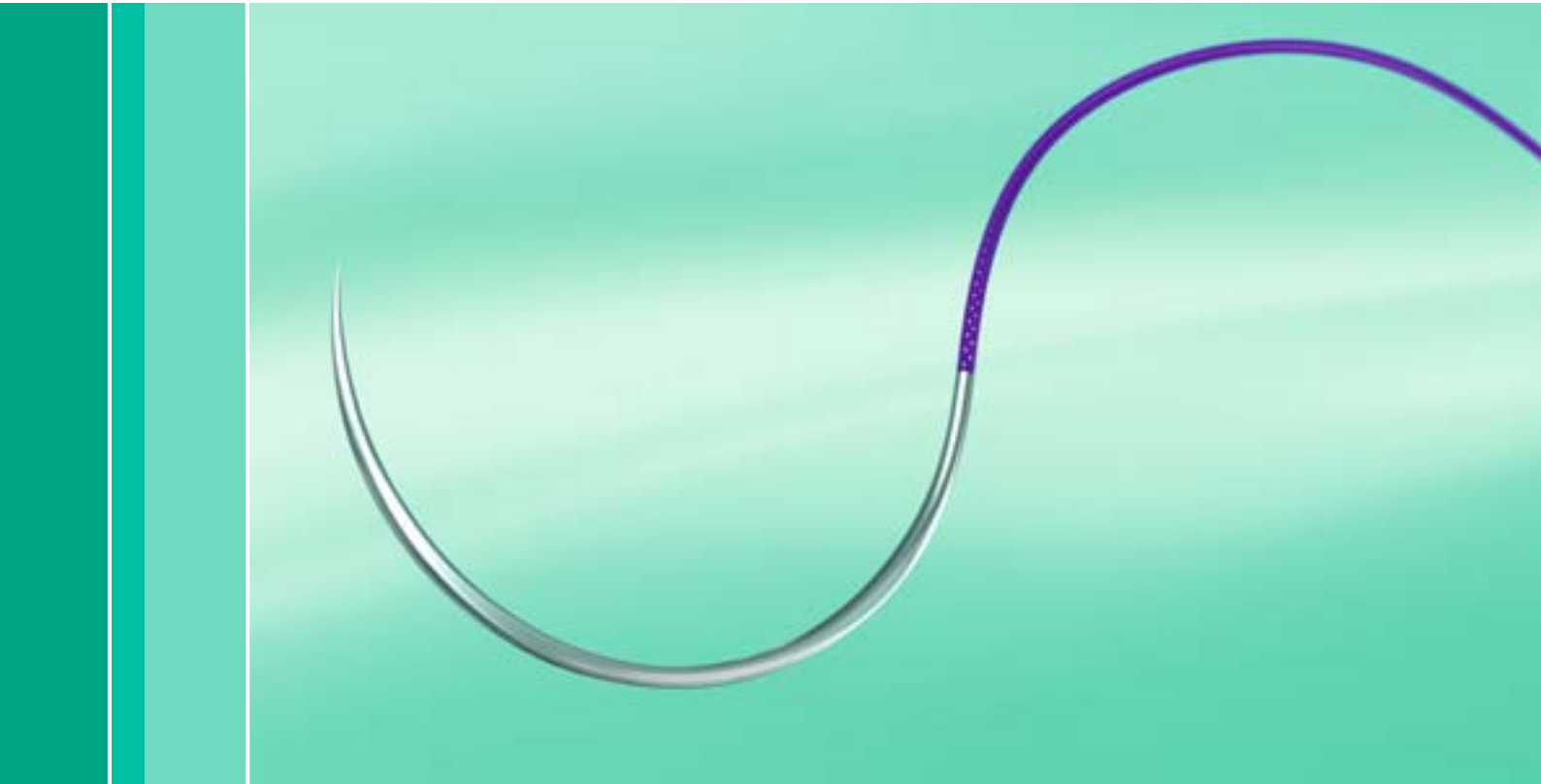


Novosyn[®]

The new PGLA suture generation

Mid-term synthetic absorbable braided and coated suture made of Poly(glycolide-co-L-lactid 90/10)



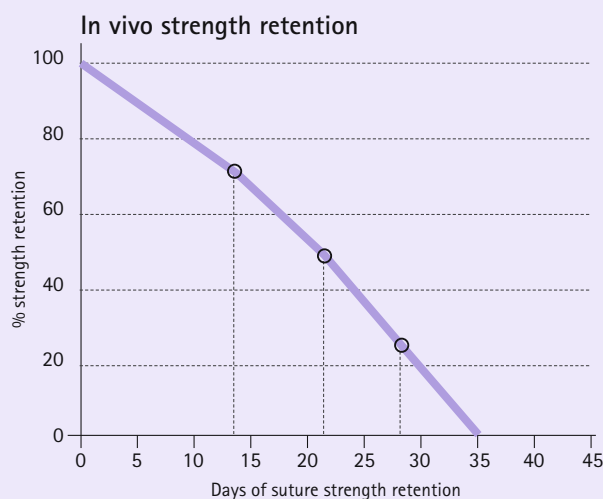
Sutures

The new PGLA suture generation

Ideal and secure degradation profile

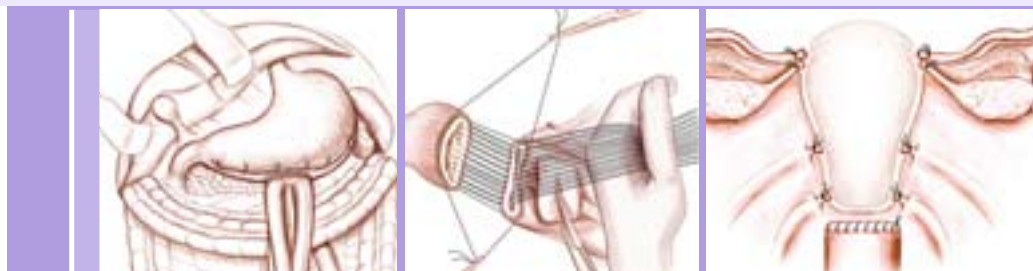
Novosyn®, the new PGLA suture generation consists of braided Poly(glycolide-co-L-lactid 90 / 10) filaments

The high initial tensile strength of the Poly-(glycolide-co-L-lactid 90 / 10) polymer provides the needed critical wound support to assure a secure and undisturbed tissue healing.



Novosyn® is a mid-term absorbable suture:

75 % initial tensile strength	14 days
50 % initial tensile strength	21 days
25 % initial tensile strength	28 days
Complete mass absorption	56 - 70 days



Novosyn® is indicated for general soft tissue approximation and / or ligation in all surgical specialties, where the surgical practice requires the use of a synthetic, mid-term absorbable, braided suture material.

Tissue Layer / Surgical Speciality	Frequently used needle
Muscular Layers	HR30 – HR76 / HRT37 – HRT80 / HRC37 – HRC80
Visceral surgery (Gastro Intestinal, Biliary & Urology)	HR10 – HR30 / FR26 – FR40
Subcutaneous	HR13 – HR26
Tendons, Ligaments & Fascia closure in Traumatology & Orthopedic surgery	HS15 – HS48 / 2xGS13
General Skin Closure	DS9 – DS35 / DSMP19 – DSMP24 / GS60
Minimal Invasive Surgery (M.I.S.)	DR / SKI / PRC / GR / DRT
Ophthalmic sutures	DRm / HLm / DLm / HLM / VLM
Ligatures	

Excellent knotting performance

■ Easy and smooth knot run-down

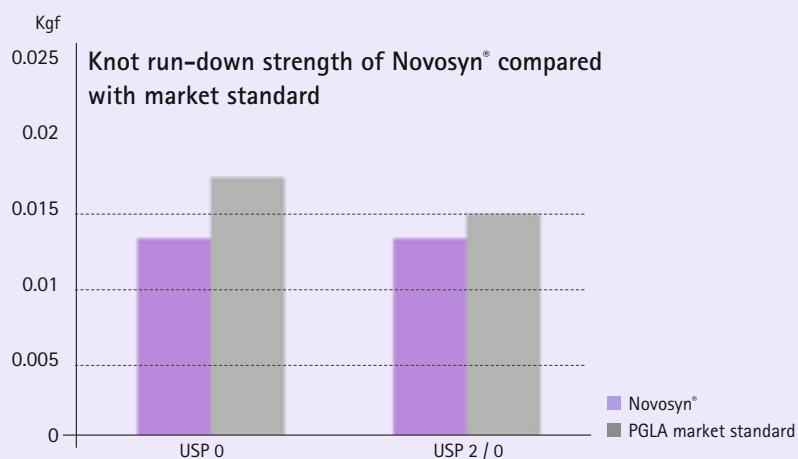
Unmatched performance from the first to the last throw, friction-free passing over the suture

■ Gentle knot repositioning

Enables the surgeon to snug down the knot to the precise position required

■ Highest knot holding capacity

Novosyn® conveniently holds aligned wound edges together ensuring a secure closure during the complete healing process



Source: internal comparison study Novosyn® vs. Industrial market standard

Novosyn® provides a very easy and smooth knot run-down. Giving the surgeon complete and unlimited control. Graph shows Novosyn® knot run-down values compared with current PGLA market standards.

Novosyn® is available with
high performing needles from
our **Easyslide** range

Maintaining needle
penetration even
after several stitches

Superior
bending strength

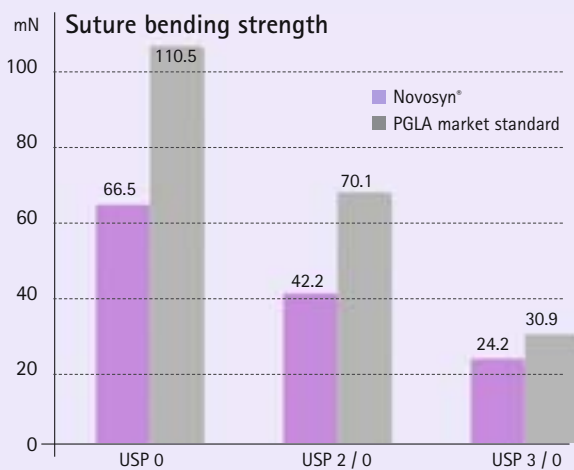
300 series
stainless steel

Superior
needle-thread attachment

The new PGLA suture generation

Enhanced pliability

The enhanced pliability of Novosyn® provides the surgeon with 100 % control in handling of the suture.



Source: internal comparison study Novosyn® vs. Industrial market standard

Minimized inflammatory reaction

Internal comparison studies have shown that Novosyn® minimizes the tissue reaction that can be caused by sutures.



Section weeks	Implant	Inflammation
4	Novosyn®	1.13
	Market standard	1.60
6	Novosyn®	1.27
	Market standard	1.53
8	Novosyn®	1.20
	Market standard	1.80
10	Novosyn®	1.27
	Market standard	1.60
12	Novosyn®	1.00
	Market standard	1.47

Infiltration of inflammation cells; Score 0: none, Score 1: 2 - 3 cell layers, Score 2: 4 - 6 cell layers, Score 3: > 6 cell layers

* internal comparison study Novosyn® vs. Industrial market standard

The new PGLA suture generation

- Smooth knot run-down
- Gentle knot repositioning
- High knot holding capacity
- Minimized inflammatory reaction
- High quality **Easyslide** needles
- Open surgery and M.I.S. needle / thread combinations



B. Braun is one of the world's leading healthcare supplier with different production facilities all over Europe. Novosyn® is produced at our Centre of Excellence for Closure Technologies in Spain where B. Braun aims to satisfy the highest quality demands, ensured by a finely tuned integral quality and environment management system.

Novosyn®

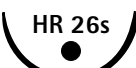
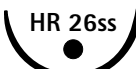
Product Features

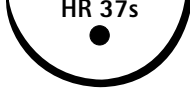
Structure	Multifilament
Chemical composition	Poly(glycolide-co-l-lactid 90 / 10)
Colour	Violet
Coating	Poly(glycolide-co-l-lactid 35 / 65) + CaSt
Size	USP 2 (metric 5) - USP 8 / 0 (metric 0.4)
Tensile strength retention	50 % tensile strength retention at 21 days 0 % tensile strength retention at approx. 35 days
Mass Absorption	Hydrolysis, complete mass absorption in 56 till 70 days
Indication	General soft tissue approximation and / or ligation in all surgical specialties
Sterilization	Ethylene oxide (EO)

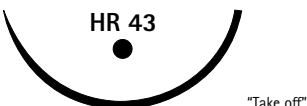


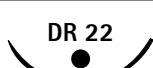
angle	Needle		Thread	USP metric							
	length mm	diameter microns	length cm colour	10/0 0.2	9/0 0.3	8/0 0.4	7/0 0.5	6/0 0.7	5/0 1	4/0 1.5	3/0 2
3/8 circle micro-needle taper point											
135°	DRm 6 	140µ	20 violet			G0068145					
1/2 circle micro-lancet needle											
160°	2xHLM 6 	150µ	30 violet			G0068715					
3/8 circle micro-lancet needle											
140°	DLm 6 	150µ	15 violet			G0068615					
140°	2xDLm 6 	150µ	30 violet			G0068702					
137°	DLm 6s 	200µ	30 violet			G0068620	G0068621				
137°	2xDLm 6s 	200µ	30 45 violet			G0068710	G0068711				
1/2 circle lancet needle with micro-point											
170°	2xHLM 8 	330µ	45 violet					G0068966			
1/4 circle lancet needle with micro-point											
90°	2xVLM 6 	240µ	30 violet					G0068616			
90°	2xVLM 8 	330µ	45 violet					G0068734	G0068735		
90°	2xVLM 8 	430µ	45 violet							G0068736	

Needle length mm	Thread length cm colour	USP metric							
		6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
1/2 circle round bodied needle									
	70 violet	C0068002	C0068003						
	45 70 violet	C0068449 C0068006	C0068450 C0068007	C0068451 C0068008					
 "Take off"	4x45 violet			C0088719					
	70 violet					C0068110	C0068111		
	70 violet	C0068011	C0068012	C0068013	C0068014	C0068015			
 "Take off"	4x45 4x70 violet			C0088713 C0088613	C0088714 C0088614				
	70 90 violet		C0068869		C0068904				
	70 violet			C0068113	C0068114				
	70 violet				C0068766				
	20 70 violet			C0068029	C0068069 C0068030	C0068004 C0068031	C0068032		
	90 120 violet				C0068877 C0068078	C0068880			

Needle length mm	Thread length cm colour	USP metric							
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6
1/2 circle round bodied needle									
 HR 22 "Take off"	4x45 4x70 violet		C0088729 C0088629	C0088730 C0088630	C0088731 B0088631				
 2xHR 22	90 violet			C0068874	C0068875				
 HR 22s	70 violet				C0068036	C0068037	C0068038		
 HR 26	20 70 violet		C0068040	C0068079 C0068041	C0068018 C0068042	C0068043	C0068044		
	90 120 violet		C0068540	C0068541 C0068088	C0068542 C0068067	C0068543	C0068544		
 HR 26 "Take off"	4x45 4x70 violet		C0088740 C0088640	C0088741 C0088641	C0088742 C0088642				
 2xHR 26	70 90 violet			C0068901	C0068902	C0068907			
 HR 26s	45 70 90 violet			C0068089 C0068589	C0068019 C0068090 C0068590	C0068091 C0068591	C0068092 C0068592	C0068093 C0068613	
 HR 26s "Take off"	4x45 4x70 violet				C0088790	B0088791 B0088691	B0088792 B0088692	B0088793 B0088693	
 HR 26ss	70 violet					C0068791	C0068100		

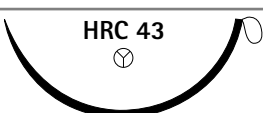
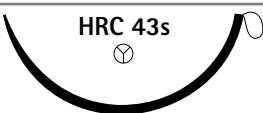
Needle length mm	Thread length cm colour	USP metric							
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6
1/2 circle round bodied needle									
 HR 26ss "Take off"	4x45 violet				C0088810				
 HR 30	70 90 violet			C0068046	C0068047 C0068447	C0068048 C0068448	C0068049	C0068045	
 HR 30 "Take off"	4x45 4x70 violet				B0088661	B0088762 B0088662			
 HR 30s	70 violet				C0068547	C0068548	C0068549		
 HR 37	70 90 violet			C0068050 C0068550	C0068051 C0068551	C0068052 C0068552	C0068053 C0068553		
 HR 37 "Take off"	4x45 4x70 violet			C0088769 C0088669	C0088770 B0088670				
 HR 37s	70 90 violet			C0068094 C0068955	C0068095 C0068595	C0068096 C0068956	C0068097 C0068597	C0068098 C0068598	
 HR 37s "Take off"	4x45 4x70 violet			C0088794	C0088795 B0088695	B0088796 C0088696	B0088797 B0088697	B0088798 B0088698	
 HR 37ss	70 90 violet					C0068122 C0068576	C0068123 C0068577		
 HR 37ss "Take off"	4x45 violet					B0088806	B0088807		

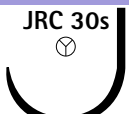
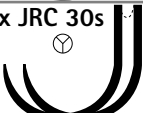
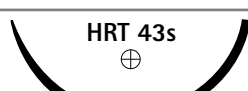
Needle length mm	Thread length cm colour	USP metric								
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6	
1/2 circle round bodied needle										
	70 90 violet			C0068466	C0068055 C0068467	C0068056 C0068556	C0068057 C0068557	C0068058 C0068558		
	4x45 4x70 violet					B0088766	B0088767 B0088667	B0088768 B0088668		
	150 violet						B0068350			
	70 90 violet					C0068946	C0068947 C0068847	C0068948 C0068848		
	4x45 violet						B0088781	B0088782		
	70 90 violet			C0068099	C0068060 C0068560	C0068061 C0068561	C0068062 C0068562	C0068063 C0068563		
	4x45 4x70 violet					B0088786	B0088787	B0088788 B0088688		
	70 violet						C0068066	C0068068		
	150 violet						B0068380			
	90 150 violet							C0068640 B0068940		
	4x70 violet						B0088655	B0088656		

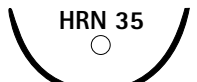
Needle length mm	Thread length cm colour	USP metric							
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6
1/2 circle round bodied needle									
	150 240 violet						B0068919	B0068930	
	70 violet						C0068183		
	70 violet				C0068074	C0068075	C0068076	C0068077	
Needle length mm	Thread length cm colour	USP metric							
		7/0 0.5	6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4
3/8 circle round bodied needle									
	45 violet	C0068101		C0068103					
	45 70 violet		C0068434	C0068134 C0068435					
	70 violet				C0068150	C0068151			
	70 violet				C0068159	C0068160	C0068161		
	70 violet					C0068164	C0068165		
	70 violet					C0068170	C0068171	C0068172	C0068173

Needle length mm	Thread length cm colour	USP metric							
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6
5/8 circle round bodied needle									
	70 90 violet			C0068414	C0068415 C0068775	C0068416	C0068417		
	70 90 violet		C0068813		C0068815 C0068820	C0068817 C0068828			
	70 violet				C0068425	C0068426	C0068427		
	70 90 violet					C0068490 C0068866	C0068491 C0068867		
Hook needle with taper point									
	70 violet				C0068475				
	70 violet						C0068478		
Round bodied ski needle									
	20 120 violet		C0068752 C0068755	C0068756	C0068757				
	20 120 violet			C0068746 C0068744	C0068749 C0068751				
	40 violet			C0068745					

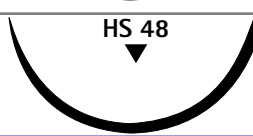
Needle length mm	Thread length cm colour	USP metric								
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6	
Straight round bodied needle										
GR 19 	20 violet		C0068281	C0068284						
GR 51 	90 violet				C0068185					
1/2 circle round bodied needle with short cutting tip										
HRC 17 	70 violet	C0068312	C0068313	C0068314	C0068315	C0068316				
HRC 20s 	70 violet				C0068785					
HRC 22 	70 violet				C0068331	C0068332	C0068333			
HRC 26 	70 violet					C0068343				
HRC 26s 	70 violet				C0068441		C0068444			
HRC 30 	70 violet			C0068373	C0068372	C0068371	C0068374			
HRC 30s 	90 violet						C0068375			
HRC 37 	70 90 violet			C0068139	C0068361 C0068140	C0068362 C0068141	C0068363 C0068142	C0068143		
HRC 37s 	70 90 violet				C0068842 C0068894	C0068843 C0068895	C0068844 C0068896	C0068897		

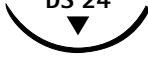
Needle length mm	Thread length cm colour	USP metric								
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6	
1/2 circle round bodied needle with short cutting tip										
	70 violet				C0068908	C0068909				
	70 violet						C0068960			
	90 violet				C0068976		C0068978			
	150 violet					C0068872	B0068873			
	70 90 violet						C0068627	C0068628 C0068983		
	150 violet					B0068601	B0068602			
	70 90 violet					C0068573	C0068964 C0068574	C0068575		
	150 violet						B0068987	B0068988		
	90 violet						G0068657			

Needle length mm	Thread length cm colour	USP metric								
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6	
Hook needle with short cutting tip										
	70 120 violet					C0068194	C0068476			
	45 violet					C0068479				
Progressive curved tapercutting needle										
	120 violet				C0068807					
1/2 circle round bodied needle with trocar point										
	70 90 violet			C0068650	C0068392 C0068651	C0068393 C0068652	C0068391 C0068653	C0068654		
	70 90 violet				C0068395 C0068532	C0068396 C0068533	C0068397 C0068534	C0068535		
	70 violet				C0068023	C0068024				
	70 violet						C0068484			
	90 violet				C0068997		C0068472			
	150 violet					C0068346	B0068347			
	70 90 violet						C0068474 C0068534	C0068353 C0068473		

Needle length mm	Thread length cm colour	USP metric							
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6
1/2 circle round bodied needle with trocar point									
 HRT 43s ⊕	150 violet					B0068356	B0068357		
 HRT 48 ⊕	70 90 violet					C0068501	C0068402 C0068502	C0068503	
 HRT 48 ⊕	150 violet						B0068370	B0068918	
 HRT 80 ⊕	90 violet						G0068788		
3/8 circle round bodied needle with trocar point									
 DRT 18 ⊕	70 violet		C0068320	C0068321					
 DRT 22 ⊕	70 violet			C0068377					
 DRT 26 ⊕	70 violet				C0068383				
 DRT 32 ⊕	70 violet				C0068386	C0068387	C0068309		
1/2 circle round bodied blunt pointed needle									
 HRN 35 ○	70 violet				C0068517				
 HRN 40 ○	90 violet						C0068637		

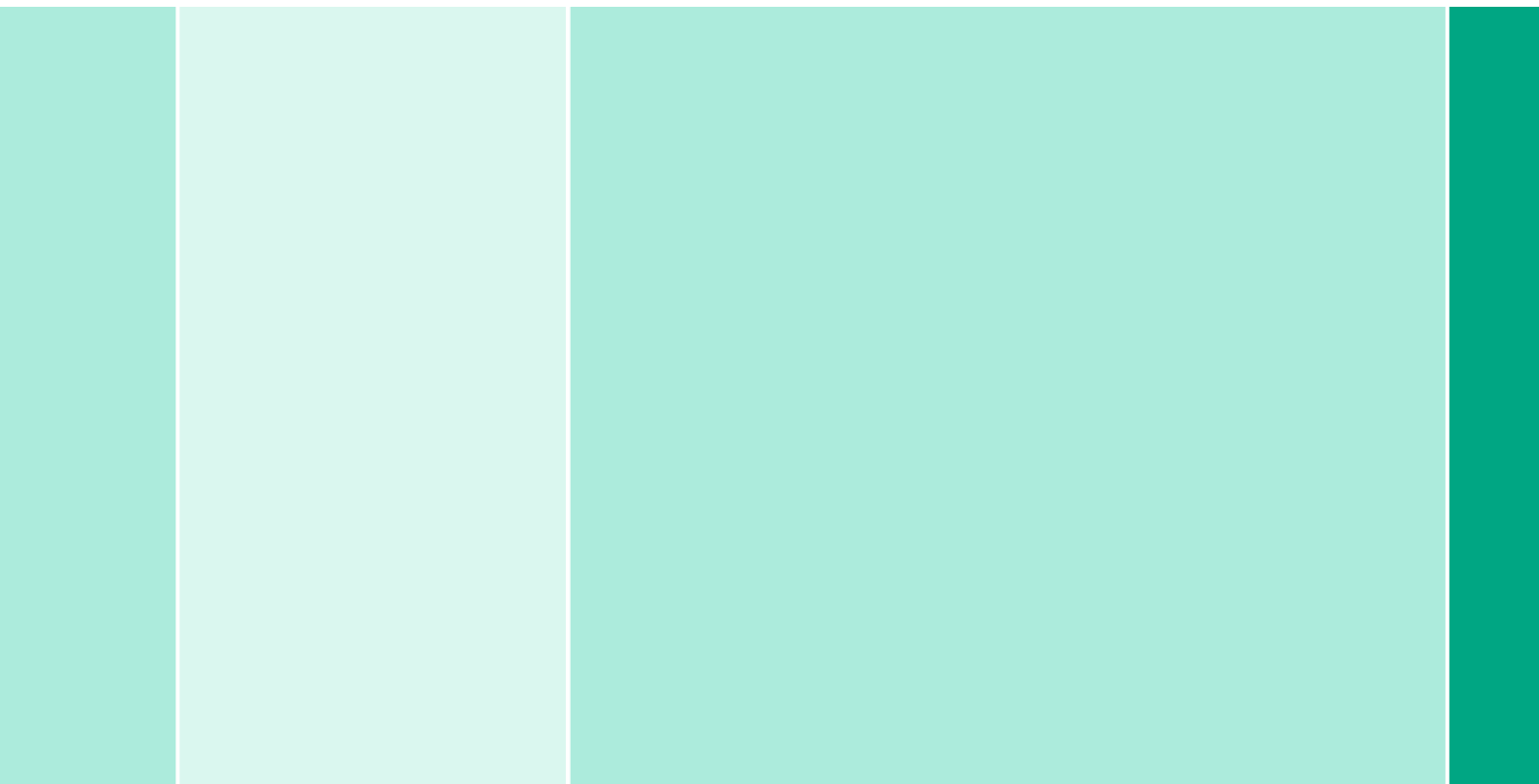
Needle length mm	Thread length cm colour	USP metric								
		5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	3 6	
1/2 circle round bodied blunt pointed needle										
	90 violet					C0068663	C0068664			
	90 violet						C0068228	C0068229		
1/2 circle reverse cutting needle										
	45 70 violet	C0068203	C0068204 C0068250							
	45 violet		C0068225	C0068226						
	45 70 violet			C0068230 C0068430	C0068431					
	4x45 violet			C0088836						
	70 violet			C0068241	C0068242	C0068243				
	70 violet				C0068290	C0068291				
	70 violet							C0068084		
	70 violet				C0068251	C0068252	C0068253			
	90 violet			C0068494	C0068495	C0068496	C0068497	C0068498		

Needle length mm	Thread length cm colour	USP metric							
		6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
1/2 circle reverse cutting needle									
	70 90 violet					C0068294 C0068596	C0068296 C0068582	C0068297 C0068583	C0068298 C0068599
	70 violet					C0068085	C0068086	C0068087	
 "Take off"	3 x 45 violet						B0088701		
	90 violet					C0068485	C0068486	C0068487	C0068488
	70 90 violet					C0068267 C0068585	C0068268 C0068586	C0068269 C0068587	C0068588
 "Take off"	3 x 45 violet							B0088911	
	70 90 violet						C0068261 C0068461	C0068262 C0068462	C0068463
3/8 circle reverse cutting needle									
	45 violet	C0068202							
	45 70 violet	C0068206	C0068207 C0068507	C0068208 C0068508					

Needle length mm	Thread length cm colour	USP metric							
		6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
3/8 circle reverse cutting needle									
DS 16 	45 70 violet		C0068212	C0068213 C0068513	C0068214 C0068514				
DS 19 	45 70 violet		C0068219 C0068419	C0068220 C0068420	C0068221 C0068421	C0068422			
DS 24 	70 violet			C0068234	C0068235	C0068236	C0068237		
DS 24  "Take off"	4x45 violet				C0088953				
DS 30 	70 violet				C0068246	C0068247	C0068248	C0068249	
DS 35 	70 violet							C0068258	
3/8 circle reverse cutting needle with micro-point									
DSMP 19 	70 violet			C0068823	C0068824				
DSMP 24 	70 violet				C0068864	C0068865			
Straight cutting needle									
2 x GS 13 	45 violet			C0068920					
GS 60 	70 violet				C0068265	C0068266			

Pre-cut sutures

	Thread length cm colour	USP metric							
		6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
Pre-cut sutures									
3 threads of 45 cm	3 x 45 violet			C0058624	C0058625	C0058626	C0058627	C0058629	C0058630
6 threads of 45 cm	6 x 45 violet		C0058643	C0058644	C0058645	C0058646	C0058647	C0058649	C0058650
12 threads of 45 cm	12 x 45 violet			C0058664	C0058665	C0058666	C0058667	B0058669	B0058670
10 threads of 60 cm	10 x 60 violet		C0058180	C0058181	C0058182	C0058183	C0058567	C0058568	
2 threads of 70 cm	2 x 70 violet			C0058404	C0058405	C0058406	C0058407	C0058409	C0058410
5 threads of 70 cm	5 x 70 violet			C0058444	C0058445	C0058446	C0058447	C0058449	C0058450
1 thread of 140 cm	1 x 140 violet			C0058204	C0058205	C0058207	C0058208	C0058209	C0058210
1 thread of 150 cm	1 x 150 violet						B0058707	B0058709	B0058708
Ligature reels									
1 thread of 250 cm	1 x 250 violet				G0058715	G0058716	G0058717	G0058719	G0058720



B. Braun Surgical SA | Carretera de Terrassa, 121 | 08191 Rubí | Spain
Phone +34 93 5 86 62 00 | Fax +34 93 6 99 73 03 | www.bbraun.es

Aesculap AG | Am Aesculap-Platz | 78532 Tuttlingen | Germany
Phone +49 (0) 74 61 95-0 | Fax +49 (0) 74 61 95-26 00 | www.aesculap.com

Aesculap – a B. Braun company

All rights reserved. Technical alterations are possible. This leaflet may be used in no way whatsoever other than for the offering, buying and selling of our products.

No part may be copied or reproduced in any form. In the case of misuse we retain the right to recall our catalogues and pricelists and to take legal action.