

 **ELI MEDICAL**

Suture Catalog

Surgical Sutures

Polyglycolic Acid (PGA) Suture



Polyglycolic Acid (PGA) Sutures are synthetic, absorbable, sterile surgical sutures composed of braided Polyglycolic Acid. The empirical formula of the polymer is $(C_2H_2O_2)_n$. PGA sutures are available undyed and dyed violet with D&C Violet No.2 (Color Index number 60725).

PGA Sutures are intended for use in general soft tissue approximation and/or ligation, but not intended for use in cardiovascular tissue, neurosurgery or ophthalmic surgery.

PGA Sutures elicits a minimal initial inflammatory reaction in tissues and are eventually replaced with an in-growth of fibrous connective tissue. Progressive loss of tensile strength and eventual absorption of sutures occurs by means of hydrolysis, where the polymer degrades to glycolic which are subsequently absorbed and eliminated by the body. Absorption begins as a loss tensile of strength followed by a loss of mass.

Implantation studies in rats show the following profile.

Days	Approximate % original Strength Remaining
14 days	75%
21 days	40%

Absorption of PGA sutures is essentially complete between 60 and 90 days.

REF.NO	COLOR	NEEDLE TYPE	NEEDLE CIRCLE	NEEDLE SIZE	NEEDLE CODE	SIZE	LENGTH
397PGA	Violet	Reverse cutting	3/8 circle	19mm	E* FS-2	4/0	30"(75cm)
421PGA	Undyed	Reverse cutting	3/8 circle	19mm	E* FS-2	5/0	30"(75cm)
467PGA	Violet	Reverse cutting	1/2 circle	36mm	E*CP-1	0	30"(75cm)
468PGA	Violet	Reverse cutting	1/2 circle	36mm	E*CP-1	1	30"(75cm)

Rapid Polyglycolic Acid (PGA Rapid) Suture



Rapid Polyglycolic Acid (PGA Rapid) sutures are synthetic, absorbable, braided, sterile surgical sutures composed of Polyglycolic Acid (PGA). The empirical formula of the polymer is $(C_2H_2O_2)_n$. The characteristic rapid loss of strength is achieved by use of a polymer material with a lower molecular weight than regular PGA suture. PGA Rapid sutures are available undyed and dyed violet with D&C Violet No.2 (Color Index number 60725). PGA Rapid sutures are coated with polycaprolactone and calcium stearate.

PGA Rapid sutures are intended for use in general soft tissue approximation where only short term wound support is required, including ophthalmic (e.g. conjunctiva) procedures. PGA Rapid suture is not for use in cardiovascular or neurological tissues.

PGA Rapid sutures elicits a minimal initial inflammatory reaction in tissues and are eventually replaced with an in-growth of fibrous connective tissue. Progressive loss of tensile strength and eventual absorption of sutures occurs by means of hydrolysis, where the polymer degrades to glycolic which are subsequently absorbed and eliminated by the body. Absorption begins as a loss tensile of strength followed by a loss of mass.

Implantation studies in rats show the following profile.

Days	Approximate % original Strength Remaining
7 days	55%
14 days	20%
21 days	5%

Absorption of PGA Rapid sutures are essentially complete between 42 and 63 days.

REF.NO	COLOR	NEEDLE TYPE	NEEDLE CIRCLE	NEEDLE SIZE	NEEDLE CODE	SIZE	LENGTH
493PGA+	Undyed	Precision reverse cutting	3/8 circle	13mm	E*P-3	5/0	18"(45cm)
494 PGA+	Undyed	Precision reverse cutting	3/8 circle	13mm	E*P-3	4/0	18"(45cm)

ELIXON™

Sterile Synthetic Absorbable Suture

Monofilament Polydioxanone(PDO) Suture

Monofilament Polydioxanone (PDO) Suture is a synthetic, absorbable, monofilament, sterile suture composed of a poly (p-dioxanone). The empirical molecular formula of the polymer is $(C_4H_6O_3)_n$. PDO suture is available undyed and dyed violet with D&C Violet No.2 (Color Index number 60725).

PDO sutures are intended for use in general soft tissue approximation, but not intended for use in pediatric cardio tissue, ophthalmic tissue, adult cardiovascular tissue, microsurgery or neural tissue.

PDO suture elicits a minimal initial inflammatory reaction in tissues and is eventually replaced with an in-growth of fibrous connective tissue. Progressive loss of tensile strength and eventual absorption of sutures occurs by means of hydrolysis, where the polymer degrades to the monomeric acid 2-hydroxyethoxyacetic acid which is subsequently absorbed and eliminated by the body. Absorption begins as loss of tensile strength followed by a loss of mass.

Implantation studies in rats show the following profile:

Days	Approximate % original Strength Remaining
14 days	75%
28 days	65%
42 days	50%

Absorption is minimal until about the 90th post implantation day and is essentially complete between 180 and 220 days.

REF. NO	COLOR	NEEDLE TYPE	NEEDLE CIRCLE	NEEDLE SIZE	NEEDLE CODE	SIZE	LENGTH
304PDO	Violet	Taper point	1/2 circle	17mm	E*RB-1	4/0	30" (75cm)
316PDO	Violet	Taper point	1/2 circle	26mm	E*SH	3/0	30" (75cm)
317PDO	Violet	Taper point	1/2 circle	26mm	E*SH	2/0	30" (75cm)
398PDO	Violet	Reverse cutting	3/8 circle	19mm	E*FS-2	3/0	30" (75cm)
451PDO	Violet	Reverse cutting	3/8 circle	24mm	E*FS-1	2/0	30" (75cm)
452PDO	Violet	Reverse cutting	3/8 circle	24mm	E*FS-1	3/0	30" (75cm)

ELITONE™

Sterile Synthetic Absorbable Suture

Monofilament Polyglycolide-co-caprolactone (PGCL) Suture

Monofilament Polyglycolide-co-caprolactone (PGCL) Sutures are synthetic, absorbable, monofilament, sterile suture composed of a Poly (glycolide-co-caprolactone). The empirical molecular formula of the polymer is $(C_2H_2O_2)_m (C_6H_{10}O_2)_n$. PGCL suture is available undyed and dyed violet with D&C Violet No.2 (Colour Index number 60725).

PGCL sutures are intended for use in general soft tissue approximation and/or ligation where an absorbable material is indicated. The safety and effectiveness of PGCL suture has not been established in the neural tissue, cardiovascular tissue, microsurgery or ophthalmic surgery.

PGCL suture elicits a minimal initial inflammatory reaction in tissues and is eventually replaced with an in-growth of fibrous connective tissue. Progressive loss of tensile strength and eventual absorption of sutures occurs by means of hydrolysis, where the polymer degrades to adipic acid which is subsequently absorbed and eliminated by the body. Absorption begins as loss of tensile strength followed by a loss of mass.

Implantation studies in rats show the following profile:

Days	Approximate % original Strength Remaining
7 days	65%
14 days	40%

Absorption is essentially complete between 90 and 120 days.

REF. NO	COLOR	NEEDLE TYPE	NEEDLE CIRCLE	NEEDLE SIZE	NEEDLE CODE	SIZE	LENGTH
315PGCL	Violet	Taper point	1/2 circle	26mm	E*SH	4/0	30" (75cm)
463PGCL	Violet	Precision reverse cutting	3/8 circle	13mm	E*P-3	5/0	18" (45cm)
942 PGCL	Violet	Reverse cutting	3/8 circle	24mm	E* FS-1	3/0	36" (90cm)
922PGCL	Violet	Reverse cutting	3/8 circle	19mm	E* FS-2	4/0	36" (90cm)
923PGCL	Violet	Reverse cutting	3/8 circle	19mm	E* FS-2	3/0	36" (90cm)
943PGCL	Violet	Reverse cutting	3/8 circle	24mm	E* FS-1	2/0	36" (90cm)

Monofilament Nylon Suture



Monofilament Nylon suture is a synthetic non-absorbable sterile monofilament surgical suture composed of polyamide 6(NH-CO-(CH₂)₅)_n or polyamide 6.6[NH-(CH₂)₆-NH-CO-(CH₂)₄-CO]_n. Polyamide 6.6 is formed by polycondensation of hexamethylene diamine and adipic acid. Polyamide 6 is formed by polymerization of caprolactam. Nylon sutures are dyed blue with phthalocyanine blue (Color Index Number 74160) ; Blue (FD & C #2) (Color Index Number 73015) or Logwood Black (Color Index Number 75290).

Nylon suture is indicated for use in general soft tissue approximation and/or ligation, including use in ophthalmic procedures, but it is not for use in the central circulatory system and central nervous system.

Nylon suture elicits a minimal initial inflammatory reaction in tissues, which is followed by gradual encapsulation of the suture by fibrous connective tissue, While polyamide is not absorbed, progressive hydrolysis of the polyamide in vivo may result in gradual loss over time of tensile strength.

REF. NO	COLOR	NEEDLE TYPE	NEEDLE CIRCLE	NEEDLE SIZE	NEEDLE CODE	SIZE	LENGTH
663NL	Blue	Reverse cutting	3/8 circle	24mm	E*FS-1	3/0	30" (75cm)
664NL	Blue	Reverse cutting	3/8 circle	26mm	E*FS	2/0	30" (75cm)

Monofilament Polypropylene Suture



Polypropylene suture is a monofilament, synthetic, non-absorbable, sterile surgical suture composed of an isotactic crystalline stereoisomer of polypropylene, a synthetic linear polyolefin. The molecular formula is (C₃H₆)_n. PP suture is available undyed (clear) and dyed blue with phthalocyanine blue(Color Index Number 74160).

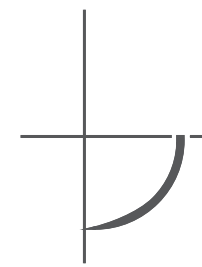
Polypropylene suture is indicated for use in general soft tissue approximation and/or ligation, including use in cardiovascular, ophthalmic and neurological procedures.

Polypropylene suture elicits a minimal initial inflammatory reaction in tissues which is followed by gradual encapsulation of the suture by fibrous connective tissue. it is recommended for use where the least possible suture reaction is desired. As a monofilament it has been successfully employed in surgical wounds which subsequently become infected or contaminated where it can minimize later sinus formation and suture extrusion. Because of its lack of adherence to tissue, Polypropylene suture is effective as a pull-out suture.

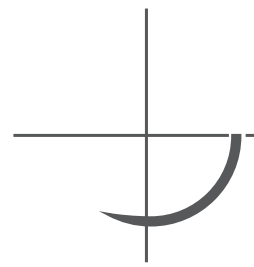
REF. NO	COLOR	NEEDLE TYPE	NEEDLE CIRCLE	NEEDLE SIZE	NEEDLE CODE	SIZE	LENGTH
8665PP	Pink	Reverse cutting	3/8 circle	19mm	E* FS-2	3/0	30" (75cm)
8683 PP	Pink	Reverse cutting	3/8 circle	19mm	E* FS-2	4/0	30" (75cm)
8684 PP	Pink	Reverse cutting	3/8 circle	24mm	E*FS-1	3/0	30" (75cm)
8685 PP	Pink	Reverse cutting	3/8 circle	26mm	E*FS	2/0	30" (75cm)
8690 PP	Pink	Reverse cutting	3/8 circle	36mm	E*FSLX	0	30" (75cm)

Needle Shape and Needle Type

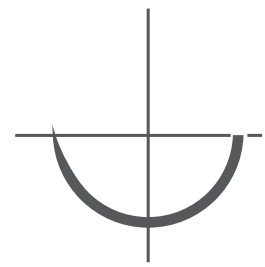
Needle Shape



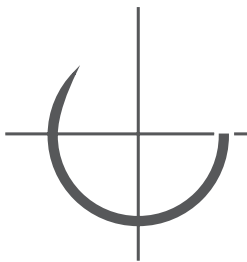
1/4 CIRCLE



3/8 CIRCLE



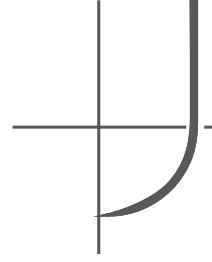
1/2 CIRCLE



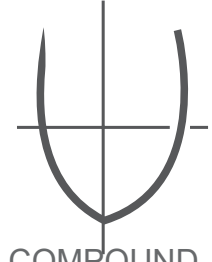
5/8 CIRCLE



STRAIGHT



1/2 CURVE



COMPOUND
CURVE

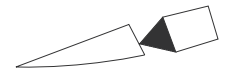
Needle Types



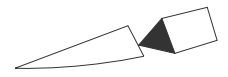
Taper Point Needle



Conventional Cutting Needle



Precision Cutting Needle



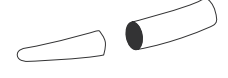
Reverse Cutting



Precision Reverse Cutting



Blunt Point Needle










Spatula Needle








Guide to Suture Materials

Synthetic Absorbable Suture

	Brands	Range of Size (USP)	Material	Color	Tensile strength retention-days
	ELISORB	USP 2- USP 6/0 (metric 5 – metric 0.7)	100% Polyglycolic Acid	Violet or Undyed	14 days post implantation 75% 21 days post implantation 40%
	ELISORB Rapid	USP 3 or 4- USP 8/0 (metric 6 – metric 0.4)	100% Polyglycolic Acid	Violet or Undyed	7days post implantation 55% 14days post implantation 20% 21 days post implantation 5%
	ELIXON	USP 2- USP 7/0 (metric 5 – metric 0.5)	Polydioxanone	Violet(D&C No.2) or Undyed	14 days post implantation 75% 28 days post implantation 65% 42 days post implantation 50%
	ELITONE	USP 3 - USP 10/0 (metric 6 - metric 0.2)	Poly(glycolideco-caprolactone)(PGA-PCL)	Undyed or Violet(D&C no.2)	7 days post implantation 65% 14 days post implantation 40%
	(PGLA)	USP 2- USP 6/0 (metric 5 – metric 0.7)	Poly(glycolide-colactide)(90/10)	Undyed or Violet (D&C No.2)	14 days post implantation 75% 21 days post implantation 40% 28 days post implantation 20%
	(PGLA Rapid)	USP 2- USP 6/0 (metric 5 – metric 0.7)	Poly(glycolide-colactide)(90/10)	Violet Undyed	7 days post implantation 55% 14 days post implantation 20% 21 days post implantation 5%
	(CATGUT)	USP #2- USP 6/0 (metric 5 – metric 0.7)	Plain Catgut	Yellow	7-10 days

Non-Absorbable Suture

	Brands	Range of Size (USP)	Material	Color	Tensile strength retention-days
	POLYPROPYLENE	USP 1- USP 10/0 (metric 4 – metric 0.2)	Polypropylene	Blue or Undyed	No loss of tensile strength
	NYLON	USP 5- USP 10/0 (metric7 – metric 0.2)	Polyamide 6 and 6.6	Blue or Black	15-20% per year
	POLYESTER	USP 5- USP 10/0 (metric7 – metric 0.2)	Polyethylene terephthalate	Green or White	Long Period
	SILK	USP 5- USP 10/0 (metric 7 – metric 0.2)	Natural Silk	Black, Blue or Undyed	Two Years
	PVDF	USP 2- USP 10/0 (metric 5 – metric 0.2)	Polyvinylidene Fluoride	Blue or Undyed	Long Period
	PTFE	USP 2- USP 10/0 (metric 5 – metric 0.2)	100% high-density PTFE	Undyed	Long Period
	STEEL	USP 6/0- USP 7#	Stainless Steel	Metal Gray	Long Period



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