

# 12<sup>th</sup> Congress of the European Burns Association (EBA)



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CONGRESS



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# SILON<sup>®</sup> TECHNOLOGY ENHANCES DURABILITY AND PRODUCES A MORE VERSATILE LINE OF SILICONE BASED PRODUCTS TO TREAT HYPERTROPHIC BURN SCARS. <sup>1</sup>

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Silicone based products have a mechanism of action that remains elusive; however, clinical observations provide significant evidence that the use of these materials potentially reduce the adverse effects of immature burn scars. Elastomers and gels are the two most prevalent categories of silicone inserts that are utilized to treat hypertrophic burn scars. Even though these inserts are commonly included in scar management protocols, they are not without limitations. One of the major deficiencies that these products share is durability, which increases the frequency of replacement throughout the scar rehabilitation process. The purpose of this presentation is to introduce burn rehabilitation therapists to a more durable line of silicone based products that provide a versatile and more effective approach to burn scar management.

The development of Silon<sup>®</sup> technology allows burn care therapists to choose from a variety of silicone insert materials that exceed traditional expectations for durability. Although silicone is the primary component in each of these products, a matrix of polytetrafluoroethylene commonly referred to as "Teflon", provides a framework that greatly improves durability despite the inserts thin composition. The manufacturer of this technology has constructed a line of silicone products which include: plain sheeting, clear self-adhesive sheeting, fabric-lined sheeting, open cell foam, textile sheeting, low temperature thermoplastic splint material, and high temperature thermoplastic splint material. A screening tool was developed to analyze each of the seven products using crucial clinical variables such as adherence, pliability, durability, ease of fabrication, thickness, elasticity and cost. Furthermore, these insert materials are categorized in a chart format that provides clear clinical recommendations for the most appropriate applications on over fifty different anatomical locations providing the clinician with a resource of options to address the varied challenges of hypertrophic burn scars in all bodily areas.

The Silon<sup>®</sup> family of products provides the burn rehabilitation therapist with an alternative choice of long lasting silicone based insert materials to use when managing immature scars over the entire body. The versatility, flexibility and durability of this technology provides effective scar management that can be used as a direct intervention (adherent sheeting), in conjunction with pressure garments (fabric lined sheeting), in recessed areas (foam), permanently incorporated into pressure garments (textile sheeting) or as splints (thermoplastic material) to help best identify the top options for the burn clinician and, more importantly, the unique and diverse needs of the burn survivor.

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# SILON® TECHNOLOGY ENHANCES DURABILITY AND PRODUCES A MORE VERSATILE LINE OF SILICONE BASED PRODUCTS TO TREAT HYPERTROPHIC BURN SCARS.

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**Introduction:** Silicone based products have a mechanism of action that remains elusive; however, clinical observations provide significant evidence that the use of these materials potentially reduce the adverse effects of immature burn scars. Elastomers and gels are the two most prevalent categories of silicone inserts that are utilized to treat hypertrophic burn scars. Even though these inserts are commonly included in scar management protocols, they are not without limitations. One of the major deficiencies that these products share is durability, which increases the frequency of replacement throughout the scar rehabilitation process. The purpose of this presentation is to introduce burn rehabilitation therapists to a more durable line of silicone based products that provide a versatile and more effective approach to comprehensive burn scar management.

	Oleeva Clear	Oleeva Foam	Oleeva Fabric	Silon-SES	Silon-TEX	Silon-LTS	Silon-STS
<b>Type of Material</b> <small>*Interpenetrating Polymer Network of Medical Grade Silicone &amp; Teflon</small>	Self-Adhesive Clear Silicone* Sheeting	Self-Adhesive Silicone* bonded to open cell foam	Self-Adhesive Silicone* bonded to silky fabric material	Non-Adhesive Silicone* Elastomer Sheeting	Silicone* Elastomer Sheeting bonded to textile	Silicone* Elastomer Sheeting bonded to low temperature thermoplastic	Silicone* Elastomer Sheeting bonded to high temperature thermoplastic
<b>Transparent</b>	Yes	No	No	Yes	No	No	Yes
<b>Adherent</b>	Yes	Yes	Yes	Minimally	No	No	No
<b>Comfort</b>	Very comfortable	Very comfortable	Very comfortable	Very comfortable	Very comfortable	Tolerable	Tolerable
<b>Thickness</b>	.025in / 0.64mm	.220in / 0.56mm	.035in / 0.89mm	.025in / 0.64mm	.020in / 0.51mm	.105in / 2.67mm	.069in / 1.75mm
<b>Ease of Fabrication</b>	Pre-Fabricated Cut to Fit	Pre-Fabricated Cut to Fit	Pre-Fabricated Cut to Fit	Pre-Fabricated Cut to Fit	Cut to Fit; Sewn into garment	Warm Water ~70°C (~160°F)	High Heat ~165°C (~330°F)
<b>Easy to Clean</b>	Yes; Mild soap & water	Slightly; Mild soap & water	Yes; Mild soap & water	Yes; Mild soap & water	Yes; Mild soap & water	Yes; Mild soap & water	Yes; Mild soap & water
<b>Durability &amp; Strength</b>	3-5 weeks	3-5 weeks	4-6 weeks	8-10 weeks	6-8 months	8-10 months	8-10 months
<b>Elasticity</b>	Stretches ~75% of length	Stretches ~75% of length	Stretches ~50% of length	Stretches ~25% of length	Stretches ~50% of length	Stretches ~300% of length	Stretches ~300% of length
<b>Shelf Life</b>	5 years	1 year	5 years	5 years	5 years	2 years	1 year
<b>Breathable</b>	Yes	Yes	Yes	Yes	Yes	No	No
<b>Sizes</b>	1.5x5 in (4x13 cm) 5x5 in (13x13 cm) 5x10 in (13x25 cm) 8x12 in (20x30 cm)	1.5x5 in (4x13 cm) 5x5 in (13x13 cm) 5x10 in (13x25 cm) 8x12 in (20x30 cm)	1.5x5 in (4x13 cm) 5x5 in (13x13 cm) 5x10 in (13x25 cm) 8x12 in (20x30 cm)	1.5x5 in (4x13 cm) 5x5 in (13x13 cm) 5x10 in (13x25 cm) 8x12 in (20x30 cm)	5x36 in (13x91cm)	9x12 in (23x30 cm) 12x18 in (30x46 cm)	16x21 in (41x53 cm)
<b>Indications for use</b>	Scar Hypertrophy & Keloids; Surgical Scars; used prophylactically to inhibit scar formation; highly visible areas	Scar Hypertrophy & Keloids; Surgical Scars; Digital Syndactyly; distributes uniform pressure to oddly shaped areas	Scar Hypertrophy & Keloids; Surgical Scars; silicone therapy without using pressure; distributes shear force stresses	Scar Hypertrophy & Keloids; Surgical Scars; under Coban wrapping; maintains silicone treatment without adhesive	Scar Hypertrophy & Keloids; Surgical Scars; Sewn into garment to maintain silicone & pressure therapy treatment	Scar Hypertrophy & Keloids; Surgical Scars; Joint contracture reduction; Scar splinting & positioning devices	Scar Hypertrophy & Keloids; Scar splinting & positioning; Maximal pressure & silicone splint treatment with transparency
<b>Pliability</b>	Gives with minimal force	Gives with minimal force	Gives with minimal force	Gives with minimal force	Gives with minimal force	Rigid; Retains shape with max force; moderate memory	Rigid; Retains shape with max force; no memory
<b>Contraindications</b>	Open Wounds, Skin Maceration, Puritis						
<b>Cost: Dollars/in<sup>2</sup></b>	~ \$1.59	~ \$1.59	~ \$1.59	~ \$1.66	~ \$0.47	~ \$0.53	~ \$0.38
<b>Cost: Euros/cm<sup>2</sup></b>	~ €0.136	~ €0.136	~ €0.136	~ €0.142	~ €0.040	~ €0.045	~ €0.033
<b>Areas of Use</b>	Face, Hands & Neck	Digital Web Spaces, Elbows, Knees	Hands, UE&LE joints, Surgical Scar Shapes	Chest, Back, Torso, Eyelids, Thighs	Axillia, Hand, Face, Chest, UE&LE joints	Hand, Face & Neck splints, UE&LE joints	Face Mask & Neck splints, breastplate
<b>Clinical Samples</b>							

**Conclusion:** The Silon® family of products provides the burn rehabilitation therapist with an alternative choice of long lasting, silicone based, insert materials to use when treating immature scars over the entire body. The versatility, flexibility and durability of this technology provides effective scar management that can be used as a direct intervention (adherent and non-adherent sheeting), in conjunction with pressure therapy (fabric lined sheeting), in recessed areas (foam), permanently incorporated into pressure garments (textile sheeting) or as splints (thermoplastic material) to help best identify the top options for the burn clinician and, more importantly, address the unique and diverse needs of the burn survivor.



**Vendor:** Bio Med Sciences, Inc. [www.silon.com](http://www.silon.com) +1 610-530-3193

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