



# Suture Materials for Veterinary Medicine

**REPAIR & REGENERATE**



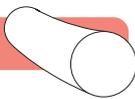
Advanced Medical Solutions

**A smooth healing process after veterinary procedures is essential for achieving optimal functional outcomes.**

Our advanced sutures materials for the veterinary field provide excellent support and facilitate the effective regeneration of damaged tissue. The carefully developed portfolio of needle geometries ensures the best possible results for each veterinary procedure. Superior handling properties and maximum comfort for animal patients are our primary focus in product development.

## Absorbable

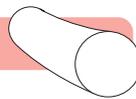
### PGA *resoquick*™



**Suggested alternative material to: VICRYL RAPIDE or VELOSORB FAST**

- ✓ short term absorbable multifilament
- ✓ very supple
- ✓ very high tensile strength
- ✓ minimal tissue reaction
- ✓ smooth passage through tissue
- ✓ high knot security

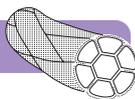
### GLYCOLON®



**Suggested alternative material to: MONOCRYL or BIOSYN**

- ✓ short term absorbable monofilament
- ✓ high tear resistance
- ✓ excellent knot security
- ✓ atraumatic tissue passage

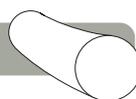
### PGA RESORBA®



**Suggested alternative material to: VICRYL or POLYSORB**

- ✓ mid term absorbable multifilament
- ✓ high tear resistance
- ✓ good handling
- ✓ excellent knot security
- ✓ atraumatic tissue passage
- ✓ minimal tissue reaction

### PDO RESORBA™

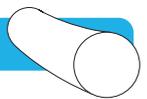


**Suggested alternative material to: PDS or MAXON**

- ✓ long term absorbable monofilament
- ✓ very high tensile strength
- ✓ minimal tissue reaction
- ✓ smooth passage through tissue
- ✓ robust and high knot security

## Non-absorbable

### MOPYLEN®



**Suggested alternative material to: PROLENE or SURGIPRO**

- ✓ polypropylene suture
- ✓ excellent knot security
- ✓ consistently high tear resistance
- ✓ excellent tissue passage
- ✓ hydrophobic
- ✓ non-ageing

### RESOLON®



**Suggested alternative material to: ETHILON II or DERMALON**

- ✓ above average softness and suppleness
- ✓ superior handling and knotting properties
- ✓ no capillarity
- ✓ excellent tissue passage

### Spring-eyed needles

#### Tempered stainless steel:

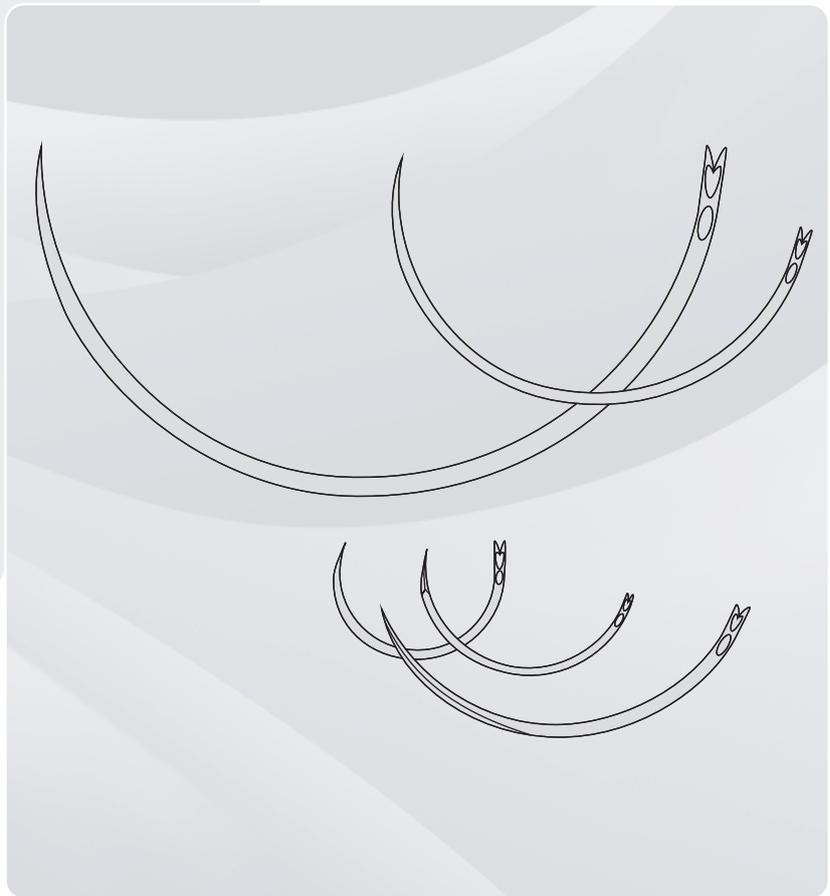
- ▶ high bending resistance
- ▶ guaranteed rustproof

#### Optimised spring eye design:

- ▶ secure hold for the suture
- ▶ reduces the risk of damage to the suture's surface
- ▶ fast and easy suture insertion due to the optimal elasticity of the spring eye

#### Precision honing:

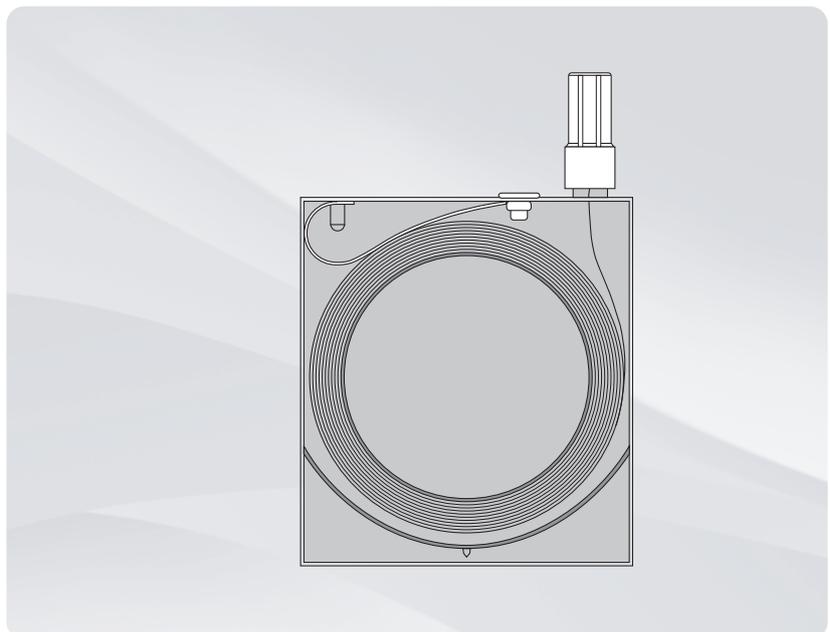
- ▶ sharply honed cutting edge reduces tissue trauma
- ▶ excellent penetration ability



### Dispenser packaging

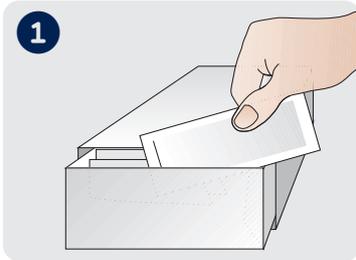
#### Features:

- ▶ available in a variety of suture materials and thread lengths
- ▶ delivered in sterile condition
- ▶ secure packaging designed for economic efficiency



## Peel-eco-Pack

### A combination of peelable outer sachet and multifunctional inner sachet



The peel-pack is removed from the storage box.

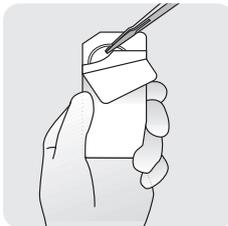


The Circulating Nurse grasps the two opening flaps at the upper end of the pack and opens it by evenly peeling the flaps apart.



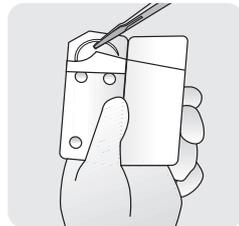
The sterile contents are handed over without contamination.

### 4 Handling of the primary packets:



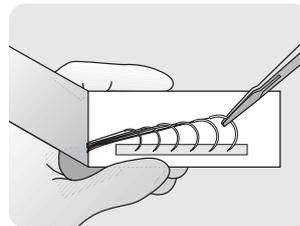
#### Single pack / needle-thread combination

Precut single sterile sutures with an attached surgical needle. The needle is exposed by turning over the perforated flap. It is then removed with a needle holder.



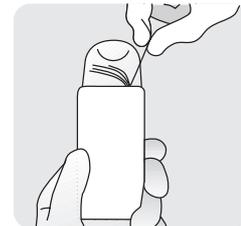
#### Single pack / needle-thread combination

The needle is exposed by folding out the suture carrier and then withdrawn with the needle holder.



#### Multipack

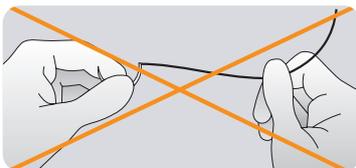
Several combinations in each sterile primary packet. This simplifies the organisation of handing over the same thread combinations during standardised procedures. The needles are exposed by opening the side of the paper cover, after which the individual needles (one after the other) are taken out with the needle holder.



#### Precut sutures

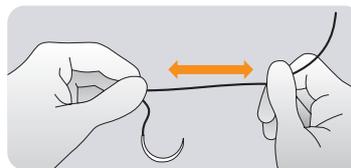
One or more threads in each sterile primary packet. The suture is meant for ligatures or for use with eyed needles. After the upper flap has been opened, the individual threads can be withdrawn in any desired order.

### Instructions



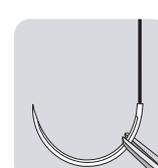
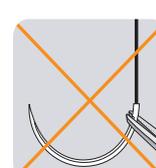
#### Stretching the thread

The thread must be stretched gently after it has been removed from the primary packet. Do not pull or rub it abruptly. Do not grasp the needle and stretch the thread!



#### Holding the needle

Needles should be held approx. 3/4 away from the tip. Do not clamp where the suture is swaged to the needle to avoid weakening the needle and suture.



## Needle codes and shapes

### 1. letter: Indicates the curvature of the needle

- F = 5/8 circle
- H = 1/2 circle
- D = 3/8 circle
- V = 1/4 circle
- K = semicurved
- J = J-shaped
- A = asymptotic
- T = compound circle
- G = straight

### 2. letter: Gives information on the type of needle and needle tip

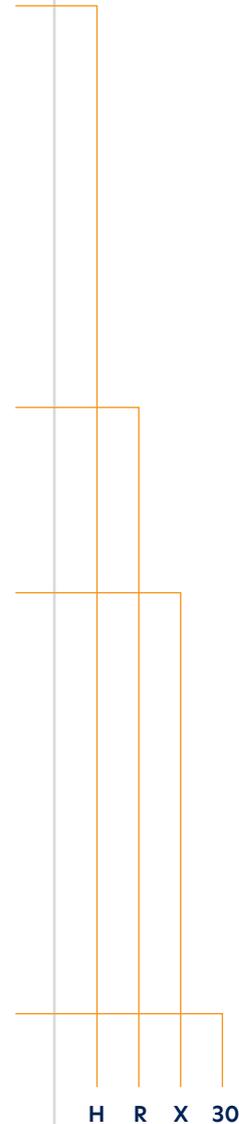
- R = round bodied needle
- S = reverse cutting needle

### 3.+4. letters: Describe special features of the needle and needle tip

- I = conventional cutting
- M = PREMIUM cut (partly hand-honed)
- N = blunt point
- T = trocar point
- P = spatulated needle
- S = stronger diameter
- X = extra strong diameter
- F = thin PREMIUM cut "THIN LINE" (partly hand-honed)
- W = flexible needle

### Numbers indicate the straight (extended) length of the needle in mm

- S (after number) = stronger diameter
- F (after number) = extra thin diameter



5/8-circle  
= F

1/2-circle  
= H

3/8-circle  
= D

1/4-circle  
= V

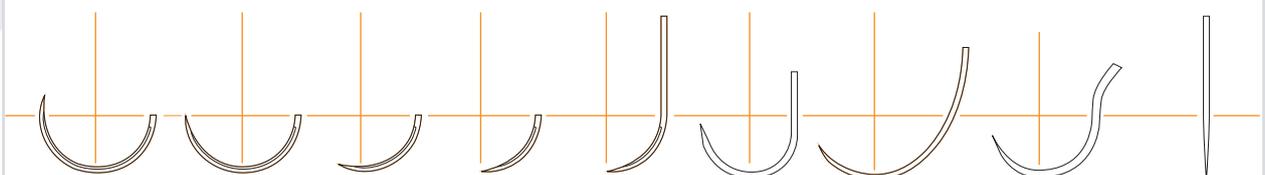
semicurved  
= K

J-shape  
= J

asymptotic = A

compound circle  
= T

straight  
= G



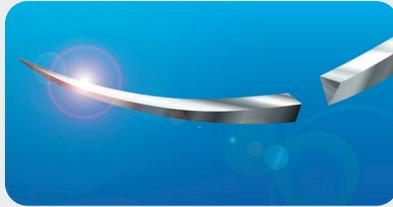
## Cross-sections and points



### Spatula needle ◻ = P

1/2 circle, 3/8 circle, 1/4 circle, or straight  
= HSPM, DSPM, VSPM

- ▶ For use in ophthalmic surgery and microsurgery
- ▶ Needle cross-section flattened
- ▶ PREMIUM cut
- ▶ Cuts on lateral edges



### Reverse cutting needle ▼ = S

1/2 circle, 3/8 circle, semicurved or straight  
= HS, DS, KS, GS

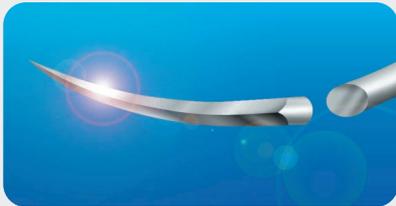
- ▶ For use in firm tissue such as skin
- ▶ Triangular needle cross-section
- ▶ Also available with PREMIUM cut needles M



### Inner cutting needle ▲ = SI

1/2 circle, 3/8 circle  
= HSI, DSI

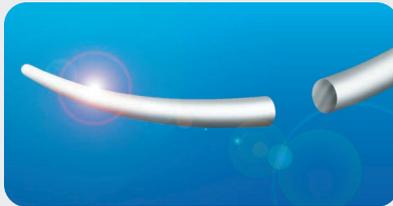
- ▶ For use in firm tissue such as skin
- ▶ Triangular needle cross-section
- ▶ Also available with PREMIUM cut needles M



### Round-bodied cutting needle ◐ = RT

1/2 circle, 3/8 circle, J-shaped, asymptotic or straight  
= HRT, DRT, JRT, ART, GRT

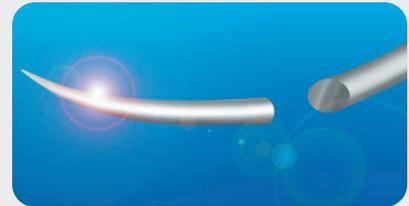
- ▶ For use in firm tissue, sclerotic vessels, and implants
- ▶ Needle tip triangular in section



### Blunt, round-bodied needle ○ = RN

1/2 circle, 3/8 circle or semicurved  
= HRN, DRN, KRN

- ▶ For use in parenchymal tissue, the cervix, and muscle traction in the eye
- ▶ Needle tip blunt
- ▶ No puncturing of vessels or tendons



### Round-bodied needle ● = R

5/8 circle, 1/2 circle, 3/8 circle, compound circle, J-shaped or straight  
= FR, HR, DR, TR, JR, GR

- ▶ For use in soft tissue (subcutaneous) such as muscle, fascia, mucosa
- ▶ In order to improve grip by the needle holder, the cross-section of the middle part of the needle is flattened
- ▶ Easy insertion

## Absorption

▶ **Absorbable sutures** approximate the tissues during the healing process. During this time the suture's tensile strength will gradually diminish. Absorbable suture material is metabolised by endogenous proteolytic enzymes or by hydrolysis (in the case of PGA *resoquick*<sup>™</sup>, GLYCOLON<sup>®</sup>, PGA RESORBA<sup>®</sup>, CAPROLON<sup>®</sup>, PDO RESORBA<sup>™</sup> and RESORBA<sup>®</sup> Barbed Suture).

**Non-absorbable sutures** remain almost unchanged when placed within body tissues and are encapsulated within the wound scar tissue by the organism. The sutures used for skin

closure are removed once the scar tissue has become sufficiently firm to hold the wound edges together (usually after 7 to 14 days).

It has to be distinguished as follows:

### Absorption time

The period in which the suture loses 50 % of its knot tensile strength.

### Dissolution

The period during which the suture completely dissolves within the tissue.

### Disintegration

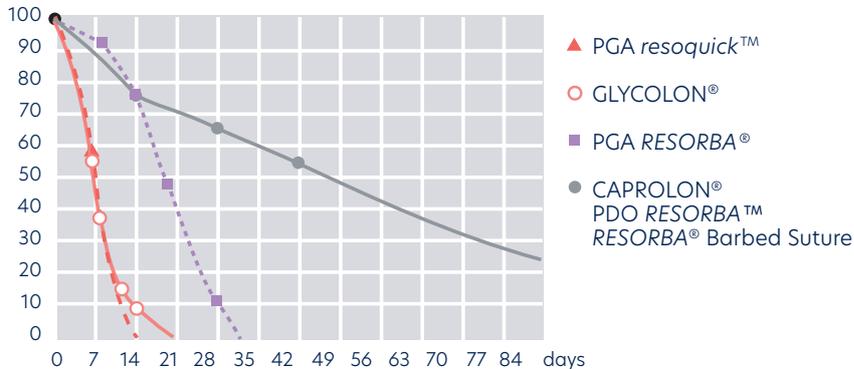
The period during which essentially non-absorbable suture breaks down by degradation into (smaller) pieces and thus losing its strength (e.g. polyamide).

### Characteristics of absorption

Different indications also require different tensile strengths and absorption characteristics. These particular features of different sutures can be achieved by the choice of the material and modifying the production process. In addition to the immediate, moderately quick or delayed loss of tensile strength there is also the corresponding duration of absorption.

Any given thread material can only fulfil its purpose as long as it has the desired tensile strength.

**Knot tensile strength in %**



The graph shows a simplified representation of the respective tear force losses over time. Data of GLYCOLON<sup>®</sup> and PGA RESORBA<sup>®</sup> come from in-vitro experiments, whereas the data of CAPROLON<sup>®</sup>, PDO RESORBA<sup>™</sup> and PGA *resoquick*<sup>™</sup> come from in-vivo experiments. Thus, the curves are not directly comparable but serve as a simplified visual representation.

## RESORBA® Suture Materials - Complete Overview

Trade name	Raw material	Structure	Thread diameter metric	Thread diameter USP	Colour	Absorption profile
PGA <i>resoquick</i> ™	Polyglycolic acid, coated	multifilament/ braided	0.7 to 5 metric	6-0 to 2 USP	undyed	short term
GLYCOLON®	Polyglycolic acid-caprolactone	monofilament	0.7 to 4 metric	6-0 to 1 USP	violet, undyed	short term
PGA RESORBA®	Polyglycolic acid, coated	multifilament/ braided	0.4 to 7 metric	8-0 to 5 USP	violet, undyed	mid term
CAPROLON®	Poly(L-lactide-co-ε-caprolactone), coated	monofilament	0.5 to 5 metric	7-0 to 2 USP	violet, undyed	long term
PDO RESORBA™	Poly(p-dioxanone)	monofilament	0.5 to 5 metric	7-0 to 2 USP	violet	long term
RESORBA® Barbed Suture	Poly(p-dioxanone)	monofilament/ barbed	1.5 to 4 metric	4-0 to 1 USP	violet	long term
MOPYLEN®	Polypropylene	monofilament	0.2 to 5 metric	10-0 to 2 USP	blue	
MOPYLEN® CV	Polypropylene	monofilament	0.4 to 3.5 metric	8-0 to 0 USP	blue	
RESOPREN®	PVDF	monofilament	0.5 to 5 metric	7-0 to 2 USP	blue	
POLYESTER	Polyester, coated	multifilament/ braided	0.7 to 8 metric	6-0 to 6 USP	green, white	
SUPOLENE	Polyester, coated	multifilament/ braided	0.7 to 6 metric	6-0 to 3 USP	green, white	
NYLON	Polyamide	monofilament	0.2 to 5 metric	10-0 to 2 USP	black, white	
RESOLON®	Polyamide	monofilament	0.5 to 4 metric	7-0 to 1 USP	blue	
SUPRAMID	Polyamide	pseudo-monofilament	0.7 to 5 metric	6-0 to 2 USP	black, white	
SILK	Silk fibroin, coated	multifilament/ braided	0.4 to 6 metric	8-0 to 5 USP	black	
STAINLESS STEEL	Stainless steel	monofilament	1 to 9 metric	5-0 to 7 USP	nature	

## Selected needle-thread combinations

	REF		Description	USP	Needle design	Thread length
● ◡	PRN30203 <sup>1)</sup>		PGA <i>resoquick</i> ™ undyed	5/0	HR 17	70 cm
	PRN30204 <sup>1)</sup>		PGA <i>resoquick</i> ™ undyed	4/0	HR 17	70 cm
● ◡	PRN30208 <sup>1)</sup>		PGA <i>resoquick</i> ™ undyed	4/0	HR 22	70 cm
▼ ◡	PRN31428 <sup>1)</sup>		PGA <i>resoquick</i> ™ undyed	5/0	DS 16	75 cm
	PRN31427 <sup>1)</sup>		PGA <i>resoquick</i> ™ undyed	4/0	DS 16	70 cm
▼ ◡	PRN31421 <sup>1)</sup>		PGA <i>resoquick</i> ™ undyed	3/0	DS 24	70 cm
	PRN31423 <sup>1)</sup>		PGA <i>resoquick</i> ™ undyed	2/0	DS 24	70 cm
● ◡	PB40201		GLYCOLON® violet	5/0	HR 17	70 cm
	PB40202		GLYCOLON® violet	4/0	HR 17	70 cm
● ◡	PB40215		GLYCOLON® violet	4/0	HR 22	70 cm
	PB40216		GLYCOLON® violet	3/0	HR 22	70 cm
	PB40217		GLYCOLON® violet	2/0	HR 22	70 cm
● ◡	PB40230		GLYCOLON® violet	4/0	HR 27	70 cm
	PB40231		GLYCOLON® violet	3/0	HR 27	70 cm
	PB40232		GLYCOLON® violet	2/0	HR 27	70 cm
● ◡	PB40241		GLYCOLON® violet	2/0	HR 35	70 cm
	PB40242		GLYCOLON® violet	0	HR 35	70 cm
● ◡	PB40310		GLYCOLON® violet	0	HRS 27	70 cm
◉ ◡	PB40605		GLYCOLON® violet	4/0	HRT 18	70 cm
◉ ◡	PB40620		GLYCOLON® violet	2/0	HRT 25	70 cm
▼ ◡	PB41416		GLYCOLON® violet	4/0	DS 18	70 cm
	PB41413		GLYCOLON® violet	3/0	DS 18	45 cm
▽ ◡	PB41509		GLYCOLON® violet	5/0	DSM 16	45 cm

For a complete overview of our suture portfolio, please scan the following QR-code. You will be linked directly to our suture catalogue.



Selected needle-thread combinations

	REF		Description	USP	Needle design	Thread length
	PA1025		PGA RESORBA <sup>®</sup> violet	4/0	HR 17	70 cm
	PA10210		PGA RESORBA <sup>®</sup> violet	4/0	HR 22	70 cm
	PA10211		PGA RESORBA <sup>®</sup> violet	3/0	HR 22	70 cm
	PA10212		PGA RESORBA <sup>®</sup> violet	2/0	HR 22	70 cm
	PA10217		PGA RESORBA <sup>®</sup> violet	3/0	HR 27	70 cm
	PA10218		PGA RESORBA <sup>®</sup> violet	2/0	HR 27	70 cm
	PA10249		PGA RESORBA <sup>®</sup> violet	2/0	HR 27	6 x 70 cm
	PA10219		PGA RESORBA <sup>®</sup> violet	0	HR 27	70 cm
	PA10233		PGA RESORBA <sup>®</sup> violet	2/0	HR 30	70 cm
	PA10234		PGA RESORBA <sup>®</sup> violet	0	HR 30	70 cm
	PA10237		PGA RESORBA <sup>®</sup> violet	1	HR 35	70 cm
	PA10278		PGA RESORBA <sup>®</sup> violet	1	HR 50	70 cm
	PA10371		PGA RESORBA <sup>®</sup> violet	3/0	HRS 35	90 cm
	PA1037		PGA RESORBA <sup>®</sup> violet	2/0	HRS 35	70 cm
	PA1065		PGA RESORBA <sup>®</sup> violet	2/0	HRT 25	70 cm
	PA1066		PGA RESORBA <sup>®</sup> violet	0	HRT 25	70 cm
	PA11423		PGA RESORBA <sup>®</sup> violet	4/0	DS 18	70 cm
	PA11416		PGA RESORBA <sup>®</sup> violet	3/0	DS 18	70 cm
	PA1145		PGA RESORBA <sup>®</sup> undyed	3/0	DS 24	70 cm
	PA11412		PGA RESORBA <sup>®</sup> violet	2/0	DS 24	70 cm
	PA1149		PGA RESORBA <sup>®</sup> undyed	2/0	DS 30	70 cm
	PA11411		PGA RESORBA <sup>®</sup> violet	0	DS 30	70 cm

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## Selected needle-thread combinations

	REF		Beschreibung	USP	Nadel- design	Faden- länge
● 	PN2026 <sup>1)</sup>		PDO RESORBA™ violet	5/0	HR 17	70 cm
	PN2027 <sup>1)</sup>		PDO RESORBA™ violet	4/0	HR 17	70 cm
	PN2028 <sup>1)</sup>		PDO RESORBA™ violet	3/0	HR 17	70 cm
● 	PN20211 <sup>1)</sup>		PDO RESORBA™ violet	4/0	HR 22	70 cm
	PN20212 <sup>1)</sup>		PDO RESORBA™ violet	3/0	HR 22	70 cm
● 	PN20214 <sup>1)</sup>		PDO RESORBA™ violet	3/0	HR 27	70 cm
	PN20215 <sup>1)</sup>		PDO RESORBA™ violet	2/0	HR 27	70 cm
	PN20230 <sup>1)</sup>		PDO RESORBA™ violet	0	HR 27	90 cm
● 	PN20245 <sup>1)</sup>		PDO RESORBA™ violet	1	HR 30	90 cm
● 	PN20221 <sup>1)</sup>		PDO RESORBA™ violet	2/0	HR 35	70 cm
● 	PN2031 <sup>1)</sup>		PDO RESORBA™ violet	3/0	HRS 12	70 cm
	PN2032 <sup>1)</sup>		PDO RESORBA™ violet	2/0	HRS 12	70 cm
	PN20325 <sup>1)</sup>		PDO RESORBA™ violet	0	HRS 12	70 cm
● 	PN20324 <sup>1)</sup>		PDO RESORBA™ violet	3/0	HRS 17	70 cm
● 	PN2034 <sup>1)</sup>		PDO RESORBA™ violet	2/0	HRS 22	70 cm
● 	PN2036 <sup>1)</sup>		PDO RESORBA™ violet	2/0	HRS 27	70 cm
	PN2037 <sup>1)</sup>		PDO RESORBA™ violet	0	HRS 27	70 cm
● 	PN20311 <sup>1)</sup>		PDO RESORBA™ violet	1	HRS 35	70 cm
	PN20310 <sup>1)</sup>		PDO RESORBA™ violet	0	HRS 35	70 cm

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## Selected needle-thread combinations

	REF		Description		USP	Needle design	Thread length
	PN2061 <sup>1)</sup>		PDO RESORBA™	violet	5/0	HRT 18	70 cm
	PN2062 <sup>1)</sup>		PDO RESORBA™	violet	4/0	HRT 18	70 cm
	PN2065 <sup>1)</sup>		PDO RESORBA™	violet	4/0	HRT 22	70 cm
	PN2066 <sup>1)</sup>		PDO RESORBA™	violet	3/0	HRT 22	70 cm
	PN20615 <sup>1)</sup>		PDO RESORBA™	violet	1	HRT 40	90 cm
	PN2111 <sup>1)</sup>		PDO RESORBA™	violet	2/0	HS 27	70 cm
	PN2112 <sup>1)</sup>		PDO RESORBA™	violet	0	HS 27	70 cm
	PN21410 <sup>1)</sup>		PDO RESORBA™	violet	3/0	DS 24	90 cm
	70238		MOPYLEN®	blue	4/0	HR 27	75 cm
	70217		MOPYLEN®	blue	3/0	HR 27	75 cm
	70218		MOPYLEN®	blue	2/0	HR 27	75 cm
	70219		MOPYLEN®	blue	0	HR 27	75 cm
	7141		MOPYLEN®	blue	5/0	DS 13	45 cm
	7142		MOPYLEN®	blue	4/0	DS 13	45 cm
	71430		MOPYLEN®	blue	4/0	DS 21	75 cm
	71431		MOPYLEN®	blue	3/0	DS 21	75 cm
	71414		MOPYLEN®	blue	4/0	DS 24	45 cm
	71416		MOPYLEN®	blue	3/0	DS 24	75 cm
	71426		MOPYLEN®	blue	2/0	DS 24	75 cm
	71424		MOPYLEN®	blue	2/0	DS 30	75 cm
	71422		MOPYLEN®	blue	0	DS 30	45 cm
	7155		MOPYLEN®	blue	6/0	DSM 13	45 cm

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## Selected needle-thread combinations

	REF		Description	USP	Needle design	Thread length
	881450		RESOLON® blue	5/0	DS 18	75 cm
	88145		RESOLON® blue	4/0	DS 18	75 cm
	88147		RESOLON® blue	3/0	DS 18	75 cm
	881457		RESOLON® blue	4/0	DS 24	75 cm
	881415		RESOLON® blue	3/0	DS 24	75 cm
	881416		RESOLON® blue	2/0	DS 24	75 cm
	881427		RESOLON® blue	3/0	DS 30	75 cm
	881419		RESOLON® blue	2/0	DS 30	75 cm
	881420		RESOLON® blue	0	DS 30	75 cm
	88151		RESOLON® blue	6/0	DSM 11	45 cm
	881519		RESOLON® blue	3/0	DSM 24	75 cm
	881520		RESOLON® blue	2/0	DSM 24	75 cm
	88171		RESOLON® blue	3/0	GS 60	75 cm
	88172		RESOLON® blue	2/0	GS 60	75 cm

<sup>1)</sup> Product manufactured by:


 Healthium Medtech Limited · #472-D, 13th Cross, 4th Phase  
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 Email: care@healthiummedtech.com  
 Mfg. Lic. No.: MFG/MD/2021/000367

For a complete overview of our suture portfolio, please scan the following QR-code. You will be linked directly to our suture catalogue.





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