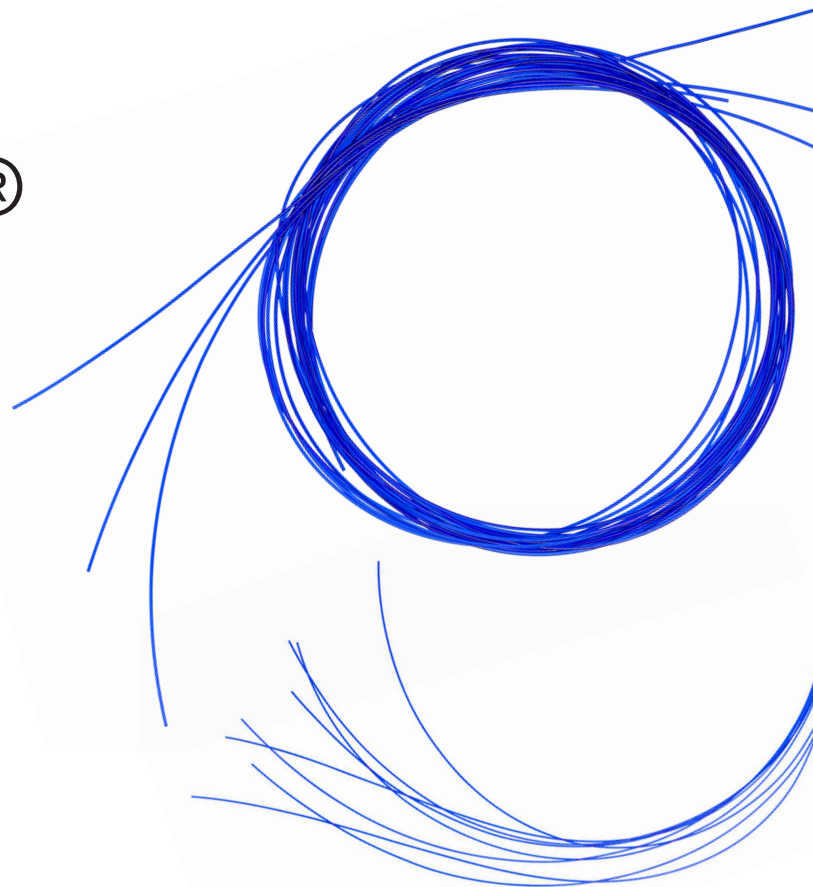


# Vilene®

**Blue monofilament  
polyvinylidene  
fluoride (PVDF)**

Synthetic  
Non-absorbable



## Suggested procedures

- Cardiovascular
- Laparoscopic
- Plastic
- Cosmetic
- Subcuticular
- Obstetrics
- Gynaecology
- Orthopaedics
- General / Intestinal
- Dental
- Paediatric

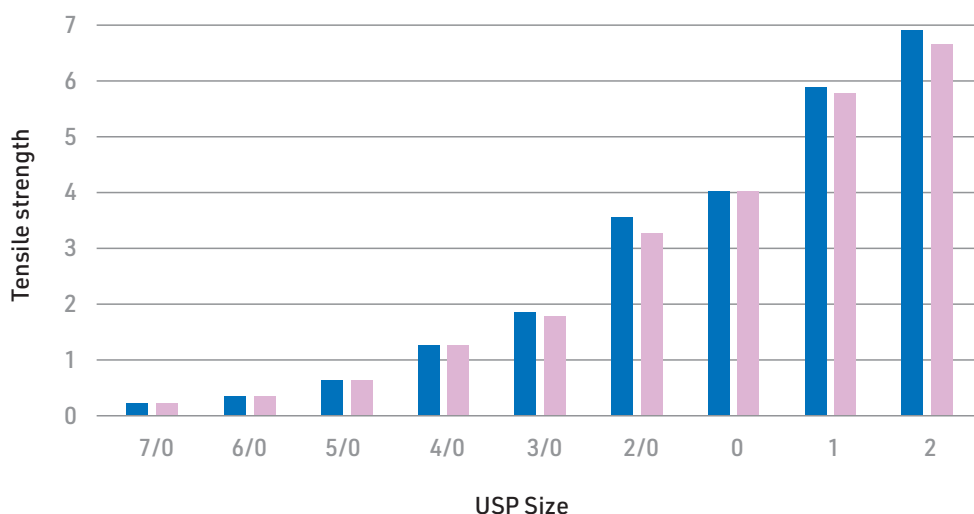
## Features

- Suitable for all procedures where polypropylene monofilaments are used
- Very low memory, with the curves straightening out when the thread is gently pulled
- Will not fray or fracture if handled correctly
- Low frictional characteristics facilitating excellent knot-tying
- Physiologically inert, with high tensile strength *in situ*
- Has very little elasticity, and is smooth, fray-free, and supple
- Will result in a superior cosmetic finish when used correctly with premium cutting needles
- Analogue of PTFE and EPTFE
- Available in:
  - single-armed and double-armed specifications
  - various multi-packs
  - a range of needles including heavy needles
- Sutures made with 300 series stainless steel
- Up to five-year shelf life

**Vilene® is a superior suture material when compared to polypropylene sutures.**

## Knot pull\*, break force and tensile strength

Vilene® has superior tensile strength *in situ* for all USP sizes



■ Vilene® ■ Polypropylene

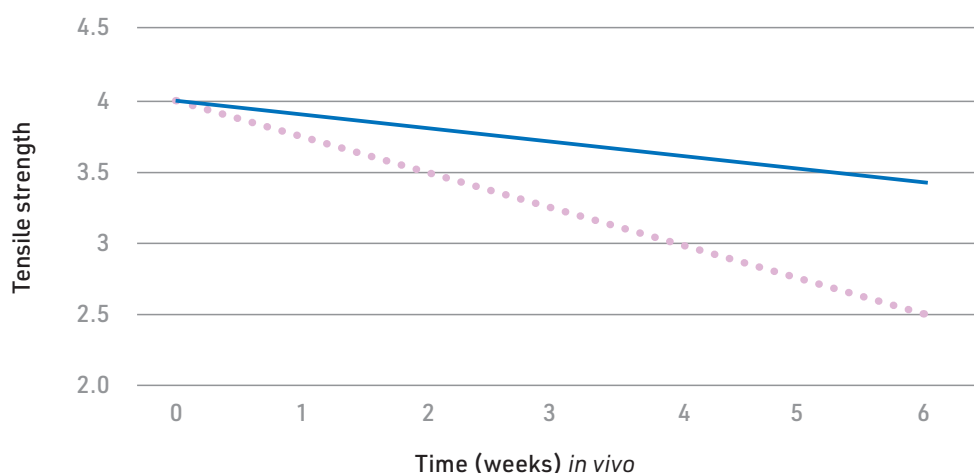
Studies<sup>(2)</sup> have shown that PVDF sutures have greater or at least equal knot pull strength compared to polypropylene sutures at all USP diameters.

Studies<sup>(1)</sup> have shown that for equivalent sizes (e.g. 4-0, 5-0 and 6-0), the extension at break for PVDF sutures was almost 150% that of polypropylene sutures.

\* Standard knot pull test is with a simple knot, and test is as stated in US Pharmacopeia Vol. XX1 and European Pharmacopeia Vol. III.

## Tensile strength retention

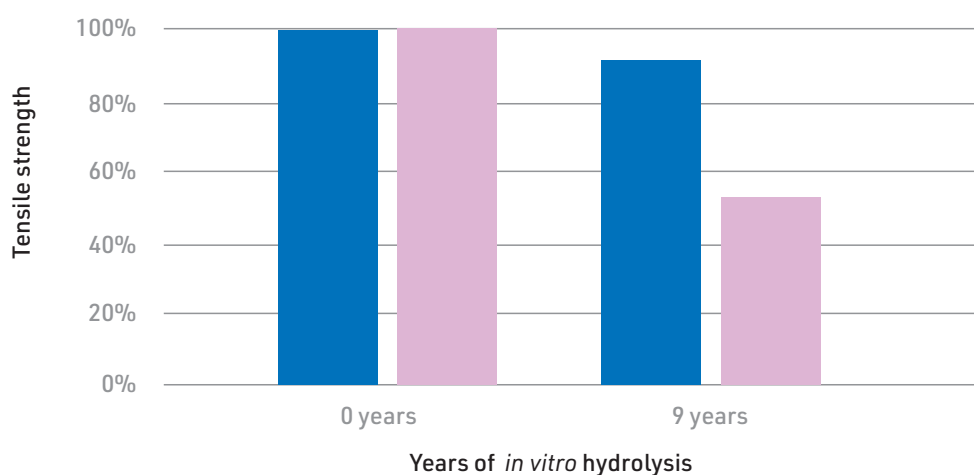
Vilene® is better at retaining tensile strength *in vivo* over time



— Vilene® ..... Polypropylene

Studies<sup>(5)</sup> have shown that PVDF sutures have significantly better tensile strength retention *in vivo* over time when compared to polypropylene sutures.

Vilene® has superior tensile strength *in vitro* over time



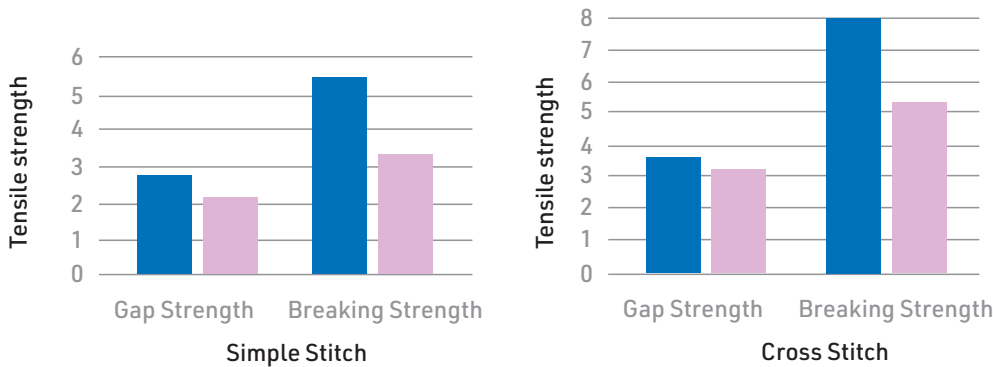
■ Vilene® ■ Polypropylene

Studies<sup>(3)(4)</sup> have shown that when PVDF sutures and polypropylene sutures are subjected to hydrolysis for 9 years, the tensile strength of PVDF sutures only reduce to 92% of original strength; whereas the tensile strength of polypropylene sutures experience a far greater reduction in tensile strength, reducing to 53% of original strength.

**Vilene® is a superior suture material when compared to polypropylene sutures.**

## Gap strength and breaking strength

Vilene® has superior gap and breaking strength when using simple or cross stitch

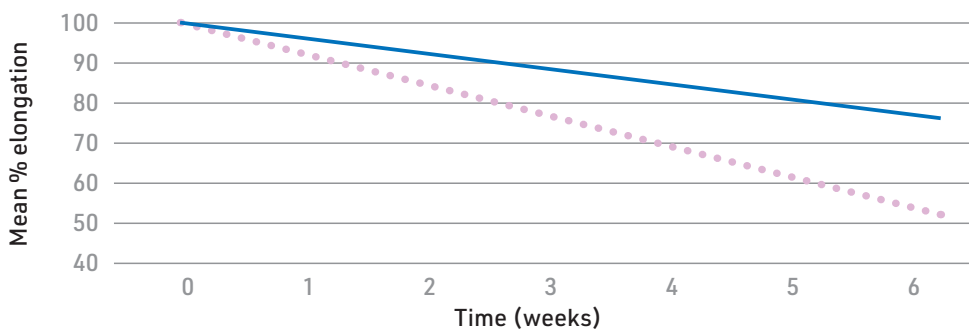


■ Vilene® ■ Polypropylene

Studies<sup>(2)</sup> have shown that the gap strength (observation of 2mm displacement between tendon ends) and breaking strength of PVDF sutures were far greater than polypropylene sutures when using simple-stitch or cross-stitch suturing techniques.

## Elongation\* and creep

Vilene® exhibits less elongation *in vivo* over time



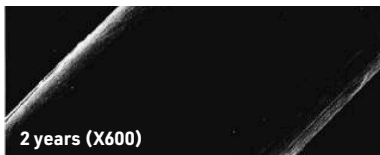
— Vilene® ..... Polypropylene

Studies<sup>(5)</sup> have found PVDF sutures to exhibit considerably less elongation *in vivo* than polypropylene sutures over time.

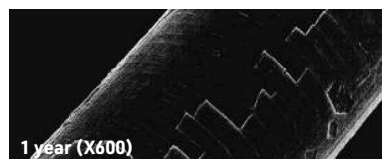
## Degradation

Vilene® exhibits minimal degradation over time.

Polyvinylidene fluoride



Polypropylene










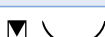










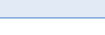
Studies<sup>(3)</sup> have found that after one and two years of implantation, PVDF sutures did not appear to be substantially degraded; however polypropylene sutures showed evidence of surface deterioration, exemplified by uniformly spaced circumferential cracking and peeling and flaking of the polymer material in the outermost surface layer.

## References

- 1) Urban E, King MW, Cuidoin R, Laroche G, Marois Y, Martin L, Cardou A, Douville Y (1994) Why Make Monofilament Sutures Out of Polyvinylidene Fluoride? *ASAIO Journal* 40: 145-156.
- 2) Wada A, Kubota H, Hatanaka H, Miura H, Iwamoto Y. (2001) Comparison of mechanical properties of polyvinylidene fluoride and polypropylene monofilament sutures used for flexor tendon repair. *Journal of Hand Surgery, Britain* 26B(3): 212- 216.
- 3) Mary, C, Marois Y, King MW, Laroche G, Douville Y, Martin L, Guidoin R. (1998) Comparison of the In Vivo behavior of Polyvinylidene fluoride and Polypropylene Sutures Used in Vascular Surgery. *ASAIO Journal* 44: 199-206.
- 4) Laroche G, Marois Y, Schwarz E et al (1995) Polyvinylidene fluoride monofilament sutures: can they be used safely for long-term anastomoses in the thoracic aorta? *Artif Organs* 19: 1190-1199.
- 5) Slavotinek A, Kapaniris O, Millard S, Fontana L, Chapelle S, Dymock R, Mouton W, Leppard P (1996) Tensile strength, elongation and histological changes of currently used sutures after implantation and in vitro exposure to bile and pancreatic juices. A report to Dynek Pty Ltd: 10- 12.

# Commonly used Vilene® product codes and specifications.

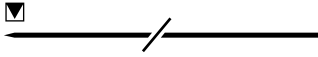















Contact us for any other suture specification.

		Thread							
Needle*		USP Metric	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 Reverse Cutting									
10mm		45cm	V601	V501					
12mm		45cm	V602	V502					
		76cm	V1602	V1502					
12mm		76cm	DV602	DV502					
13mm		45cm	V6040	V5040	V4040				
22mm		45cm					V2088		
28mm		45cm					V207		
40mm		76cm					V2013	V013	V113
		100cm					V12013		
3/8 Circle Reverse Premium Cutting									
11mm		45cm	V602D	V502D					
13mm		45cm	V6049	V5049	V4049				
16mm		45cm	V604	V504	V404	V304			
		76cm		V1504	V1404	V1304			
19mm		45cm	V605	V505	V405	V305	V205		
		76cm			V1405	V1305	V1205		
24mm		45cm			V406	V306	V206		
		76cm			V1406	V1306	V1206		
26mm		45cm				V3047	V2047		
30mm		76cm				V309	V209	V09	
1/2 Circle Reverse Cutting									
16mm		45cm		V5015	V4015				
18mm		45cm		V5014	V4014				
25mm		45cm				V3034	V2034		
40mm		76cm					V2012	V012	V112
1/2 Circle Reverse Premium Cutting									
15mm		45cm		V5016	V4016				

\* Needle images and sizes are approximations only.

# Commonly used Vilene® product codes and specifications.











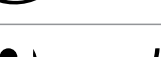



Contact us for any other suture specification.

Needle*	Thread						
	USP Metric	7/0 0.5	6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3
<b>Straight Premium Cutting</b>							
60mm 	100cm				V4030	V3030	V2030
<b>3/8 Circle K-TANA® Special Cutting</b>							
13mm 	45cm		KV6040	KV5040			
16mm 	45cm		KV604	KV504	KV404		
18mm 	45cm			KV505	KV405		
<b>3/8 Circle Conventional Cutting</b>							
13mm 	45cm		V6093	V5093	V4093		
16mm 	45cm		V6037	V5037	V4037	V3037	
	76cm					V13037	
19mm 	45cm					V30#36	
	76cm				V140#36		
26mm 	45cm					V30#10	
<b>3/8 Circle Finline® (Conventional Premium) Cutting</b>							
16mm 	45cm		V6025	V5025	V4025	V3025	
20mm 	45cm				V4026	V3026	
25mm 	45cm				V4027	V3027	
<b>3/8 Circle Round Bodied Taper</b>							
10mm CV300 	76cm	DV7052	DV6052	DV5052	DV4052		
13mm CV300 	76cm	DV7053	DV6053 DV6053E2^		^Non-reflective black needle		
	90cm		DV16053	DV5053 DV5053E2^	DV4053		
16mm CV300 	90cm		DV6054	DV5054	DV4054	DV3054	
18mm CV300 	76cm				V4066		
25mm CV300 	90cm				DV4067	DV3067	

\* Needle images and sizes are approximations only.

# Commonly used Vilene® product codes and specifications.



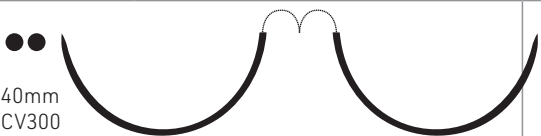









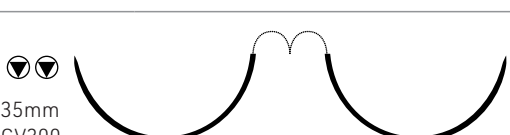
Contact us for any other suture specification.

Needle*	Thread								
	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
<b>3/8 Circle Round Bodied A-CUTE® (Cutting Tip) Taper</b>									
10mm CV300 	76cm	DV7077	DV6077						
13mm CV300 	76cm		DV6076						
	90cm			DV5076					
16mm CV300 	90cm		DV6062	DV5062					
<b>1/2 Circle Round Bodied Taper</b>									
10mm CV300 	76cm	DV7051	DV6051	DV5051					
13mm CV300 	76cm	DV7055	DV6055	DV5055Z					
	90cm			DV5055	DV4055				
16mm CV300 	90cm		DV6060	DV5060	DV4060	DV3060	DV2060		
18mm CV300 	90cm		DV6064	DV5064	DV4064	DV3064	DV2064		
20mm CV300 	90cm			DV5065	DV4065	DV3065	DV2065		
22mm CV300 	76cm			V50#23	V40#23	V30#23	V20#23		
22mm CV300 	90cm				DV40#23	DV30#23			
25mm CV300 	76cm				V4068	V3068	V2068	V068	V168
	90cm						V12068		
25mm CV300 	90cm			DV5068	DV4068	DV3068	DV2068		
	120cm					DV13068	DV12068		
30mm CV300 	76cm					V3069	V2069	V069	V169
30mm CV300 	90cm					DV3069	DV2069		

\* Needle images and sizes are approximations only.

# Commonly used Vilene® product codes and specifications.

Contact us for any other suture specification.

		Thread							
Needle*	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
<b>1/2 Circle Round Bodied Taper</b>									
35mm CV300 	76cm					V3070	V2070		
	100cm							V070	V170
35mm CV300 	120cm					DV3070	DV2070		
40mm CV300 	90cm							DV097	
<b>4/5 Curve Round Bodied Taper J Needle</b>									
30mm 	100cm						V2078	V078	V178
<b>1/2 Circle Round Bodied Taper (Heavy)</b>									
35mm 	100cm							V070E5	
40mm 	76cm						V2097E5		
	100cm							V097E5	V197E5
48mm 	76cm						V2098E5		
	100cm							V098E5	V198E5
<b>1/2 Circle Round Bodied A-CUTE® (Cutting Tip) Taper</b>									
10mm CV300 	76cm	DV70#46							
13mm CV300 	76cm		DV60#76	DV50#76					
16mm CV300 	90cm		DV6061	DV5061					
18mm CV300 	90cm			DV5035	DV4035	DV3035	DV2035		
25mm CV300 	90cm				DV4032	DV3032	DV2032		
35mm CV300 	45cm							DV042ZZ	
	90cm					DV3042	DV2042		
	90cm							DV042	

\* Needle images and sizes are approximations only.

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Dynek is a leading, family owned manufacturer of sutures, committed to technical and surgical excellence. Established in 1974, Dynek has a proud history of innovation and quality as the only Australian manufacturer of sutures, with a singular focus of excellent patient outcomes.



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- The information contained in this document is intended as a guide only.
- Always refer to the instructions for use when using Dynek sutures.
- Vilene® is included on the ARTG (AU), Medsafe (NZ), and CE Mark (EU).
- Knot tying requires the standard surgical technique of flat and square ties with additional throws as indicated by surgical circumstance.
- A minimum order quantity may apply to all products.

QA:BE021/4 06/2022