

# FIRST DUAL-SHELL MATERIAL FOR CLEAR ALIGNERS

## DESIGNED TO DELIVER CONSISTENT FORCES WHILE ENHANCING PATIENT COMFORT<sup>2</sup>

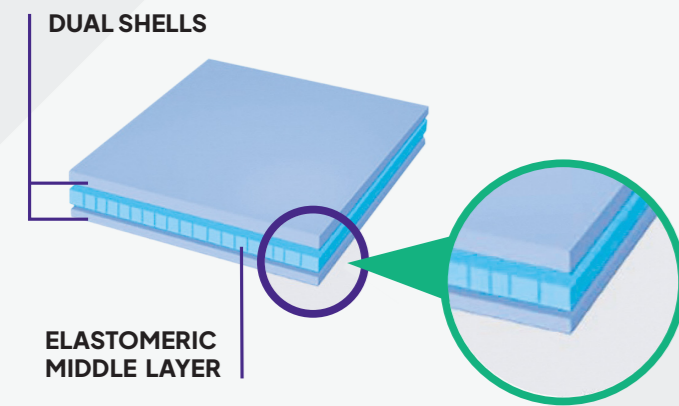
Zendura FLX is a premium, multilayer aligner material designed to deliver consistent forces while enhancing patient comfort in orthodontic treatment. Its proprietary trilaminar structure combines a resilient elastomeric core with durable outer layers, delivering higher force retention and controlled tooth movement<sup>1</sup>.

Up to  
**150% improved force retention**  
compared to monolayer materials

**40% lower initial force\*\***

**High crack resistance based on tear strength data**

**Ultra-clarity\* (99%)**



Two thin outer layer provide rigidity and force, while the inner elastomeric layer aids in patient comfort and flexibility.

**RESULT: ENGINEERED FOR PATIENT COMFORT AND CONSISTENT FORCE DELIVERY.**

\*\* Compared to tested materials.

<sup>1</sup>Effective vertical movement requires not only elasticity but also sufficient impact strength to resist deformation caused by vertical occlusal forces. Zendura FLX's hard outer shell provides the necessary strength to withstand these forces, while its inner elastic core allows for controlled tooth movement.

<sup>2</sup>Shukor NM, Shahrul AI, Norman NH (2025). Comparison of horizontal and vertical tooth movements in Erkodur vs Zendura FLX clear aligners. Arch Orofac Sci, 20(1): 29-41.

**ZENDURA | FLX<sup>®</sup>**  
CLEAR ALIGNER MATERIAL

# ENGINEERED FOR COMFORT & PERFORMANCE.

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SKU	Dimensions	Format	Thermoformer
9204-20	Zendura FLX   0.76 mm x 125 mm Round	20 Singles	BioStar/MiniStar/Drufomat
9231-20	Zendura FLX   0.76 mm x 120 mm Round	20 Singles	Erkopress
9232-20	Zendura FLX   0.76 mm x 125 mm Square	20 Singles	BioStar/MiniStar/Drufomat
9207	Zendura FLX   0.76 mm x 125 mm Round	Pouch with 10	BioStar/MiniStar/Drufomat
9229	Zendura FLX   0.76 mm x 125 mm Round	Pouch with 20	BioStar/MiniStar/Drufomat

BioStar & MiniStar are registered trademarks of Scheu.  
Drufomat is registered trademark of Dreve.  
Erkopress is registered trademark of Erkodent.

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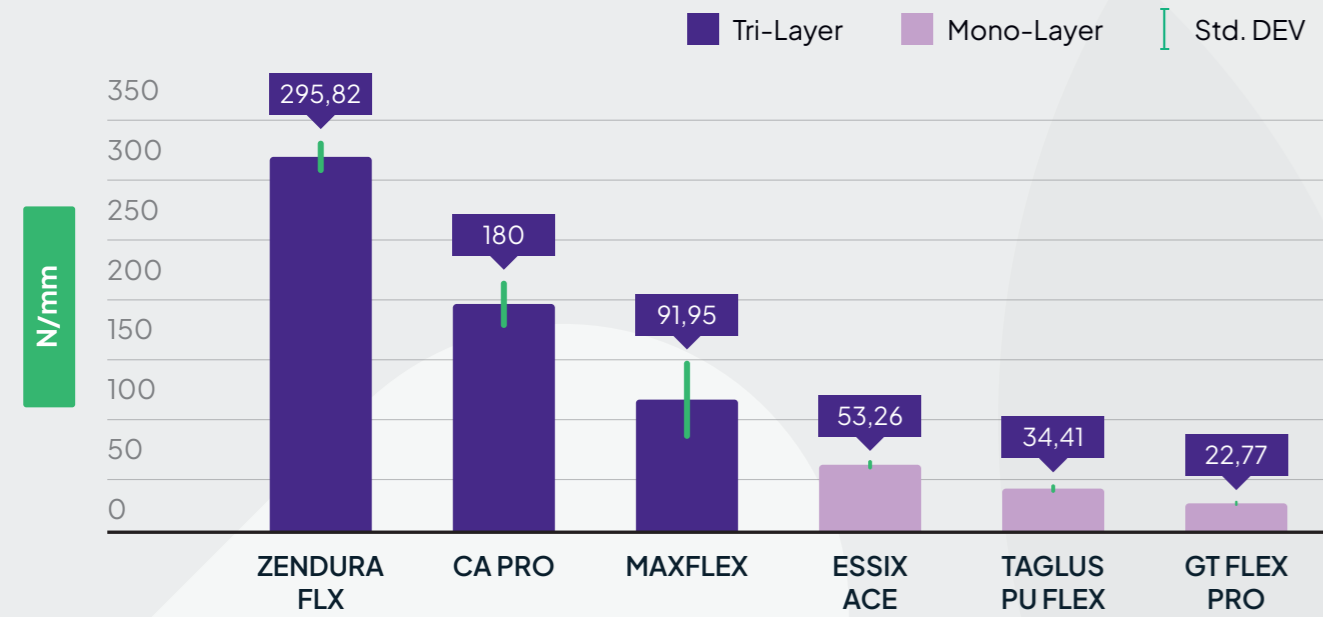
**ZENDURA**DENTAL

## TEAR STRENGTH

Zendura FLX offers higher tear strength compared to competing materials, particularly monolayer thermoplastics. This enhanced tear strength translates to greater resistance to cracking.

### Tear Strength of Thermoformed Aligner Materials\*

14 samples preconditioned in artificial saliva at 37°C for 24 hours



With an average tear strength of 295.82 N/mm, Zendura FLX is:

**64%**

stronger than CA Pro

**250%**

stronger than MaxFlex

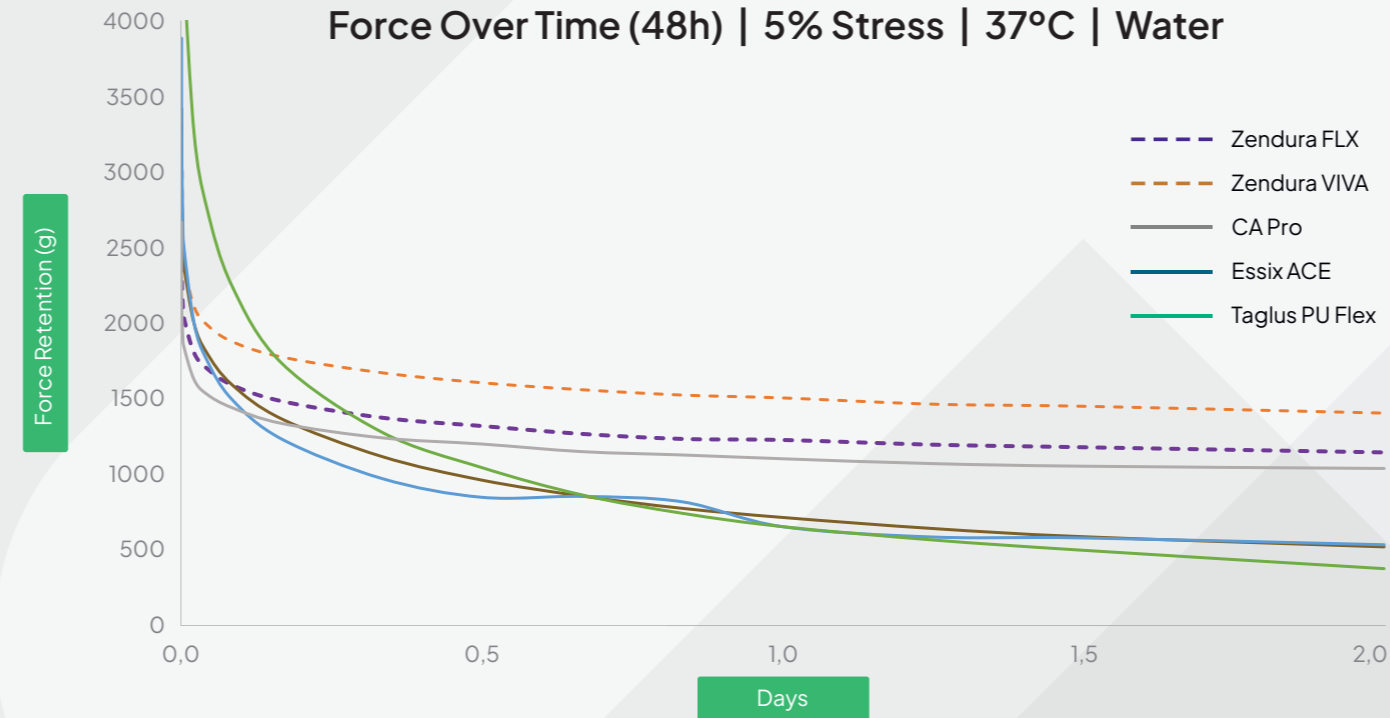
**500%**

stronger than Essix ACE

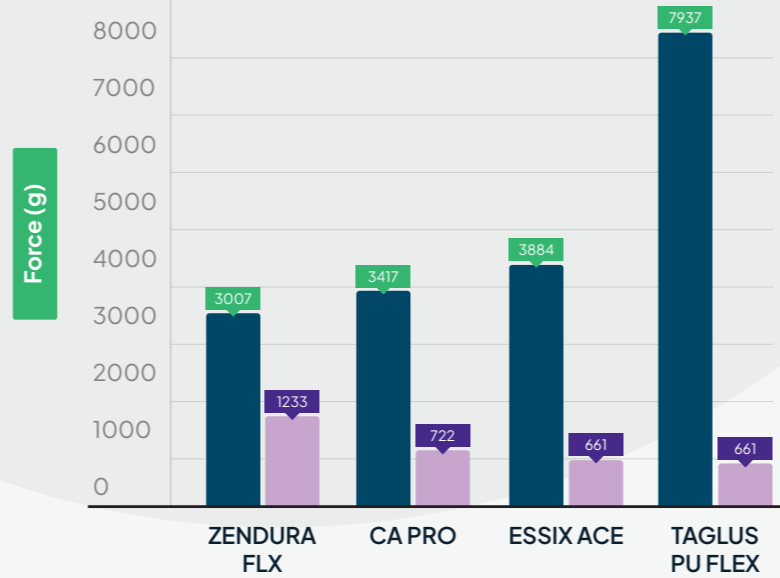
CA Pro & Duran are trademarks of Scheu-Dental GMBH. MaxFlex is a trademark of Shanghai MaxFlex Technology. Essix is a trademark of Dentsply Sirona. Taglus is a trademark of Laxmi Dental. GT Flex is a trademark of GoodFit Technologies, LLC.

## FORCE RETENTION

Force Retention refers to a material's ability to maintain force over time. Most plastics experience a rapid force drop within the first few hours, leaving insufficient force for the intended wear period. Zendura FLX is engineered differently—it starts with lower initial forces and retains them significantly better than competing materials\*, ensuring consistent performance and force delivery.



### Force: Initial vs 24 Hour\*



## FEATURES AND BENEFITS

At **time zero**, Zendura FLX starts with an initial force which is **lower than CA Pro, Essix Ace, and Taglus PU Flex**.

Zendura FLX retains force **more effectively than competitors over time**. It starts with a lower initial force and also drops the least after 24 hours.

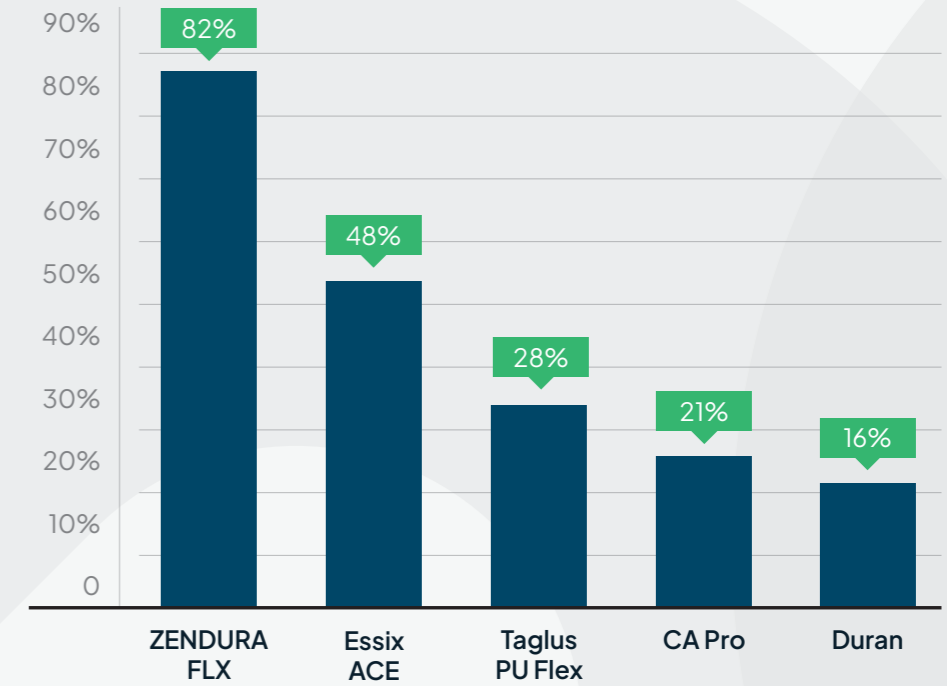
Lower initial force means **less insertion stress on teeth**, which typically translates to greater patient comfort<sup>2</sup>.

Despite the lower starting force, Zendura FLX maintains excellent force retention over time (56.8%), ensuring effective tooth movement without compromising comfort.

## ELASTICITY

Elastic recovery is the ability of material to recover to its original shape after deformation. Zendura FLX demonstrates high elasticity indicative of its ability to retain its shape over use period. When paired with tear strength data, Zendura FLX shows both, resistance to deformation and durability during treatment.

### Elastic Recovery (24h) | 37°C | Water\*



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\* Bench top data.

<sup>2</sup> The force generated by aligners is influenced by both the aligner material and the direction of movement. Multi-layer materials exhibit superior performance compared to single-layer materials, primarily because of their lower initial force, which enhances patient comfort, and their capability to maintain consistent force application even after undergoing ageing.

Elschazly TM, Bourauel C, Ismail AM, Ghoraba O, Chavanne P, Elattar H, Alhotan A. Effect of thermomechanical ageing on force transmission by orthodontic aligners made of different thermoformed materials: An experimental study. Orthod Craniofac Res. 2024 Dec;27 Suppl 2.