



WDR|Scientific®

KISSCare ULTRA®

WDR|Scientific, LLC



Reduce or Eliminate Plaque

WDR|Scientific, LLC

World Wide Distributor of

KISSCare ULTRA®

Self Bonding Silicone Polymer for Dental Use

Contents © Copyright by WDR|Scientific, LLC and Beach Quest Scientific, LLC – All Rights Reserve

Oral Bacteria and Bio-Films

**It's agreed- Bacteria, Plaque
and Biofilms are
here for the long run.**

Bacteria, Plaque and Bio-Film

**People who have
No teeth
have No Plaque**

Bacteria Plaque and Biofilms

People who have Teeth

People who have Dentures

People who have Implants

And Other Dental Restorations

Can and Do Develop Plaque and Biofilms

Bacteria Plaque and Biofilms

- **Dental plaque** is a biofilm, usually a pale yellow, that develops naturally on the teeth. Like any biofilm, **dental plaque** is formed by colonizing bacteria trying to attach themselves to the **tooth's** smooth surface.
- **A Biofilm** is a well organized, cooperating community of microorganisms. The slime layer that forms on rocks in streams is a classic example of a biofilm. *So is the plaque that forms in the oral cavity.*

Research into Biofilms

- Oral Biofilms need a hard surface to develop (teeth or restorations).
- Plaque and Biofilms harbor bacteria which protect themselves with a resistant matrix of bio-mater.
- It is estimated that it takes upwards of 1,000 times more antibiotic to eliminate biofilms than free floating bacteria.¹

Current Elimination Methods

- Regular tooth brushing
 - *Removes food, light plaques but they reform quickly*
- Regular Flossing
- Antibiotic mouth washes
- Manual or Ultrasonic scaling
 - *Immediate but temporary removal- plaques quickly reform*
- Antibiotic gingival packing
 - *Rarely effective over long term*

Is there a better solution?

Yes!

We can eliminate the ability of the
Plaque or Biofilms
to adhere to a HARD SURFACE

*We can seal intact and damaged tooth enamel,
restorations and dentures placing a non stick protective
surface that resists attachment of
Plaques and Biofilm formation.*

Self Bonding Silicone Polymer

- Research shown by **Sang E. Park¹, DDS**, et al that **Self Bonding Silicone Polymers can seal Dentures** and other oral surfaces to prevent c.Albicans and other similar pathogenic bacteria, from adhering to the hard surfaces of dentures in the mouth.
- **Where bacteria, plaque and biofilms can not stick, they can not exist, and are handled by the body's natural defense systems.**

What is Self Bonding Silicone Polymer?

- Silicone is the most inert material known to man.
- Silicone has a long and valued history in medicine and health care.
- Self Bonding Silicone Polymer is a catalytically enhanced polymer that opens the silicone molecule and allows a portion of the silicone to stick to one surface while presenting a resistant surface to the other.

KISSCare ULTRA®

Self Bonding Silicone Polymer

- Invented by **Keith Kent, DMD** in the 1980's
- Originally developed as a **dental coating**
- A Pure biomedical grade silicone gel polymer
- Applied
 - *After a through cleaning*
 - *With a simple burnishing technique*
 - *With simple available instruments*
- **No curing or dry time**

Amazing Chemistry

One side sticks to a substrate

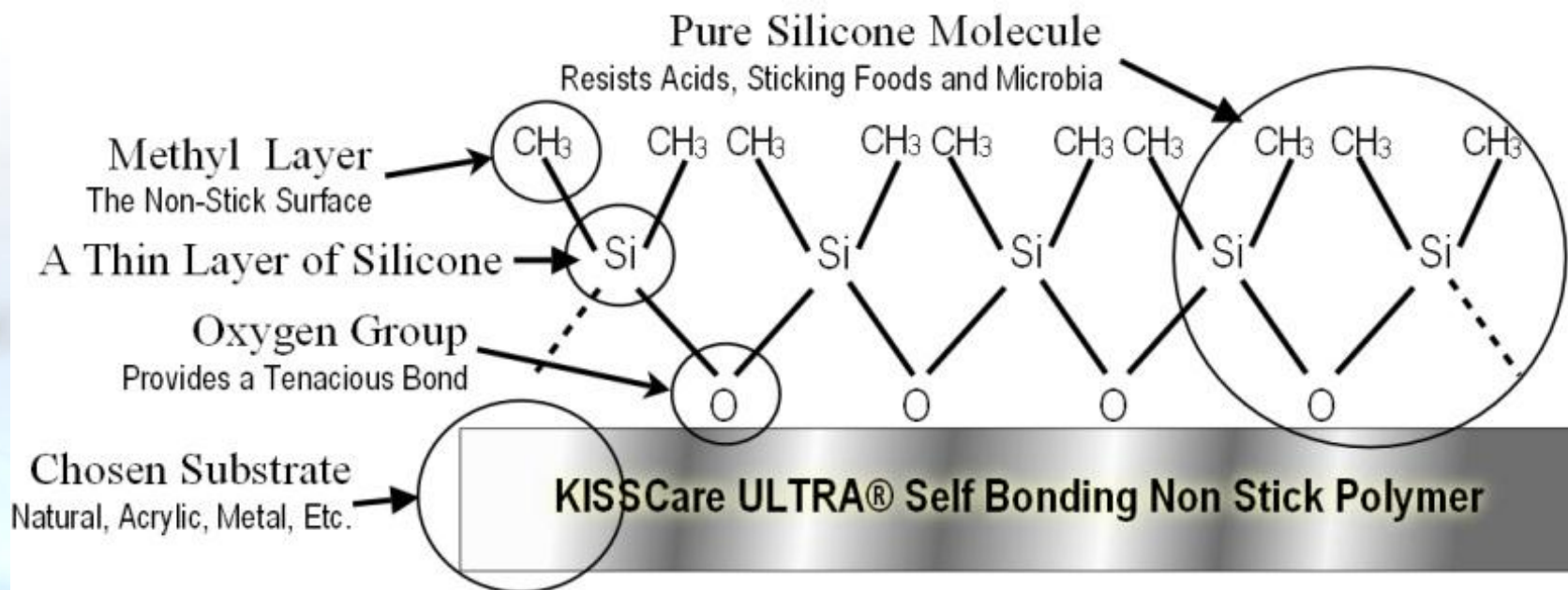
The Other Doesn't!

Amazing Dual natured polymer is so unique it's
Patented:

US Patents

4623593 & 4839456

Introducing KISSCare ULTRA®



A Panacea?

NO

- The Silicone, once applied will last many months.
- While **very sturdy**, the Silicone Polymer is subject to micro abrasion and physical wear. Physical destruction of the bonded surface by other means can affect the coating.
- The Silicone should be re-applied after every cleaning or other physical disturbance to the coated surface.

Practice Builder – You Bet

- The Silicone can be billed through regular insurance provisions as
- Anti Staining coating or as a De-sensitizer.
- This material makes Patients HAPPY
- Food and candy won't stick to teeth or restorations.
- Dentures remain fresh with improved retention
- The Silicone soothes and protects oral tissues as well.

Five Minutes

- After thoroughly cleaning the intended surface of application
- You can apply a protective coating to two full arches in ***less than five minutes.***
- ***No curing time***
- ***No drying time***
- A small amount of material goes a long way
- Once applied it's ready to begin service.

Patient Benefits

- Seals Tooth Enamel, Restorations, Implants and Dentures
- Desensitizes
- Blocks Staining
- Resists acids
- Food, candy, bacteria and biofilms can't stick
- Improves Denture retention through Hydrophobic actions and wettability
- Soothes and protects oral tissues as well

But how does it work?

The Self Bonding Silicone Polymer is *Super Hydrophobic* and *Mono Molecular*

The Silicone changes the surface to which it is applied to **pure inert Silicone Polymer One Molecule Thick**

When applied to a surface substrate- Natural or artificial

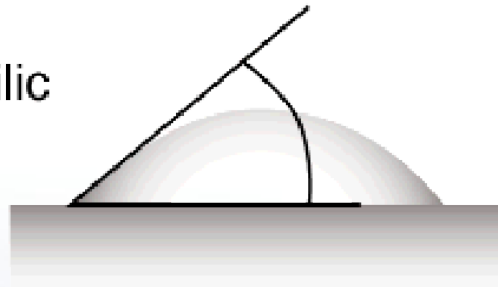
- The Silicone Polymer **seals** the surface to which it is applied
- The Silicone Polymer is *Super Hydrophobic with a contact angle of over 120°*
- The Surface is **Gas Permeable**
- The Surface **Blocks Stains**
- **The new surface attracts Oxygen**

The product **BLOCKS** the ability of oral microbia, biofilms and food from adhering to the surface of the coated substrate.

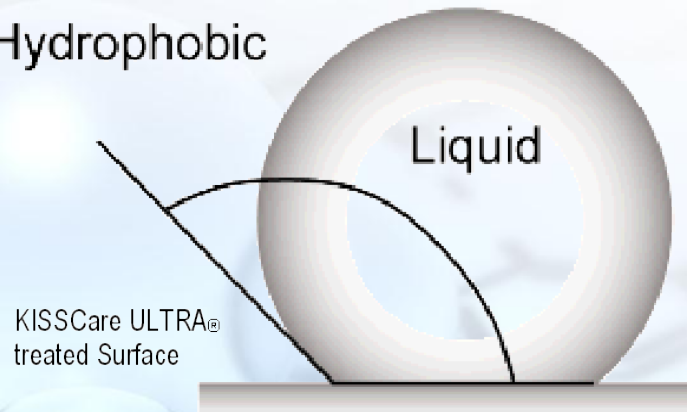
They can't stick to the Silicone surface!

Super Hydrophobic KISSCare ULTRA®

Hydrophilic



Hydrophobic



“Hydrophilic” versus “Hydrophobic” contact angles
on KISSCare ULTRA® treated surface

Won't any Silicone do this?

NO

- Normal Silicone polymers are SO inert they won't last five minutes in the oral environment before being washed away.
- Only Self Bonding Silicone Polymers that have been treated with Trade Secret and Patented methods will provide the above benefits.

Hey- What about Teflon®?

- Teflon®* polymers are indeed very non stick
- Fluorine based, Teflon® has been shown by the US Environmental Protection Agency to migrate from it's treated surfaces and is a known carcinogenic.
- Teflon® can only be applied with harsh chemicals (poisonous) or intense heat and mechanical bonding methods which are too dangerous and outside of the scope of the Dental Profession.

TEFLON® is a Registered Trademark od DUPONT®

Where can I get Self Bonding Silicone Polymers for My Practice?

You can obtain the amazing

KISSCare ULTRA® product directly from:

WDR|Scientific at:

www.wdrscientific.com

1-800-653-0683

Citations

1- **Costerton JW.** *Introduction to biofilm.* Int J Antimicrob Agents 1999:11:217-221.

2- **Sang E. Park, DDS, MMSc Hans-Peter Weber, DMD, Dr Med Dent Shigemi Ishikawa-Nagai, DDS, MSD, PhD**
Self-Bonding Polymers as Surface Coatings of Restorative Resins to Prevent Staining
Harvard. The Journal of Clinical Dentistry; Vol. XVII, No.5: 134-137, 2006

Sang E. Park, DDS, MMSc, Ryan Blissett, DMD, Srinivas M. Susarla, DMD, & Hans-Peter Weber,
DMD, Dr Med Dent. *Candida albicans Adherence to Surface-Modified Denture Resin Surfaces*
Journal of Prosthodontics ;17 (2008) 365–369

3- **Keith Kent, DMD.** The Science of Silicone Polymers
KissPolymers.com 1998-2014

Additional References

1. [Dye BA, Li X, Beltran-Aguilar ED. Selected oral health indicators in the United States, 2005-2008. NCHS Data Brief. 2012 May;\(96\):1-8.](#)
2. [Eke PI, Dye BA, Wei L, Thornton-Evans GO, et al. Prevalence of periodontitis in adults in the United States: 2009 and 2010. J Dent Res. 2012 Oct;91\(10\):914-920.](#)
3. [DuPont GA. Understanding dental plaque: biofilm dynamics. J Vet Dent 1997;14: 91-94.](#)
4. [Slavkin HC. Biofilms, microbial ecology and Antoni Van Leeuwenhoek. J Am Dent Assoc 1997;128: 492-495.](#)
5. [Marsh PD, Bradshaw DJ. Dental plaque as a biofilm. J Industrial Microbiology 1995;15: 169-175.](#)
6. [Costerton JW, Lewandowski Z, DeBeer D, et al. Biofilms, the customized microniche. J Bacteriology 1994;176: 2137-2142.](#)
7. [Armitage GC. Basic features of biofilms-why are they such difficult therapeutic targets? Ann R Australas Coll Dent Surg. 2004 Oct; 17:30-34.](#)
8. [Shearer BG. Biofilm and the dental office. J Am Dent Assoc 1996;127: 181-189.](#)
9. [Meyer KF 1917. The present status of dental bacteriology. J Am Dent Assoc 1917;4: 966-996.](#)
10. [Socransky SS, Haffajee AD. Evidence of bacterial etiology: a historical perspective. Periodontol 2000. 1994 Jun;5:7-25.](#)
11. [Willmann DE, Chaves ES. The role of dental plaque in the etiology and progress of inflammatory periodontal disease. In Harris NO, Garcia-Godoy F eds. Primary preventive dentistry. Stamford, CO: Appleton & Lange; 1999:63-76.](#)
12. [Kimball GD. The relationship of materia alba and dental plaque to periodontal disease. J Periodontol 1952;23: 16-169.](#)
13. [Keyes PH, Jordan HV. Periodontal lesions in the Syrian hamster. III. Findings related to an infectious and transmissible component. Arch Oral Biol 1964;9: 377-400.](#)
14. [Listgarten MA. Electron microscopic observations of the bacterial flora of acute necrotizing ulcerative gingivitis. J Periodontol 1965;36: 328-339.](#)
15. [Papapanou PN, Engebretson SP, Lamster JB. Current and future approaches for diagnosis of periodontal diseases. NY State Dent J 1999;32-39.](#)
16. [Haffajee AD, Socransky SS. Microbial etiological agents of destructive periodontal diseases. Periodontol 2000 1994;5: 78-111.](#)
17. [Page RC, Offenbacher S, Schroeder HE, et al. Advances in the pathogenesis of periodontitis: summary of developments, clinical implications and future directions. Periodontology 2000 1997;14: 216-248.](#)
18. [American Academy of Periodontology. Systemic antibiotics in periodontics \(position paper\). J Periodontol 2004; 75:1553-1565.](#)
19. [Greenstein G, Polson A. The role of local drug delivery in the management of periodontal diseases: A comprehensive review. J Periodontol 1998;69: 507-520.](#)
20. [Marsh PD. Dental plaque as a microbial biofilm. Caries Res. 2004 May-Jun;38\(3\):204-11.](#)
21. [Hiyari S, Bennett KM. Dental diagnostics: molecular analysis of oral biofilms. J Dent Hyg. 2011 Fall;85\(4\):256-263.](#)
22. [Costerton JW. Introduction to biofilm. Int J Antimicrob Agents 1999;11:217-221.](#)
23. [Marsh PD. Dental plaque: biological significance of a biofilm and community life-style. J Clin Periodontol 2005; 32 \(suppl.6\): 7-15.](#)
24. [Marsh PD, Bradshaw DJ. Physiological approaches to the control of oral biofilms. Adv Dent Res. 1997 Apr;11\(1\):176-185.](#)
25. [Wilson M, Gibson M, Strahan D, Harvey W. A preliminary evaluation of the use of a redox agent in the treatment of chronic periodontitis. J Periodontal Res. 1992 Sep;27\(5\):522-527.](#)