

**ZenSplint**



**ZENSPLINT**

Next-Generation Nylon Splints

 **MODERN**  
Dental Europe

# WHAT IS A NYLON SPLINT?

## Nylon Splint Explained

Nylon splints represent a modern evolution in splint therapy. Manufactured using advanced 3D printing technology and medical-grade nylon, these appliances provide a lightweight and durable alternative to traditional acrylic splints.

Unlike conventional materials, nylon allows for an exceptionally thin design while maintaining high strength and flexibility. This enables improved patient comfort, easier adaptation, and reliable long-term protection against the forces generated by bruxism and clenching.

With a posterior thickness as thin as **0.5 mm**, nylon splints maximize tongue space and reduce bulk in the oral cavity, enhancing wearability and patient compliance.



### WHY USE NYLON SPLINTS IN YOUR PRACTICE?

Bruxism and clenching affect a significant portion of the population and can lead to extensive dental damage if left untreated. A high-quality splint is essential for protecting teeth, restorations, and the temporomandibular joint. remaining comfortable enough for nightly wear.

Nylon splints provide dentists with a reliable treatment solution that combines advanced material science with digital manufacturing. The result is a durable, comfortable appliance that supports effective bruxism management while improving the patient experience.

These appliances are designed to withstand the intense pressure generated by grinding and clenching while remaining comfortable enough for nightly wear.

### THE PROTECTIVE SOLUTION

A custom-fitted splint acts as a protective shield between your teeth. By absorbing the intense pressure of clenching and grinding, it safeguards your natural smile and prevents costly dental repairs before they begin.



#### Comfortable Night Wear

Ultra-thin design allows patients to sleep comfortably while protecting teeth.



#### Vapor Polishing

Creates smoother surfaces for comfort and durability



#### Precision Digital Manufacturing

Digitally designed and 3D printed for consistent fit and reproducible results



#### Advanced Nylon Technology

Modern 3D-printed nylon material combines strength, hygiene, and flexibility.



#### Durable Protection

Medical-grade nylon resists cracking and wear caused by grinding forces.



#### Patient Comfort

Lightweight and flexible material improves adaptation and daily usability.



## BENEFITS FOR YOUR PRACTICE

### Clinical Advantages

#### Ultra-Thin Design

With a posterior thickness as low as 0.5 mm, nylon splints are significantly thinner than traditional acrylic appliances, reducing bulk and increasing patient comfort.

#### Exceptional Durability

Medical-grade nylon offers high tensile strength and resistance to cracking, wear, and breakage, ensuring reliable long-term use even under heavy occlusal forces.

#### Improved Patient Comfort

The lightweight and flexible material allows patients to speak, drink water, and move their jaw more naturally compared to rigid appliances.

#### Hygienic and Biocompatible

The material is hypoallergenic and BPA-free, making it suitable for a wide range of patients and reducing the risk of irritation or sensitivity.

#### Custom Digital Manufacturing

Each splint is digitally designed and manufactured for precise fit and reproducibility, ensuring consistent clinical outcomes.

#### A BETTER EXPERIENCE FOR YOUR PATIENTS

Patients benefit from an appliance that is:

- Lightweight and comfortable to wear
- Custom-fit for their unique dentition
- Durable enough for long-term nightly use
- Designed to reduce bulk and maximize tongue space

By improving comfort and wearability, nylon splints help increase patient compliance and treatment success.

#### INDICATIONS

Nylon splints are designed to support dentists in managing a variety of clinical situations, including:

- Bruxism and teeth grinding
- Night-time clenching
- Occlusal stabilization
- Protection of restorations such as crowns, veneers, and implants
- Management of occlusal forces

These appliances act as a protective barrier between the upper and lower teeth, absorbing pressure and preventing further structural damage.



## SMOOTH AND POLISHED SURFACE

### Patented Finishing Technique

Vapor polishing is a specialized technique used to improve the surface finish of 3D-printed objects.

We have developed a **unique vapor polishing formula** in which the nylon object is placed in a chamber filled with biocompatible solvent vapors, which gently softens the outer layer of the material.

This softening allows for the smoothing of any surface imperfections, resulting in a glossy, polished appearance.



Custom  
Made



Ultra-  
thin



Light-  
weight



Hypo-  
allergenic



BPA  
free



Stainless



Comfortable

#### IMPROVED COMFORT

Our nylon devices are fabricated using advanced 3D printing technology, resulting in a posterior thickness as thin as 0.5 mm. This design is less bulky and maximizes tongue space compared to acrylic options, helping patients adjust quickly and comfortably.

#### HIGH DURABILITY

Medical-grade nylon is tough and resistant to cracking, wear, and breakage, unlike traditional acrylic, which can be brittle. With high tensile strength ( $\geq 47$  MPa) and modulus ( $\geq 1650$  MPa), these devices can handle daily use and the stress from clenching and grinding teeth.

#### FAST LABORATORY TURNAROUND

Appliances are produced with an in-lab turnaround time of approximately 5 days (excluding shipping), supporting efficient workflows for dental practices.

## NEXT-GENERATION SPLINT THERAPY

### A better Experience for Your Patients

Nylon splints combine advanced materials, digital manufacturing, and refined finishing technology to provide a modern solution for bruxism management. For dental professionals seeking a durable, comfortable, and innovative splint therapy option, nylon splints represent the next step forward in appliance design.



#### SPLINT COMPARISON

Products	Milled Splint (Hard)	Forma® Adapt Splint	Handmade Splint (Hard/Soft)	ZenSplint
Material	PMMA (Acrylic)	PMMA (Acrylic) High elastic recovery	PMMA (Acrylic) Hard/Soft dual layering is feasible	Nylon
Transparency	Nearly clear	Nearly clear	Slightly opaque	No transparency
Residual Monomer	Yes	No	Yes	No
Durability	★★★★	★★★	★★★	★★★★★
Occlusal Detailing	★★★★★	★★★★	★★★	★★★★★
Stain Resistance	★★★★	★★★	★★★★	★★★★★
Comfort	★★★★	★★★★	★★★	★★★★★
Minimum Posterior Thickness	1.5mm	1.5mm	2mm	0.5mm
Reproducibility	Yes	Yes	No	Yes
Reline-able at Chairside	Yes	Yes	Yes	No
Vapor Polishing Technology	Not applicable	Not applicable	Not applicable	Yes
Recommended Purposes	Stabilization splints; Flat plane splints; Night guards; Anterior bite plane splints	Flat plane splints; Night guards; Anterior bite plane splints	Stabilization splints; Flat plane splints; Night guards; Anterior bite plane splints	Flat plane splints; Night guards; Anterior bite plane splints
Warranty	3 months	3 months	3 months	1 year
In-lab Turnaround Time Excluding Shipping	3 days	3 days	3 days	3 days

## GET IN TOUCH

### Ready to offer your patients maximum durability?

Upgrade your workflow with ZenSplint, an ultra-thin, medical-grade nylon splint designed for strength, flexibility, and long-term reliability.

Engineered for high tensile strength and minimal thickness (down to 0.5 mm), ZenSplint provides a durable, lightweight solution for bruxism and sleep therapy while maximizing patient comfort.

**Order your nylon splint today or contact us for more information.**

#### EFFICIENT PRODUCTION

**Fast Laboratory Turnaround:** Appliances are produced with an in-lab turnaround time of approximately 5 days, excluding shipping.

#### WARRANTY

ZenSplint appliances include a **1-year warranty** covering manufacturing defects during normal intraoral use.





Trees for All

