

NEW!

DAL Second Nature™ Partial Dentures



What are DAL Second Nature partial frameworks made with?

DAL Second Nature partial frameworks are made using Zirlux Acetal, a millable thermoplastic material that is well suited for a wide variety of removable appliances. The highly crystalline acetal copolymer possesses high tensile and flexural strength, fatigue resistance, low friction, low moisture absorption, and excellent dimensional stability.

What are the benefits of partial frameworks made from Zirlux Acetal?

DAL Second Nature partial frameworks made with Zirlux Acetal are esthetic, durable, metal-free and tooth or tissue-borne. Patients will appreciate the comfort, the ease of inserting and removing the appliance, the lack of a metallic taste, and no thermal conductivity when drinking cold or hot beverages.

How does a DAL Second Nature partial differ from Valplast or DuraFlex flexible partials?

Flexible partial dentures are tissue-borne. The rigidity and strength of the DAL Second Nature framework allow it to be supported primarily by the existing dentition.

How does a DAL Second Nature partial differ from a traditional metal partial?

The clasps on a DAL Second Nature partial are more flexible than metal clasps, so they can fully engage the undercuts. This also allows for more minimally invasive case design, as no healthy tooth structure needs to be removed to create rest preps.

How thick is the average DAL Second Nature partial?

Major connector: 0.7 mm

Saddle area: 0.5 mm

Clasp on anterior tooth: 2.0 mm where clasp joins framework, thinning to 0.7 mm at tip

Clasp on posterior tooth: 2.5 mm where clasp joins framework, thinning to 0.7 mm at tip

How much does a DAL Second Nature framework made with Zirlux Acetal weigh?

A DAL Second Nature framework weighs about 40% less than a similarly designed metal framework.

Will DAL Second Nature partials made with Zirlux Acetal discolor over time?

Zirlux Acetal absorbs virtually no water, providing years of service without discoloring or developing odor.

How sensitive to temperature are DAL Second Nature partials made with Zirlux Acetal?

The Zirlux Acetal thermoplastic material melts at 392°F so it is very stable at normal body temperatures.

Is the DAL Second Nature framework adjustable?

The material is easily and cleanly ground with the same carbide burs used to adjust denture base resin.

How do I polish a DAL Second Nature framework?

The material can be polished with pumice and rag wheel.

Can DAL Second Nature clasps be modified?

Minor adjustments to the clasps can be made chairside by heating them gently with hot air (a flame will burn them) or using pre-heated pliers.

Will a DAL Second Nature framework made with Zirlux Acetal break?

The Zirlux Acetal material has been used successfully in the mouth worldwide for 25 years. Over that time, reported breakages have been very rare, but any removable appliance can be subject to failure due to improper handling, etc. DAL provides a one year warranty if the failure is due to defects in material or workmanship.

Can I repair a DAL Second Nature framework or clasp if it breaks?

DAL has the equipment and training necessary to quickly and easy make minor repairs without having to fabricate a new appliance.

How resistant is the material to scratches?

The patient should avoid cleaning the plastic with a harsh abrasive or hard-bristled brush. Any OTC denture cleanser is safe and effective.

Physical Properties

Property	Method	Unit	Value
Density	ASTM D792	g/cm ³	1.41
Tensile Strength (New)	ASTM D638	MPa	61.00
Tensile Modulus	ASTM D638	MPa	2820.00
Flexural Strength (New)	ASTM D790	MPa	90.00
Flexural Modulus	ASTM D790	MPa	2620.00
Moisture Absorption	ASTM D570	wt%	0.22
Izod Impact, Notched	ASTM D256	ft-lb/in (J)	1.00

Testing conducted by Polymer Solutions Incorporated, Blacksburg, Virginia, USA in July 2010



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