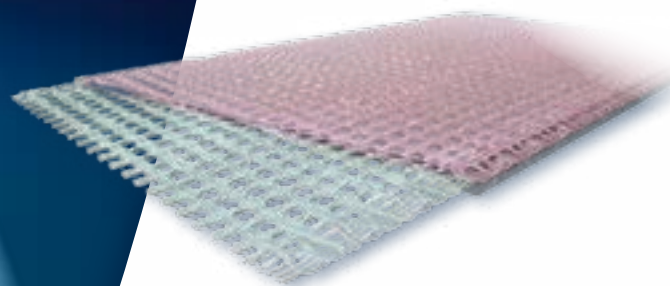
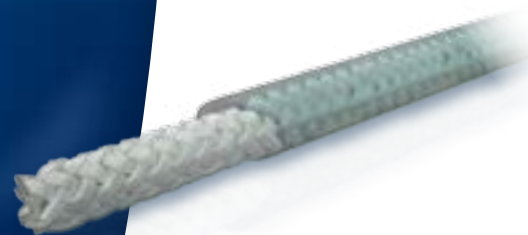
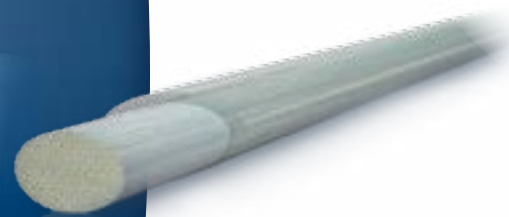
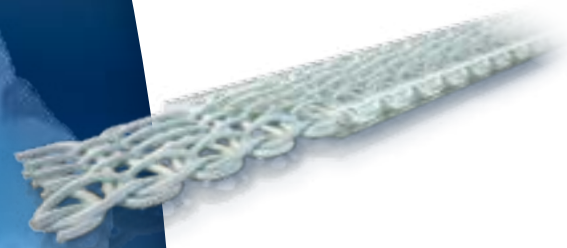
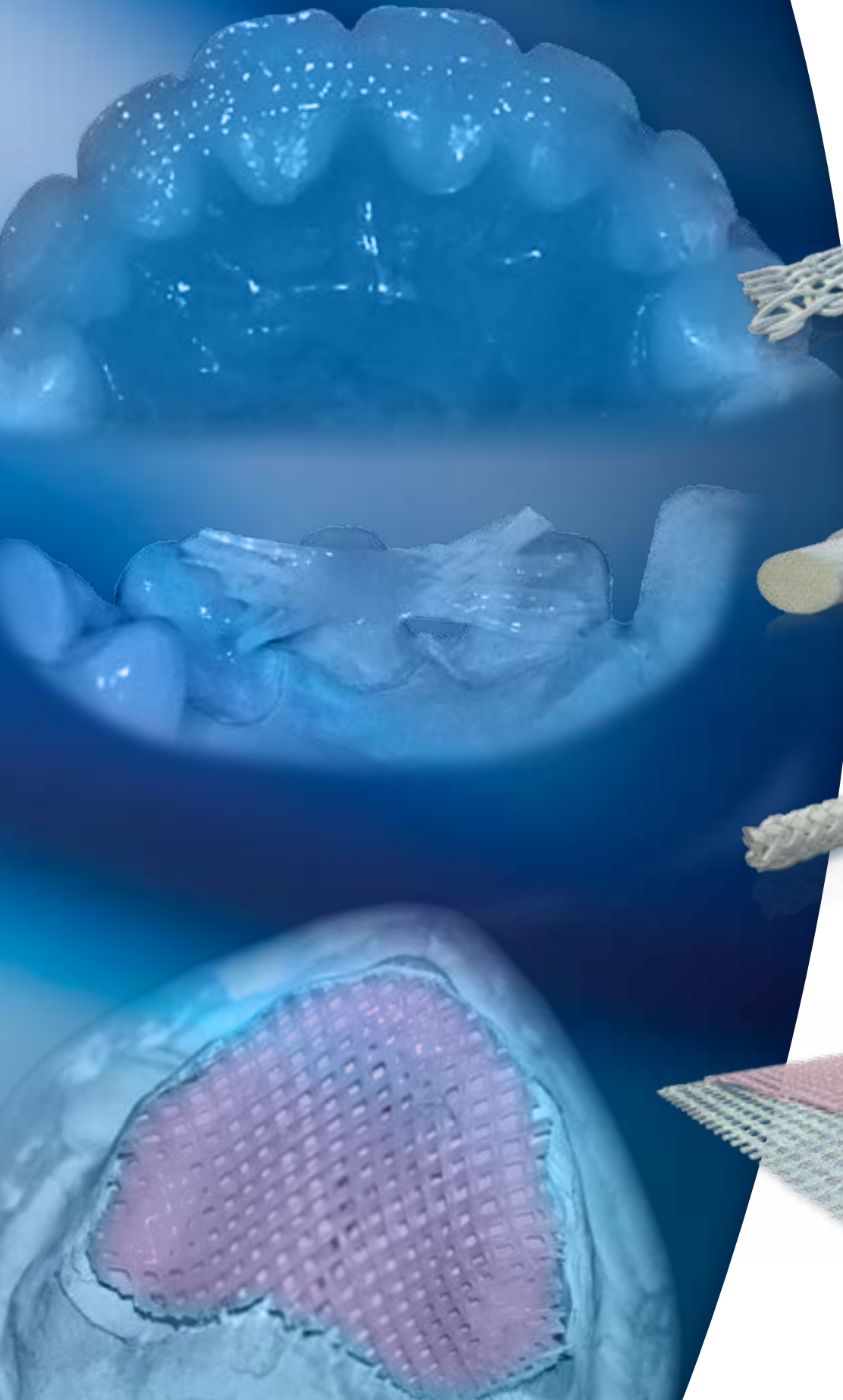


# QUARTZ SPLINT®



*Our fiber expertise  
is your strength™*

[www.rtdental.com](http://www.rtdental.com)



# QUARTZ SPLINT® MESH

QUARTZ SPLINT® MESH has been especially designed for reinforcing acrylic resin dentures.

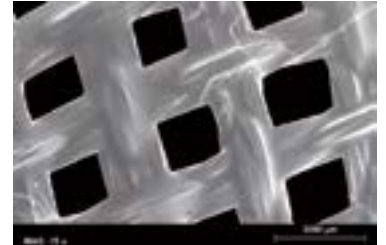
QUARTZ SPLINT® is pre-impregnated with a proprietary methacrylic resin matrix which can chemically bond to the majority of composite. The industrial impregnation and the know how of RTD in fiber technology prevent from having bubbles and voids within the material.

The special mesh allows a perfect integration within the acrylic resin with a high esthetic effect and a tremendous reinforcement.

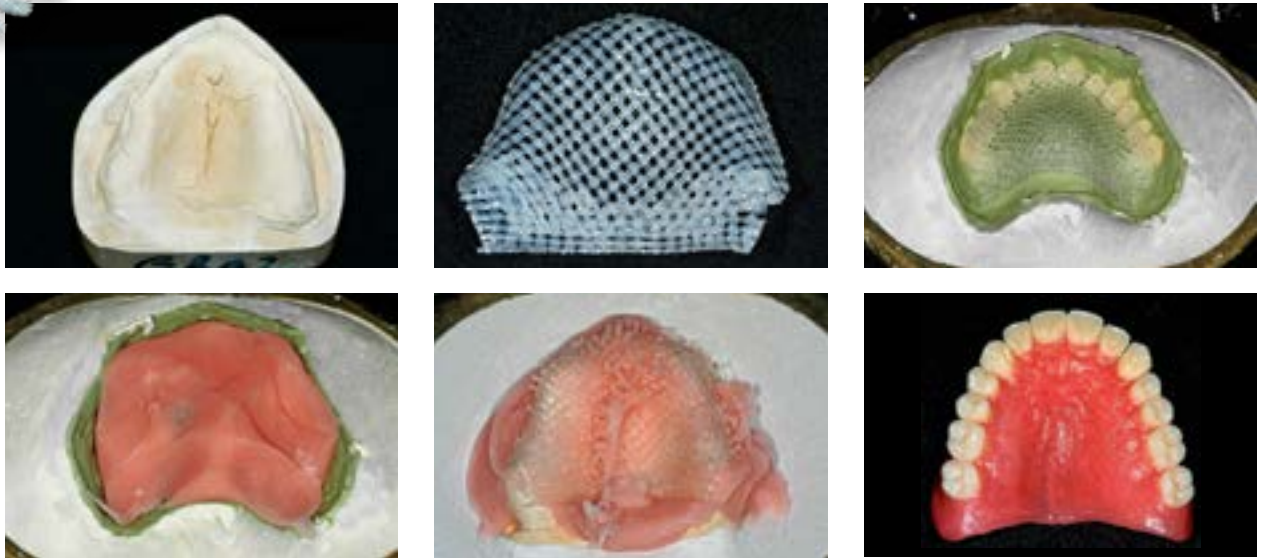
It gives also an easy adaptation to the oral curves. It can be custom-formed easily before curing.

QUARTZ SPLINT® MESH can be used routinely for denture reinforcement and for denture repair.

QUARTZ SPLINT® MESH very advantageously replaces the standard metal framework, which is subject to corrosion and show-through. The modulus of elasticity of QUARTZ SPLINT® MESH is close to acrylic resin and this prevents de-lamination and micro-leakage and offers long lasting results.



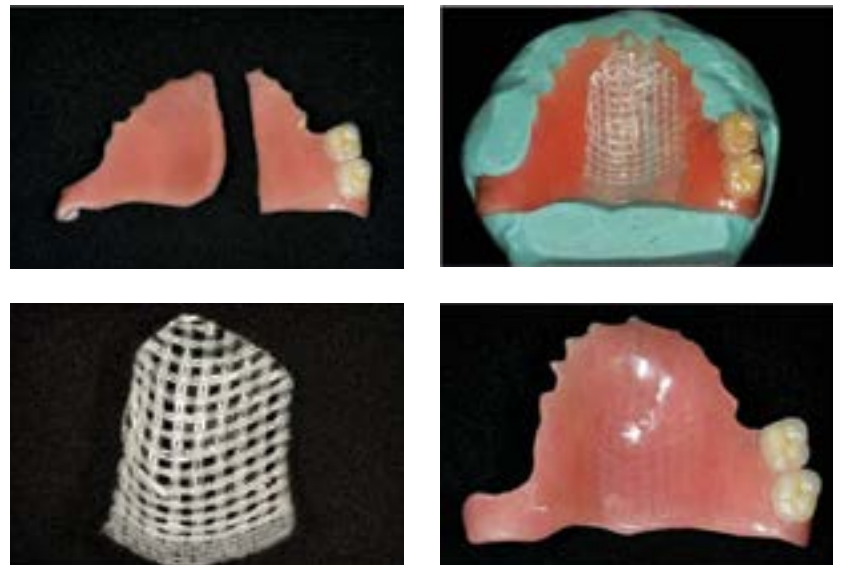
Standard denture fabrication protocol with **QUARTZ SPLINT® MESH** reinforcement



\* See full technique at [www.rtdental.com](http://www.rtdental.com)

Pictures: Courtesy of Dental ID (France)\*

Partial denture repair with **QUARTZ SPLINT® MESH** reinforcement



Pictures: Courtesy of Dental ID (France)\*



**QUARTZ SPLINT® MESH**

**REFERENCE**

**5010083** REFILL 2 QUARTZ SPLINT® MESH 55 x 80 mm

# QUARTZ SPLINT® WOVEN

The woven "QUARTZ SPLINT®" has been specially designed to attain a strong and effective splint or span using very little space and bulk of material. The thickness is just 0.4 mm and with its width of 2.5 mm is usable in the majority of situations.

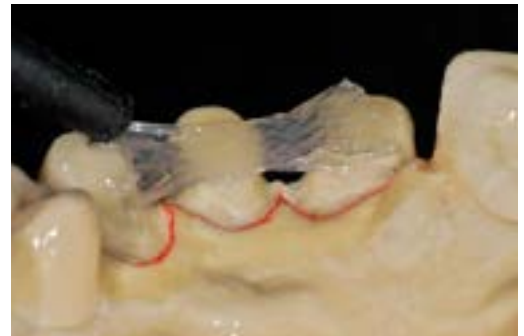
**Two lengths 80 mm and 120 mm are available.**

The *near-zero* memory property and the comfortable working time makes the "QUARTZ SPLINT®" one of the easiest materials to use in complex clinical situations. The woven material can be mixed and matched with the **UD** (Uni-directional), Rope and Mesh **QUARTZ SPLINT®** product for the widest range of applications in dentistry.

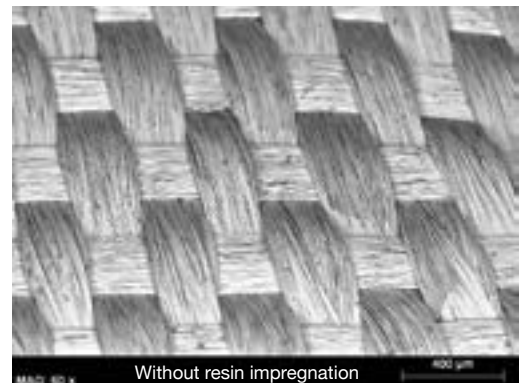
**QUARTZ SPLINT®** is pre-impregnated with a proprietary resin matrix which chemically bonds to composite. The vast experience of RTD in fiber technology ensures that the impregnation is bubble and void free, rendering the material with the maximum possible strength.

## Near Zero Memory

The near-zero memory of the woven and the rope **QUARTZ SPLINT®** is demonstrated in the following pictures. The material holds its new shape without any polymerization.



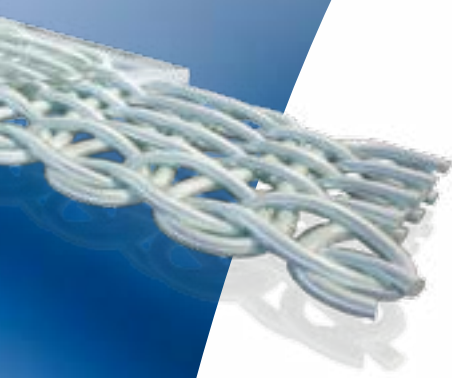
Pictures: Courtesy of Dental ID (France)



SEM Pictures: RTD (France)



Pictures: Courtesy of Dr Ajay Kakar

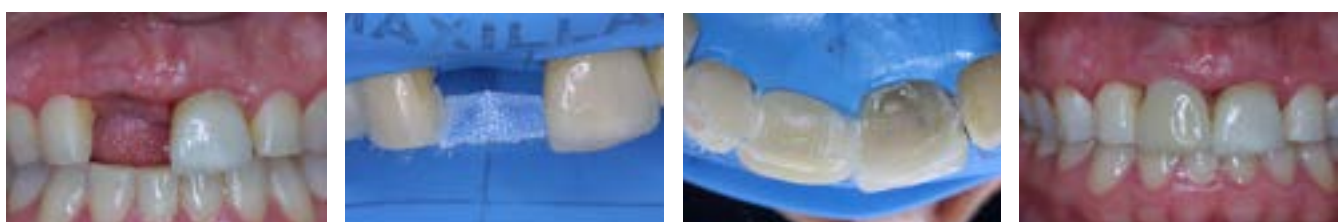


## QUARTZ SPLINT® WOVEN reinforces an anterior bridge



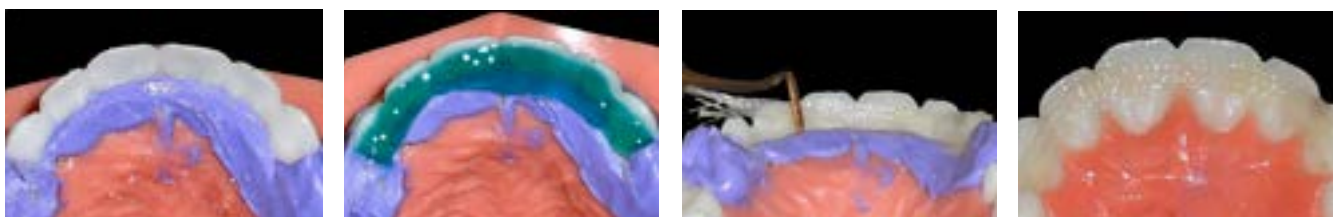
Pictures: Courtesy of Dental ID (France)\*

## QUARTZ SPLINT® WOVEN Natural tooth replacement



Pictures: Courtesy of Dr Kogan (Mexico)\*

## QUARTZ SPLINT® WOVEN Simplified mobile teeth stabilization



\* See full technique at [www.rtdental.com](http://www.rtdental.com)

Pictures: Courtesy of Dr Brown (USA)\*



REFERENCE	
5011106	QUARTZ SPLINT® INTRO KIT (5 UD Ø 1,0 mm x 80mm + 5 WOVEN 2,5 mm x 80mm + 1 QS RESIN 1.5g + 1 QS FLOW™ 2g + ACCESSORIES)
5011110	QUARTZ SPLINT® INTRO KIT (5 UD Ø 1,5 mm x 80mm + 5 WOVEN 2,5 mm x 80mm + 1 QS RESIN 1.5g + 1 QS FLOW™ 2g + ACCESSORIES)
5030110	QUARTZ SPLINT® INTRO KIT (10 WOVEN 2,5 mm x 80mm + 1 QS RESIN 1.5g + 1 QS FLOW™ 2g + ACCESSORIES)
5010053	REFILL 5 QUARTZ SPLINT® WOVEN 2,5 mm x 80 mm
5010056	REFILL 5 QUARTZ SPLINT® WOVEN 2,5 mm x 120 mm

# QUARTZ SPLINT® UD

**QUARTZ SPLINT® UD** has the highest density of fiber (~50 % fiber in weight) in order to achieve maximum performance.

**QUARTZ SPLINT® UD** is recommended for cases which are submitted to very high loads.

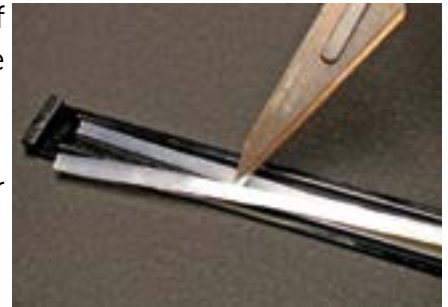
**QUARTZ SPLINT® UD** diameter can be easily reduced by separating the fibers along the axis. A flat or round shape can be done.

**QUARTZ SPLINT® UD** is pre-impregnated with a proprietary resin matrix which chemically bonds to composite. The vast experience of RTD in fiber technology ensures that the impregnation is bubble and void free, rendering the material with the maximum possible strength.

**QUARTZ SPLINT® UD** can increase the strength of a composite bridge by up to 300% (Fig. 1)

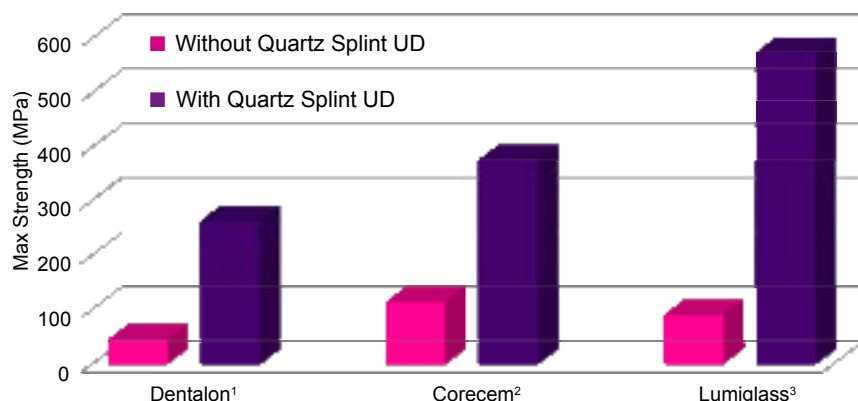
A special development has been achieved to offer user a long working time.

**QUARTZ SPLINT® UD** is available in 1,0 mm and 1,5 mm with a lengths of 80 mm. In addition a length of 120 mm is available in diameter of 1,5mm, to fit any situation.



Picture: Courtesy of Dental ID (France)

Flexural Strength\* (Fig. 1)

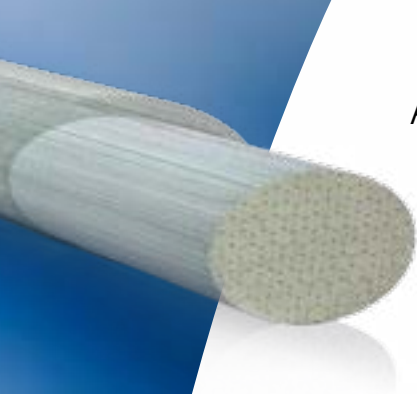


1 Laboratory resin from Heraeus Kulzer

2 Core build up & cement from RTD

3 Light cure composite from RTD

\* Internal data

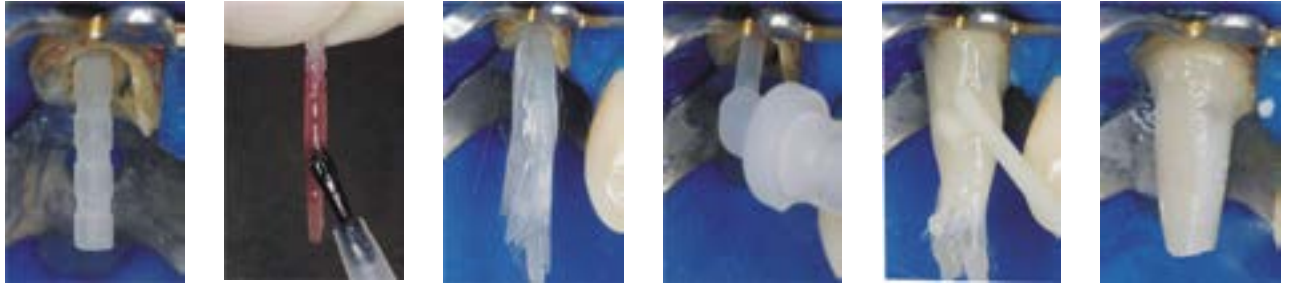


## Anterior bridge with **QUARTZ SPLINT® UD** reinforcement



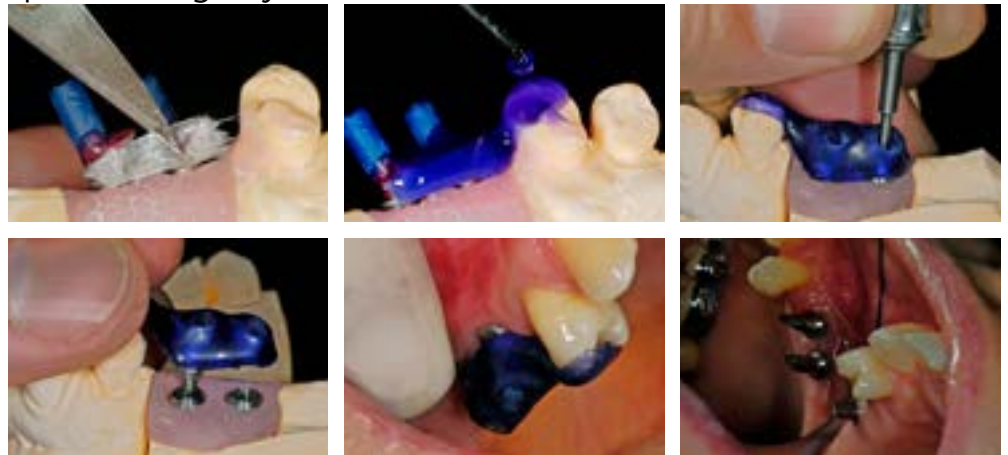
Pictures: Courtesy of Dental ID (France)\*

## "Fiber Augmented Post" using fiber post and **UD**



Pictures: Courtesy of Dr Alejandro Bertoldi Hepburn (Chile)\*

## Implants positioning key with **QUARTZ SPLINT® UD**



\* See full technique at [www.rtdental.com](http://www.rtdental.com)

Pictures: Courtesy of Dental ID (France)\*



REFERENCE	
<b>5011106</b>	<b>QUARTZ SPLINT®</b> INTRO KIT (5 <b>UD</b> Ø 1,0 mm x 80mm + 5 <b>WOVEN</b> 2,5 mm x 80mm + 1 <b>QS RESIN</b> 1.5g + 1 <b>QS FLOW™</b> 2g + ACCESSORIES )
<b>5011108</b>	<b>QUARTZ SPLINT®</b> INTRO KIT (5 <b>UD</b> Ø 1,0 mm x 80mm + 5 <b>UD</b> Ø 1,5 mm x 80mm + 1 <b>QS RESIN</b> 1.5g + 1 <b>QS FLOW™</b> 2g + ACCESSORIES )
<b>5011110</b>	<b>QUARTZ SPLINT®</b> INTRO KIT (5 <b>UD</b> Ø 1,5 mm x 80mm + 5 <b>WOVEN</b> 2,5 mm x 80mm + 1 <b>QS RESIN</b> 1.5g + 1 <b>QS FLOW™</b> 2g + ACCESSORIES )
<b>5020110</b>	<b>QUARTZ SPLINT®</b> INTRO KIT (10 <b>UD</b> Ø 1,5 mm x 80mm + 1 <b>QS RESIN</b> 1.5g + 1 <b>QS FLOW™</b> 2g + ACCESSORIES )
<b>5010048</b>	REFILL 5 <b>QUARTZ SPLINT® UD</b> Ø 1,0 mm x 80 mm
<b>5010049</b>	REFILL 5 <b>QUARTZ SPLINT® UD</b> Ø 1,5 mm x 80 mm
<b>5010055</b>	REFILL 5 <b>QUARTZ SPLINT® UD</b> Ø 1,5 mm x 120 mm

# QUARTZ SPLINT® ROPE

The **QUARTZ SPLINT® ROPE** is indicated for bridge reinforcement and denture repair. It can be used alone or in association with **QUARTZ SPLINT® MESH**.

The rope format of the splint has a much larger quantitative volume of the splint fibres and they are intertwined to provide much greater strength and resistance to any kind of fracture. This material is suggested for any kind of laboratory splint fabrication or for a clinical case where the splint is running across the occlusal surfaces.



SEM Pictures: RTD (France)

This splint is recommended for situations where there is extensive tooth damage coupled with periodontal damage to enhance the stabilization strength..

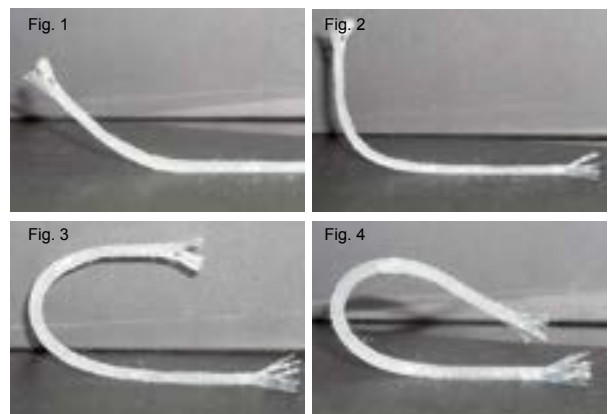
**QUARTZ SPLINT® ROPE** is pre-impregnated with a proprietary resin matrix which chemically bonds to composite. The vast experience of RTD in fiber technology ensures that the impregnation is bubble and void free, rendering the material with the maximum possible strength.

The high-strength quartz fibers used are the same one has our award-winning fiber posts.

## Near Zero Memory

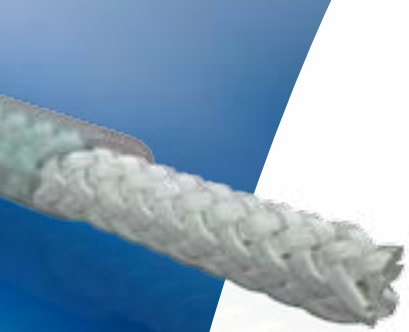
The zero memory allows it to be adapted extremely easily around a curved without polymerisation (Figs. 1 – 4).

Once ideal adaptation has been achieved, it can be polymerised in that position and then layered with micro/nano composite to complete the splint.



Pictures: Courtesy of Dr Ajay Kakar





## QUARTZ SPLINT® ROPE full bridge's reinforcement



\* See full technique at [www.rtdental.com](http://www.rtdental.com)

Pictures: Courtesy of Dental ID (France)



### REFERENCE

<b>5040110</b>	<b>QUARTZ SPLINT® INTRO KIT (10 ROPE Ø 1,5 mm x 80 mm + 1 QS RESIN 1.5g + 1 QS FLOW™ 2g + ACCESSORIES)</b>
<b>5010070</b>	<b>REFILL 5 QUARTZ SPLINT® ROPE Ø 1,5 mm x 80 mm</b>

# QS FLOW



QS FLOW is a flowable nano-hybrid, light-cured composite especially designed for use with fiber products such as QUARTZ SPLINT, for the stabilization / splinting of mobile teeth. The handling properties have been optimized to allow placement without slumping or dripping.

Mechanical Properties are similar to other flowable resins, but radiopacity is DOUBLE that of the typical resin of this type.

QS FLOW is also appropriate for Core Build Up.

It is based on methacrylate resin with nano inorganic fillers of 0,01 - 0,7  $\mu\text{m}$  to allow an easy polish.



PHYSICAL & MECHANICAL PROPERTIES	
SHADE	A2 VITA® Classic
DEPTH OF CURE	5mm (20s 1200mW/cm <sup>2</sup> )
FLEXURAL STRENGTH (ISO 4049)	107 +/- 11 MPa
COMPRESSIVE STRENGTH	285 +/- 41 MPa
KNOOP HARDNESS	27
RADIOPACITY (ISO 4049)	400% Al

## Core Build Up.



## Mobile teeth splinting.



Pictures: RTD (France)\*

\* See full technique at [www.rtdental.com](http://www.rtdental.com)

Pictures: RTD (France)\*

## QUARTZ SPLINT RESIN

To re-wet the QUARTZ SPLINT Fibers, or make the fibers wetter. It is exactly the same resin that is included in the pre-wetted QUARTZ SPLINT.



## SEALBOND ULTIMA Universal Light Cure adhesive

SEALBOND ULTIMA is on purpose a 5th generation bonding system in order to present the best proven results. SEALBOND ULTIMA is compatible for use with light-cure, dual-cure and chemical-cure cements and composites.



## QUARTZ SPLINT SCISSOR





Kevlar Cutter with breaker notch. Especially designed for cutting glass and Quartz Fibre with very sharp and long life cutting



REFERENCE	
5010001	REFILL 2 QUARTZ SPLINT® RESIN Syringe + Accessories
5000020	REFILL 2 QS FLOW™ Syringe + Accessories
1030410	REFILL SEALBOND ULTIMA Universal Light Cure adhesive (4,5 ml)
5010010	QUARTZ SPLINT® Scissor
5010200	REFILL 15 Tips for QUARTZ SPLINT® RESIN
5010020	REFILL 15 Tips for QS FLOW™

## Indications by Type

■ Recommended  
□ Possible

Structure		Diameter / Width (mm)	Length (mm)	Indications
	UD	1.5, 1.0	80	Reinforcement of permanent composite bridges Reinforcement of temporary acrylic bridges Fiber-Augmented Fiber Post Technique Replacement of missing teeth (with natural or denture teeth or composite) Splinting of mobile teeth (post-periodontal or trauma) Implant positioning key
	WOVEN	2.5	80	Splinting of mobile teeth (post-periodontal or trauma) Post orthodontic treatment retainer Space maintainer Implant positioning key Replacement of missing teeth (with natural or denture teeth or composite) Reinforcement of permanent composite bridges Reinforcement of temporary acrylic bridges
	ROPE	1.5	80	Chair-side occlusal splints in very mobile teeth Reinforcement of permanent composite bridges Reinforcement of temporary acrylic bridges
	MESH	55	80	Fabrication /reinforcement of full or partial acrylic denture Repair of full or partial acrylic denture



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*Our fiber expertise  
is your strength™*

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