

OPHTHALMIC CATALOGUE

For quality & safety



## SMI: Surgical sutures of the highest quality

SMI AG was established in 1987 - the first Belgian company manufacturing surgical sutures - since then it has grown continuously. Today SMI is recognised as a world-wide supplier of quality surgical sutures and medical devices.

The company is situated in St. Vith in the East of Belgium, near the point where the borders of Belgium, Germany and Luxembourg meet.

#### 

SMI complies always with international quality standards such as EN ISO 13485. All raw materials and finished products are submitted to stringent quality control by a highly qualified team.

SMI is dedicated to customer satisfaction by ensuring high quality products and an excellent service based on customer focus, reliability and delivery performance.

#### **✓** WORLD-WIDE RECOGNITION

SMI exports to around 120 different countries all over the world. For this performance SMI received the "Royal Export Award 2000" from the Belgian Foreign Trade Board.

#### **☑** THE CATALOGUE

This catalogue contains information about the most commonly used SMI ophthalmic products. On our Website you will find the full range of SMI products. We are constantly striving to increase our product range based on market developments and customer needs.

Since many years SMI products are recognized by ophthalmologists around the world.

Not all products are registered and approved for sale in all countries or regions. Please contact your country representative for product availability and information.

Printed versions or locally saved copies of the product information material may not be current. Please refer to our website for current information about our products.

For complete indications, contraindications, warnings, precautions, and adverse reactions, please reference full package insert.

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## **CERTIFICATES**





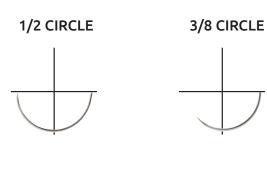


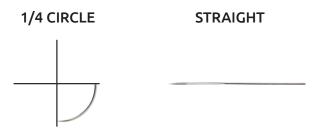


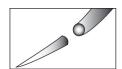


### **NEEDLE TYPES**

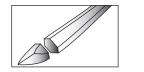
**SMI** surgical needles are manufactured from highest quality stainless steel grades for outstanding performance, combining high ductility and strong bending moment. Advanced silicon coating ensures smooth penetration and reduced tissue trauma. The shape of the needle body is designed in order to allow maximum stability in the needle holder.







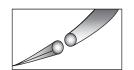






**TAPER POINT** 

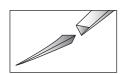
A gradual taper to a round bodied needle.





**TAPER CUTTING POINT** 

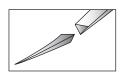
Balanced, cutting point-tapering into a round bodied needle.





#### **REVERSE CUTTING**

A triangular body offers a third cutting edge on the outer convex curvature.



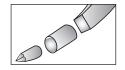


#### **EASY PASS NEEDLE**

Precision point with extra sharpening.

#### SIDE CUTTING SPATULA NEEDLES

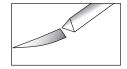
Needle with cutting edges on the two sides.





#### **SOFT CUTTING POINT - CORONARY**

A minute point followed by a round body and a rectangular main body for better penetration in cardiovascular surgery.





#### **CONVENTIONAL CUTTING**

A triangular body offers a third cutting edge on the inside concave curvature.

### SPATULA NEEDLE





#### **PRODUCT**

Side-cutting (spatula) needles are flat on the top and bottom surfaces to reduce tissue injury. These needles allow maximum ease of penetration and control as they pass between and through tissue layers. Side-cutting needles were designed initially for ophthalmic procedures.

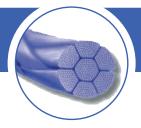
The sharp spatula needle cuts the tissue with the needle tip. Therefore, only a marginal tissue damage is caused.

#### **INDICATIONS**

Ophthalmic surgery

#### **BENEFITS**

- ✓ Designed for ophthalmic procedures
- ☑ The needle separates or splits through the thin layers of sclera or corneal tissue and travels within the plane between them
- ☑ The optimal width, shape, and precision sharpness ensure maximum ease of penetration





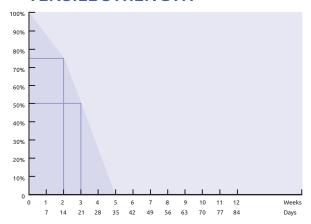
Туре	Braided and coated multifilament
Composition	Polyglactine 910, a copolymer made of 90% glycolide and 10% L-lactide
Coating	Poly-glycolide-co-L-lactide and calcium stearate (<1%)
Colour	Violet / Beige-undyed
Tissue reaction	Minimal
Absorption	The hydrolytic action by which the material is broken down results in total absorption between 56 and 70 days. Between 40% and 50% of tensile strength remain after 21 days.
Presentation	Box with 12 sutures

CHARACTERISTICS	BENEFITS
☑ High tensile strength	Excellent tissue support
☑ Synthetic	Minimal tissue reaction
☑ Breaks down by hydrolysis	Predictable absorption rate
☑ Braided structure	Excellent handling properties High flexibility High tensile strength Excellent knot security
☑ Coated multifilament	Soft passage through the tissues with minimal sawing, tissue drag and trauma Good knot tie down / adjustability Reduced capillary action
✓ Hermetically sealed packing	Guaranteed seal and product sterility

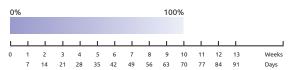
#### CONTRAINDICATIONS

Being absorbable not to use when an extended wound support is required. Caution in patients with delayed wound healing (e.g. compromised immune system).

#### **TENSILE STRENGTH**



#### **ABSORPTION**



Side cuttin double arm			Metric	USP	Length		Order number
	<b>2 x HSP 8 mm</b> 200 μm 300 μm	$\bigcup$	0.7	6/0	45 cm	violet	O910061
1/2 circle	<b>2 x HSP 8 mm</b> 300 μm		0.7	6/0	45 cm	undyed	O910061U
	<b>2 x HSP 8 mm</b> 350 μm		1	5/0	45 cm	violet	O910052
Cide south							
Side cuttin double arm			Metric	USP	Length		Order number
3/8 circle	<b>2 x DSP 11 mm</b> 350 μm	$\subseteq$	1	5/0	45 cm	violet	O910051
Side cuttin double arm			Metric	USP	Length		Order number
double arm	ned	<b>W</b>	Metric 0.7	<b>USP</b> 6/0	<b>Length</b> 45 cm	violet	Order number O91006
	2 x VSP 8 mm					violet undyed	
double arm	ned		0.7	6/0	45 cm	•••••	O91006
double arm	2 x VSP 8 mm		0.7 0.7	6/0 6/0	45 cm 20 cm	undyed	O91006 O91006U-20
double arm	2 x VSP 8 mm 300 μm		0.7 0.7 0.7	6/0 6/0 6/0	45 cm 20 cm 45 cm	undyed undyed	O91006 O91006U-20 O91006U
double arm	2 x VSP 8 mm 300 μm 2 x VSP 8 mm 350 μm		0.7 0.7 0.7	6/0 6/0 6/0 5/0	45 cm 20 cm 45 cm 45 cm	undyed undyed violet	O91006 O91006U-20 O91006U O91005
1/4 circle	2 x VSP 8 mm 300 μm 2 x VSP 8 mm 350 μm		0.7 0.7 0.7 1	6/0 6/0 6/0 5/0 5/0	45 cm 20 cm 45 cm 45 cm 45 cm	undyed undyed violet	O91006 O91006U-20 O91006U O91005 O91005U





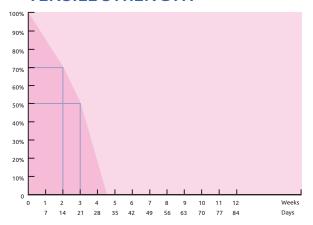
Туре	Monofilament; USP 5/0 – 8/0 braided and coated multifilament
Composition	Polyglycolic acid
Coating	Polycaprolactone and calcium stearate (1%)
Colour	Violet / Beige-undyed
Tissue reaction	Minimal
Absorption	The hydrolytic action by which the material is broken down results in total absorption in approximately 60 to 90 days. Approximately 50% of tensile strength remain after 21 days.
Presentation	Box with 12 sutures

CHARACTERISTICS	BENEFITS
☑ High tensile strength	Excellent tissue support
☑ Synthetic	Minimal tissue reaction
☑ Breaks down by hydrolysis	Predictable absorption rate
☑ Braided structure	Excellent handling properties High flexibility High tensile strength Excellent knot security
☑ Coated multifilament	Soft passage through the tissues with minimal sawing, tissue drag and trauma Good knot tie down / adjustability Reduced capillary action
✓ Hermetically sealed packing	Guaranteed seal and product sterility

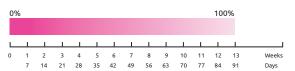
#### CONTRAINDICATIONS

Being absorbable not to use when an extended wound support is required. Caution in patients with delayed wound healing (e.g. compromised immune system).

#### **TENSILE STRENGTH**



#### **ABSORPTION**





Side cutting double arm			Metric	USP	Length		Order number		
1/2 circle	<b>2 x HSP 8 mm</b> 200 μm		0.5	7/0	45 cm	violet	OSU07		
Side cutting spatula double armed Metric USP Length Order number									
	2 x DSP 6 mm		0.4	8/0	30 cm	violet	OSU08-30		
	200 µm		0.4	8/0	45 cm	violet	OSU08		
3/8 circle	2 x DSP 6,2 mm 150 µm	$\subseteq$	0.2	10/0	30 cm	violet	OSU10		
	2 x DSP 6,4 mm		0.3	9/0	30 cm	violet	OSU09		
	200 µm		0.5	7/0	45 cm	violet	OSU072		
	2 x DSP 8 mm 200 µm	$\subseteq$	0.5	7/0	45 cm	violet	OSU071		
Side cutting 3/8 circle	DSP 6,2 mm 150 μm		Metric 0.2	USP 10/0	Length 10 cm	violet	Order number OSU101		
	DSP 6,2 mm					violet violet			
	DSP 6,2 mm 150 µm DSP 6,4 mm 200 µm		0.2	10/0	10 cm		OSU101		
3/8 circle Side cutting	DSP 6,2 mm 150 µm DSP 6,4 mm 200 µm		0.2	10/0 9/0	10 cm 30 cm		OSU101 OSU09-1		
3/8 circle Side cutting double arm	DSP 6,2 mm 150 µm DSP 6,4 mm 200 µm		0.2 0.3 <b>Metric</b>	10/0 9/0 USP	10 cm 30 cm Length	violet	OSU101 OSU09-1 Order number		
3/8 circle Side cutting double arm	DSP 6,2 mm 150 µm DSP 6,4 mm 200 µm  g spatula ned  2 x VSP 8 mm 300 µm 350 µm		0.2 0.3 Metric 0.7	10/0 9/0 USP 6/0	10 cm 30 cm  Length 45 cm	violet violet	OSU101 OSU09-1 Order number OSU06		
3/8 circle  Side cutting double arm  1/4 circle	DSP 6,2 mm 150 µm DSP 6,4 mm 200 µm  g spatula ned  2 x VSP 8 mm 300 µm 350 µm		0.2 0.3 <b>Metric</b> 0.7	10/0 9/0 USP 6/0 5/0	10 cm 30 cm  Length 45 cm 45 cm	violet  violet  violet	OSU101 OSU09-1 Order number OSU06 OSU05		
3/8 circle  Side cutting double arm  1/4 circle	DSP 6,2 mm 150 µm DSP 6,4 mm 200 µm  g spatula ned  2 x VSP 8 mm 300 µm 350 µm		0.2 0.3 Metric 0.7	10/0 9/0 USP 6/0 USP 6/0 5/0	10 cm 30 cm  Length 45 cm 45 cm Length	violet violet violet	OSU101 OSU09-1 Order number OSU06 OSU05 Order number		
3/8 circle  Side cutting double arm  1/4 circle	DSP 6,2 mm 150 µm DSP 6,4 mm 200 µm  g spatula ned  2 x VSP 8 mm 300 µm 350 µm		0.2  0.3  Metric  0.7  1  Metric  0.7	10/0 9/0 USP 6/0 USP 6/0	10 cm 30 cm  Length 45 cm  Length 45 cm	violet  violet  violet	OSU101 OSU09-1 Order number OSU06 OSU05 Order number 11071512		



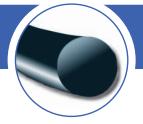


Туре	Monofilament
Composition	Polypropylene, a polymer of propylene
Coating	None
Colour	Blue
Tissue reaction	Minimal
Absorption	Non absorbable
Presentation	Box with 12 sutures

CF	HARACTERISTICS	BENEFITS				
$\checkmark$	High tensile strength, non absorbable	Excellent and permanent tissue support				
$\checkmark$	Synthetic	Minimal tissue reaction				
<b>V</b>	Monofilament with microscopic uniform diameter	Soft passage through the tissues with minimal sawing, tissue drag and trauma Absence of capillarity (no support of bacterial growth) Excellent knot tie down				
$\checkmark$	Pliability and softness	Good handling properties Easy and secure knotting				
$\checkmark$	Hermetically sealed packing	Guaranteed seal and product sterility				

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Side cuttin double arm		Metric	USP	Length		Order number
3/8 Circle	2 x DSP 6,4 mm	0.2	10/0	30 cm	blue	OPP105
	200 μm	0.3	9/0	30 cm	blue	OPP95
Side cuttin	g spatula	Metric	USP	Length		Order number
1/4 circle	<b>VSP 16 mm</b> 150 μm	0.2	10/0	10 cm	blue	OPP103
Side cuttin loop	g spatula	Metric	USP	Length		Order number
1/4 circle	VSP 16 mm 150 μm	0.2	10/0	10 cm	blue	OPP103L
Side cuttin double arm		Metric	USP	Length		Order number
Straight	2 x GSP 16,15 mm	0.2	10/0	20 cm	blue	OPP101
	150 µm	0.3	9/0	20 cm	blue	OPP91
Side cuttin loop	g spatula	Metric	USP	Length		Order number
Straight	GSP 16,15 mm 150 μm	0.2	10/0	15 cm	blue	OPP110
	130 рііі					
Side cuttin double arm Straight	g spatula	Metric	USP	Length		Order number





Туре	Monofilament
Composition	Extrusion of polyamide 6.0 or 6.6
Coating	None
Colour	Black
Tissue reaction	Minimal
Absorption	Non absorbable, gradually encapsulated by connective tissue. The thread mass diminishes, approximately 10% a year by rupture of chemical links (hydrolytic action).
Presentation	Box with 12 sutures

CF	<i>IARACTERISTICS</i>	BENEFITS				
$\checkmark$	High tensile strength, non absorbable	Excellent and permanent tissue support				
V	Synthetic	Minimal tissue reaction				
$\checkmark$	Monofilament with microscopic uniform diameter	Soft passage through the tissues with minimal sawing, tissue drag and trauma Absence of capillarity (no support of bacterial growth) Excellent knot tie down				
$\checkmark$	Pliability and softness	Good handling properties Easy and secure knotting				
$\checkmark$	Hermetically sealed packing	Guaranteed seal and product sterility				

Side cutting double arm		Metric	USP	Length		Order number
1/2 circle	<b>2 x HSP 6,2 mm</b> 150 μm	0.2	10/0	30 cm	black	ON102
, \	<b>2</b> x HSP <b>6,4</b> mm 220 μm	0.2	10/0	30 cm	black	ON106
	<b>2</b> x HSP 8 mm 300 μm	0.7	6/0	45 cm	black	ON62

# DACLON

Side cuttine double arm		Metric	USP	Length		Order number
	2 x DSP 6 mm 220 μm	0.2	10/0	30 cm	black	ON103
		0.1	11/0	20 cm	black	ON111
		0.2	10/0	30 cm	black	ON101
	2 x DSP 6,2 mm	0.3	9/0	30 cm	black	ON95
2/0 : 1	150 µm	0.3	9/0	45 cm	black	ON95-45
3/8 circle		0.4	8/0	30 cm	black	ON85
<del></del>		0.4	8/0	45 cm	black	ON85-45
	2 x DSP 6,2 mm 200 μm	0.5	7/0	30 cm	black	ON75
	2 v DCD ( 4 mm	0.2	10/0	30 cm	black	ON105
	2 x DSP 6,4 mm 220 µm	0.2	10/0	38 cm	black	ON105-38
		0.2	10/0	45 cm	black	ON105-45
	2 x DSP 8 mm 300 μm	0.7	6/0	45 cm	black	ON61
Side cuttin	g spatula	Metric	USP	Length		Order number
3/8 circle	DSP 6,2 mm 150 μm	0.2	10/0	15 cm	black	ON1011
Side cuttin		Metric	USP	Length		Order number
1/4 circle	<b>2 x VSP 8 mm</b> 350 μm	1	5/0	45 cm	black	ON51
Round bod double arm	ied taper point	Metric	USP	Length		Order number
1/4 circle	2 x VR 8 mm 220 μm	0.4	8/0	45 cm	black	ON81
Reverse cu	tting	Metric	USP	Length		Order number
3/8 circle	DS 12 mm	0.5	7/0	75 cm	black	9051512
	DS 12 mm	0.7	6/0	75 cm	black	9071512



## POLYESTER

Туре	Braided multifilament
Composition	Polyester - a polymer of polyethylene terephthalate
Coating	Silicone
Colour	White
Tissue reaction	Minimal
Absorption	Non absorbable, gradually encapsulated by connective tissue
Presentation	Box with 12 sutures

CH	IARACTERISTICS	BENEFITS
<b>V</b>	Unsurpassed tensile strength, non absorbable	Excellent and permanent tissue support
$\checkmark$	Synthetic	Minimal tissue reaction
<b>V</b>	Braided structure	Excellent handling properties High flexibility High tensile strength Excellent knot security
<b>V</b>	Coated multifilament	Soft passage through the tissues with minimal sawing, tissue drag and trauma Good knot tie down / adjustability Reduced capillary action
$\checkmark$	Hermetically sealed packing	Guaranteed seal and product sterility

## POLYESTER

Side cuttin double arm			Metric	USP	Length		Order number
1/2 Circle	<b>2 x HSP 8 mm</b> 350 μm		1	5/0	45 cm	white	OP52
Side cuttin double arm			Metric	USP	Length		Order number
3/8 Circle	<b>2 x DSP 8 mm</b> 350 μm	$\subseteq$	1	5/0	45 cm	white	OP53
Side cuttin double arm		1/	Metric	USP	Length		Order number
	<b>2 x VSP 8 mm</b> 250 μm		0.5	7/0	45 cm	white	OP71
1/4 Circle	<b>2 x VSP 8 mm</b> 300 μm		0.7	6/0	45 cm	white	OP61
	2 x VSP 8 mm 350 μm		1	5/0	45 cm	white	OP51
	<b>2 x VSP 8 mm</b> 350 µm		1.5	4/0	45 cm	white	OP41





Туре	Braided multifilament
Composition	Braided fibres from the cocoon of the silkworm
Coating	Silicone
Colour	Black
Tissue reaction	Moderate
Absorption	Silk suture elicits an initial inflammatory reaction in tissues, which is followed by gradual encapsulation of the suture by fibrous connective tissues.
Presentation	Box with 12 sutures

CF	HARACTERISTICS	BENEFITS
V	High tensile strength, non absorbable	Excellent and permanent tissue support for up to 3 month
<b>V</b>	Braided structure	Excellent handling properties High flexibility High tensile strength Excellent knot security
<b>V</b>	Coated multifilament	Soft passage through the tissues with minimal sawing, tissue drag and trauma Good knot tie down / adjustability Reduced capillary action
$\checkmark$	Hermetically sealed packing	Guaranteed seal and product sterility

#### **CONTRAINDICATIONS**

Known allergies or sensitivities to silk

louble arm	ned		Metric	USP	Length		Order number
3/8 circle	<b>2 x DSP 6,5 mm</b> 200 μm	$\subseteq$	0.4	8/0	45 cm	black	OS81B
	2 x DSP 6,5 mm		0.5	7/0	45 cm	black	OS71
<del></del>	240 µm		0.7	6/0	45 cm	black	OS61
	<b>2 x DSP 8 mm</b> 350 μm		1	5/0	30 cm	black	OS52
Side cuttin double arn			Metric	USP	Length		Order number
1/4 circle	<b>2 x VSP 8 mm</b> 250 μm		0.7	6/0	45 cm	black	OS62
	<b>2 x VSP 10 mm</b> 350 μm		1	5/0	45 cm	black	OS51
Reverse cu							
	tting		Metric	USP	Length		Order number
	tting		Metric 0.7	<b>USP</b> 6/0	Length 45 cm	black	Order number 8071512
3/8 circle	DS 12 mm					black black	
3/8 circle	, v		0.7	6/0	45 cm	· •	8071512
3/8 circle	, v		0.7	6/0 5/0	45 cm 45 cm	black	8101512
3/8 circle	DS 12 mm		0.7 1 1.5	6/0 5/0 4/0	45 cm 45 cm 75 cm	black black	8071512 8101512 8151512
3/8 circle Reverse cu	DS 12 mm  DS 16 mm  DS 19 mm		0.7 1 1.5 1.5	6/0 5/0 4/0 4/0	45 cm 45 cm 75 cm 75 cm	black black black	8071512 8101512 8151512 8151516 8151519
Reverse cu	DS 12 mm  DS 16 mm  DS 19 mm		0.7 1 1.5 1.5	6/0 5/0 4/0 4/0 4/0	45 cm 45 cm 75 cm 75 cm 75 cm	black black black	8071512 8101512 8151512 8151516

## **SUTURE MATERIALS**

ABSORBABLE SUTURES

NON-ABSORBABLE SUTURES





