

Ultaire™ AKP Partial Frequently Asked Questions



What is Ultaire AKP high-performance polymer?

Ultaire AKP is a new high-performance aryl ketone polymer (AKP) from Solvay Dental 360™. This material is specifically formulated to meet critical performance requirements for dental applications, including removable partial dentures.

What are the benefits of RPDs made from Ultaire AKP?

Removable partial dentures made from Ultaire AKP have similar mechanical properties to cortical bone and are tooth and tissue supported, lightweight, biocompatible, leave no metal taste in the mouth and offer pleasing aesthetics.¹

How is Ultaire AKP different from Valplast™ or other soft acrylics?

Ultaire AKP is not a flexible material. It is a rigid product indicated as a metal replacement and is provided in a disc form (known as Dentivera™ milling disc) suitable for use in a CAD/CAM digital workflow.

Is Ultaire AKP made in the U.S.A.?

Dentivera milling discs made from Ultaire AKP are manufactured in the United States of America.

Can Ultaire AKP be used for any edentulous case?

Ultaire AKP RPD frames have been successfully made for Kennedy Classes I, II and III.

AESTHETICS AND COMFORT OF ULTAIRE AKP RPDS

Why are Ultaire AKP RPD frames more aesthetically pleasing than metal-frames?

Because Ultaire AKP has tooth-like coloring, it eliminates aesthetic issues surrounding the visibility of metal.

Can the material be stained/glazed?

Ultaire AKP clasps can be stained. Normal polishing techniques are possible.

Can I use this material for other dental indications?

The Dentivera milling disc currently has FDA, CMDCCAS and EU regulatory approvals for full and partial removable dentures and overdentures.

How is this material different than PEEK?

This material is made from a PAEK-based chemistry, which is slightly different than PEEK in terms of its molecular composition, higher ductility and greater elasticity.

How stable is the material?

The properties of Ultaire AKP are not expected to change over time as long as the device is used appropriately and instructions for use are followed.

How strong is Ultaire AKP?

Strength characteristics for Ultaire AKP surpass those of acrylics and acetals that are on the market today. The flexural strength of any material used for RPDs needs to be high enough to withstand loading and not break. At 148 MPa, Ultaire AKP has flexural properties that are well above minimum requirements for denture base materials per ISO 20795 standards. Ultaire AKP is specifically designed to be supportive and have a long lifetime — well over 10 years with normal insertion and removal — but is also comfortable enough to help improve patient compliance.

Does Ultaire AKP offer multiple color options?

At this time, only one color is available.

Will there be discoloration of the material over time?

Under proper use conditions, discoloration is not expected. However, it is recommended that Ultaire AKP material be kept from direct sunlight exposure to avoid slight changes in color. Prolonged exposure to typical staining agents such as coffee may affect the color.

REMOVABLE PARTIAL DENTURE FRAMES MADE FROM ULTAIRE AKP

Many patients have metal sensitivities. Will this be an issue for RPD frames made from Ultaire AKP?

Ultaire AKP is not made from metal, but rather a high-performance polymer similar to those used in spine and hip implants. This biocompatible material is monomer free and because of that there is a reduced occurrence of sensitivity issues, making Ultaire AKP an excellent choice for patients with metal sensitivities.¹

How thick is the Ultaire AKP frame as compared to metal?

The Ultaire AKP frame is slightly thicker than metal. This is to ensure that the RPD has proper rigidity, which is required for this application. Patient testing has indicated that the slightly thicker frame has not affected comfort of the frame, nor any functionality such as speaking or eating.

How is an Ultaire AKP RPD different from a metal RPD?

An RPD made of Ultaire AKP is lighter in weight, is more comfortable and is more aesthetically pleasing as it is tooth-colored. It is non-corrosive, non-irritating and leaves no metallic taste in the mouth.

How much does an Ultaire AKP frame weigh?

A complete, post-processed Ultaire AKP frame is about one-third the weight of a similarly designed metal frame.

Why are clasps designed shorter?

The Ultaire AKP clasp should be made shorter and thicker than typical metal clasps, while encircling the tooth at least 200 degrees. This allows for better retention by increasing the rigidity of the clasp arm. The clasp width and thickness can be adjusted, but should remain between 1.25-3 mm.

CARE AND REPAIR OF ULTAIRE AKP RPDS

How hard is it to adjust the clasps? Can clasps be repaired if they break?

Frames made from Ultaire AKP may be altered with existing dental tools. Avoid using excessive force when altering the frame. Frames and clasps cannot be bent. Adjustments or tightening should not be necessary with an RPD made out of Ultaire AKP once it is designed and fitted. Clasps can be repaired if they break by doing a standard pickup of the partial in the mouth.

Can I repair an Ultaire AKP RPD frame if it breaks?

A frame made from Ultaire AKP is strong enough to withstand normal forces (i.e. mastication, insertion forces). However, the frame could break if extreme forces are applied to it. If a frame fractures, it will need to be remilled.

How are frames made from Ultaire AKP cleaned?

Standard framework RPD cleaning recommendations and materials can be used with Ultaire AKP partials.

What if the patient loses another tooth; can you add onto it?

Teeth can be added under certain circumstances. The process is similar to the procedures for adding teeth to metal frames and are based on modifying the acrylic.

How are the acrylic and teeth attached to an Ultaire AKP frame?

The acrylic portion of the denture is mechanically adhered to the polymer frame and no chemical or adhesive bond is required. Teeth are set within the acrylic as with traditional cast-frames and the same teeth options can be used.

How resistant is the material to scratches and heat?

Lab and clinical trials have shown that Ultaire AKP has a very high resistance to scratches; however, use of sharp tools or scraping of the surface should be avoided. Ultaire AKP will withstand temperatures up to 300°C (575°F).

¹ Solvay biocompatibility testing on file.

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