth are thoroughly cleaned before placing it in the patient's mouth.

#### Straightening & Beautification of Teeth on same day

The doctors check the prosthesis in the mouth. Using the special SAPT.CemResin, the prosthesis is fixed securely. Regular care and maintenance of the prosthesis ensures long term success.

#### Post treatment oral care, hygiene and follow-ups

To get the full benefit of your prosthesis, you ought to take all precautions as advised such as:

- Regular check-up and cleaning
- Occlusal balancing

If an upgrade to better materials is needed in the future and you are under warranty; a nominal fee of 20% of the treatment cost or the cost difference for the upgrade will be charged for repair or replacement.

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#### SAPT.Temp

#### Description

SAPT.Temp produces safe, biocompatible, aesthetically pleasing temporary prothesis that need to be replaced by a higher-performance polymer due to wear and tear.

#### Material properties:

• Type: Metal-free, polymer based

· Shock Absorbability: Limited

Wear Resistance: LowStrength: > 65 mpa

• E-modulus: > 2100mpa

Hardness: 56 shore

Indicated wearing time: 6 months to 2 years

**Indications:** SAPT.Temp prosthesis are designed for temporary use as there is high wear and tear and potential discoloration compared with the higher-performance polymers.

**Advantages:** Distinct advantage of SAPT.Temp is reducing the load on the underlying structures making it suitable for: heavy bite force, pan-supari habits, bruxism, health issues, clenching etc. They can be used as temporary prosthesis in such cases and repaired or replaced or upgraded when required. They may trigger allergies and material in-tolerances.

#### SAPT.MultiCom

#### Description

SAPT.MultiCom is a two-stage process, wherein an aesthetic prosthesis is fixed over a framework. The material of the framework and the prosthesis are polymer based. Indicated for use in mouth for 2 years to 5 years only.

#### **Advantages:**

- Metal Free: Provides shock absorbability up to 30% of normal load.
- Two-Stage Technique: Offers better and more stable repair capabilities.
- Functional Superiority: Superior in aesthetics and function when compared with SAPT.Temp
- Cost-Effective: Economical within advanced polymers.

**Indications:** These prostheses have a lower wear and tear when compared with the SAPT.Temp. They are beneficial in reducing the load on the underlying structures in cases of heavy bite force, pan- supari habit, bruxism, clenching. They can be used as intermediate solutions and are easily repaired, replaced or upgraded as needed. The framework provides superior protection for inner structures enhancing overall durability of the prosthesis.

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#### SAPT.HighImpact

#### Description

SAPT.HighImpact is a cross linked composite polymer that offers superior physical properties compared to conventional PMMA. Manufactured under controlled high temperature and high-pressure environments. SAPT.HighImpact ensures excellent color retention and plaque resistance, comparable to ceramic restorations. HIPC is one of the types of SAPT.HighImpact. Clinically proven and approved for over 9 years of wear, it stands as a robust and reliable choice for dental prosthesis.

#### **Advantages**

- **Metal Free**: Certified for a lifespan of 9 years with exceptional wear resistance.
- Joint Load Reduction: Reduces about 90% load on the joint.
- Plaque resistant: Maintains cleanliness and reduced plaque buildup.
- Aesthetic Appeal: Offers an aesthetic, translucent and opalescent finish for a natural look.

#### **Material properties:**

- Strength: Over 120 MPa with minimal solubility in saliva
- Elastic Modulus: > 2200 MPa

**Indications:** SAPT.HighImpact are a group of high performing polymers that is suitable for permanent dental prosthesis with implants, natural teeth, or both. It provides excellent gingival response and pressure absorbing capability.

#### SAPT.Nano

#### Description

SAPT.Nano is a nano-reinforced biopolymer designed for permanent denture structures. Reinforced with graphene sheets, which are lighter than carbon fiber & harder than steel. SAPT.Nano enhances the performance of artificial teeth. This material provides a natural aesthetic appearance, while addressing mechanical, physiochemical and biological shortcomings found in other materials failures of the rest of the materials currently in use.

#### **Material properties**

• Strength: Over 140 mpa

• Elastic Modulus: > 3200mpa

• Hardness: 88 shore

• **Application:** Suitable for bridges of more than 2 missing teeth and complete prosthesis.

**Indications:** Being resistant to fractures, it offers greater flexibility, and reduced chances of breakages. SAPT.Nano is ideal for long-term prosthesis, especially in cases involving heavy bite force, pan-supari habit, bruxism, and clenching. This material can be easily repaired or replaced as needed.

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#### SAPT.BioPEEK

#### Description

SAPT.BioPEEK is a biocompatible polymer of polyether ketone, enhanced with ceramic fillers to provide the highest aesthetic retention and resistance to scratching and abrasion. This material has been utilized in-body for over 30+ years in applications such as intervertebral discs and hip joint replacements. With the improvement, these materials can now be used in dental applications especially as a framework.

#### **Advantages:**

- Anti-allergic: No metal, oxide or monomer
- Natural Bone Similarity: Matches the weight and density of natural bone
- No Metallic Taste: Ensures a pleasant oral experience
- Off-Peak Effect: Reduce compression and torsion from chewing, enhancing comfort
- Heat conduction: Similar to teeth, improving comfort
- Low Abrasion and High Versatility: Durable and adaptable for various dental applications
- Conserves Antagonists: Cuts like dentin, preserving surrounding structures
- Gingival Management: Provides optimal gum health and management
- Longevity: Durable with a long-lasting restoration
- Natural Oral Feel: Mimics the natural sensation and function of teeth
- Immediate Restoration: Allows for one-time treatment immediate use
- Bruxism: Excellent for patients with bruxism, clenching, heavy bite, pan-supari habit

Material properties: SAPT.BioPEEK is suitable for use as a permanent dental prosthetic framework for both implant and natural teeth.

Flexural Strength: 180 mpa with almost no water solubility

#### SAPT.CemResin

#### Description

SAPT.CemResin are biocompatible materials used to secure prosthesis over natural teeth or implants. It provides strong, durable bone that enhances the stability and longevity of dental prosthesis.

Indications: SAPT.CemResin is indicated for prosthetic fixation, offering excellent with shock absorbability to protect underlying structures.

#### Material properties

• Strength: > 50 mpa

• Elastic Modulus: > 1500 mpa

#### **Advantages**

- Shock absorbing: Effectively absorbs shocks and reduces stress on teeth and implants
- Chemical bond with SAPTeeth™: Forms a strong bond with prosthesis
- Higher durability: Provides long lasting performance as it does not dissolve in saliva

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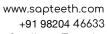
#### SAPT.3Dresin

SAPT.3DResin is a biocompatible resin material used in the dental industry through additive manufacturing processes, allowing for the construction of complex prosthetic models. It is primarily used to create surgical guides and temporary splints. This material can be sterilized in an autoclave, ensuring hygiene and safety.

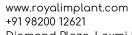
## Comparison of SAPTeeth™ Materials

| Material        | Description   | Properties  | Advantages   | Indications  |
|-----------------|---|---|--|--|
| SAPT.Temp       | Safe biocompatible, aesthetically pleasing temporary prosthesis that may need to be replaced due to wear and tear. Indicated for 6 months to 2 years of use.                                      | Metal-free, limited<br>shock absorbability, ,<br>Strength >65 MPa,<br>E-modulus >2100<br>MPa.   | Reduces load on underlying structures.   | Temporary use due to high wear and tear and potential discoloration.   |
| SAPT.MultiCom   | Two-stage process with an aesthetic prosthesis fixed over a polymer-based framework. Indicated for 2 to 5 years of use.   | Metal-free, polymer-<br>based, shock<br>absorbability up to<br>30% of normal load,<br>Strength >65 MPa, E-<br>modulus is about<br>2100 MPa. | Better and more stable repair capabilities, superior in aesthetics and function compared to SAPT.Temp. | Intermediate<br>solutions for cases<br>of heavy bite force   |
| SAPT.HighImpact | Cross-linked composite polymer offering superior physical properties, excellent colour retention, and plaque resistance. Clinically proven for over 9 years of wear.                              | Metal-free, cross-<br>linked composite,<br>Strength >120 MPa,<br>E-modulus >2200<br>MPa, Minimal<br>solubility in saliva.                   | Certified for a<br>lifespan of 9 years,<br>reduces joint load<br>up to 90%, plaque<br>resistant.       | Suitable for permanent dental prostheses with implants, natural teeth, or both, excellent pressure absorbing capability. |
| SAPT.Nano       | Nano-reinforced<br>biopolymer reinforced with<br>graphene sheets for<br>enhanced performance. In<br>case of wear and tear re-<br>alignment is possible.<br>Indicated for up to 9 years<br>of use. | Strength >140 MPa,<br>E-modulus >3200<br>MPa, Hardness 88<br>Shore, Suitable for<br>bridges.  | Resistant to<br>fractures, offers<br>greater flexibility,<br>reduced chances<br>of breakages.          | Ideal for long-<br>term prostheses,<br>especially in cases<br>involving heavy<br>bite force.                             |

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#### COMPARISON OF FIXED TEETH RESTORATION\*

| About                         | SAPT.HighImpact                              | Zirconia Ceramic   | Porcelain Fused to<br>Metal  |
|-------------------------------|--|--|--|
| Aesthetics                    | High translucency, natural appearance        | Stable colour, very close to natural look but bulky                      | Good aesthetics but less<br>natural and bulky  |
| Repair & Fixture              | Easy to repair                               | Difficult to repair; may require replacement                             | Moderate repairability;<br>metal framework may<br>get exposed.                       |
| Elasticity                    | High elasticity; therefore, shock absorbable | Poor elasticity; therefore brittle                                       | Poor elasticity;<br>therefore brittle  |
| Cost                          | High   | Moderate   | Economical   |
| Colour Stability &<br>Look    | Excellent; resistant to discolouration       | Satisfactory; maintains colour but may age over time                     | Satisfactory; porcelain can stain over time.   |
| Expected Life                 | 9 years                                      | 5 years  | 3 - 5 years  |
| Advantages                    | Shock Absorbing, Durable                     | Does not wear-off, but prone<br>to fractures of supporting<br>structures | Economical, but ceramic chipping and fracture of supporting structures is a concern. |
| Immediate Loading of Implants | Suitable for Immediate<br>Implant Loading    | Not suitable for Immediate<br>Implant Loading                            | Not suitable for<br>Immediate Implant<br>Loading                                     |
| Hardness                      | Nearest to Natural Teeth                     | 5 - 10 times harder than<br>Natural teeth                                | 5 - 10 times harder than<br>Natural teeth  |

<sup>\*</sup>This is as per research conducted by International Institute of Dental Research Pvt Ltd based on its own experience and other researches all over the world. \*Images shared above are only for reference purposes.

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Diamond Plaza, Laxmi Narayan Shopping Centre, Opp. Railway Station, Malad (East), Mumbai - 400 097









#### Patient Results with SAPTeeth™ in one day.





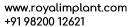


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# SAPTeeth<sup>™</sup> Technology: A Revolution to Dentistry

Today, cutting-edge research conducted by leading international dental industry experts has revealed that certain high-performance polymers offer an innovative approach to delivering optimal patient care from the outset. These polymers provide success-oriented, efficient, and capable solutions for dental treatments.

Research indicates that ceramic teeth, porcelain teeth, Ni-Cr metal teeth, and titanium teeth exert stress on bone that is 24 to 149 times greater than that of these polymers. This significant difference highlights the shock-absorbing capability of these polymers compared to other materials. Consequently, implants and jawbones experience less stress under crowns made from these polymers. Therefore, for patients with weak bone structures or low calcium levels, the use of these polymers is highly recommended.

At Royal Dental Clinics, our team of dental surgeons utilizes these polymers, known as '0.5yw,' '2yw,' and '9yw,' under the 'SAPT' technology. SAPT stands for 'Shock Absorbable Permanent Teeth.' The nomenclature reflects the expected wear time: '0.5yw' denotes an expected wear time of about half a year, '2yw' denotes two years, and '9yw' denotes nine years.

These polymers also offer the advantage of easy in-mouth repair within minutes when necessary. In cases of infection in the underlying tooth or bone, the entire bridge often does not need to be removed; only the affected part can be treated and refurbished quickly while the patient is on the dental chair. At Royal Dental Clinics, we have observed that even the '0.5yw' polymers can last between two to five years for many patients. However, in some cases, especially those with habits such as chewing paan, supari, or bruxism, the wear time may be less than six months.

Royal Dental Clinics is equipped with state-of-the-art technology, including in-house scanners, 3-D imaging systems (CBCT-OPG-Ceph), 3-D printers, digital impressions, and CAD-CAM systems (Exocad, Hyperdent, and Milling). This advanced technology ensures that our treatments are efficient, capable, and oriented towards success.







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## **WHO WE ARE**

Founded in 1983 by Dr. Arun Chamria in India, Royal Dental Clinics is now an industry stalwart practicing for over 3 decades towards building 'Dentistry with Real Smiles'. Royal Dental Clinics is Internationally recognised for contribution to 'Same Day Fixed Teeth', 'Immediate Loading of Implants' and 'Advances in Dentistry'. It is the trust of our valued 20,000+ patients who believe, 'One day of patience, many years of peace.' Our processes do not require multiple visits as we offer most cases on Same-Day Consultation and Cosmetic Treatments in 1 Day.

#### WHAT WE DO

- > Dental Implants even in less bone with teeth
- Same day smile makeover with cosmetic treatment
- ▶ Use of dentofacial aesthetics to create pleasent appearance of face & smile
- Restoration of teeth with advanced polymers and composite materials
- Bite balancing to increase efficiency of natural teeth
- ▶ Oral hygiene maintenance and removal of decay including root canals in 1 day in most cases as per consulting

#### **OUR PROCEDURES**

Patient 3D imaging & X-ray at Royal High resolution virtual design of required treatment

Fixing & beautification of teeth on same day

6 6

Advanced consulting with detailed estimate plan

3D scanning of impression for seamless case planning

Automate customised fabrication of teeth prosthesis

Revisit us for healthy maintenance of oral care

## **SOFTWARE & DESIGNING**







Milling



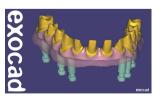
**CBCT** 



Scanning



3D Printing



3D designing

20+ Accolades Received 8,000+ Implants Done



20,000+ Patients Trust

40+ Years of Experience