










KRUUSE Suture



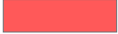









11th edition



General Information

Introduction	4	
Article	6	
PGA/Catgut	10	
Suture display	11	
Packaging	12	
Pharmacopoeia	13	
Needles	14	
Suture range	16	
Indications of use	18	

Sutures in Peel Pack

KRUUSE Sacryl Rapid	20	
KRUUSE Monofast	22	
KRUUSE Monofast Plus	26	
KRUUSE Sacryl	28	
KRUUSE Sacryl Plus	34	
KRUUSE PGA	36	
KRUUSE PD-X	38	
KRUUSE PD-X Plus	42	
KRUUSE Promilene	44	
KRUUSE Krupramid	48	
KRUUSE Nylon	50	
KRUUSE Silk	54	

Sutures in Cassettes

KRUUSE PGA	56	
KRUUSE Krupramid	58	
KRUUSE Silk	60	
KRUUSE Dermafil	62	
KRUUSE Linen	64	

Needles	66	
----------------	----	---

Needle holders	69	
-----------------------	----	---

For more information visit:
www.kruise.com





Our sutures have been extremely well received since our launch in 2012. Our responsiveness to add new combinations of sutures and needles on customer request is also very popular - in fact we already added 258 new combinations!

Rikke Jarlkvist
Product Manager

How would you like your sutures?

Suturing is part of daily life in all veterinary practices – and the quality of sutures and needles is of utmost importance to the veterinarian. It is important that the selection and quality of sutures and needles marketed by a veterinary company fully live up to all the demands of the veterinarians using the products. The best way to achieve this goal is effective teamwork between the veterinary company and their customers.



In 2012, KRUUSE introduced their new suture range:

A complete range specifically tailored to the veterinary market and based on the wishes and requirements of KRUUSE's own customers, including key opinion leaders. The complete suture range has been extensively tested by a panel of KRUUSE's own customers: Over a two month period, a total of 1200 peel packs were tested by 56 vets in 13 countries – with excellent test results.

Based on feedback from their customers, KRUUSE was able to identify the specific wishes of veterinarians regarding sutures – and comply with these in the new KRUUSE range of sutures.

All KRUUSE's customers agreed that an ideal suture should be:

- Of high and consistent quality
- Available at an affordable price
- Easy to work with

Interestingly, many customers also had specific wishes regarding user-friendliness:

- Package labelling should be clear and concise, making it easy to choose the correct suture and needle
- Packages should contain fewer individual peel packs than traditionally offered
- Website information, product catalogue and product charts should be clear and concise – more streamlined than traditional suture range information
- Practical suture displays should be available
- Very important that KRUUSE continually listens to customer wishes for new products



Attention to detail is required in order to provide veterinary hospitals with the ideal suture - and at the same time, KRUUSE wanted their suture range to be user-friendly. The team behind KRUUSE sutures has worked hard to achieve these goals, so the final products in every respect live up to the requirements of their customers:

High quality: All KRUUSE sutures and needles are of very high and consistent quality. KRUUSE's suture manufacturer was chosen after conducting extensive market research. This manufacturer produces 1.3 million needles per month from very high quality stainless steel and 400,000 sterile suture peel packs per month. All products are produced under strict quality control. KRUUSE's suture manufacturer has produced sutures for the human market for more than 10 years and exports their sutures to countries such as Japan and the US – very difficult markets to get into.

Competitively priced: Even though KRUUSE sutures are of the highest quality, it has been possible to offer the full range at very competitive prices – or, in the words of KRUUSE's customers: "Value for money". KRUUSE sutures are of comparable quality to the well-known market leaders – at a lower price.

Easy to work with: KRUUSE needles and sutures are of the highest quality. Where many other needles simply break if a strong force is applied, KRUUSE needles bend and then regain their original shape. KRUUSE sutures are available in a wide range of lengths and sizes in order to meet the wide variety of needs the customers have.

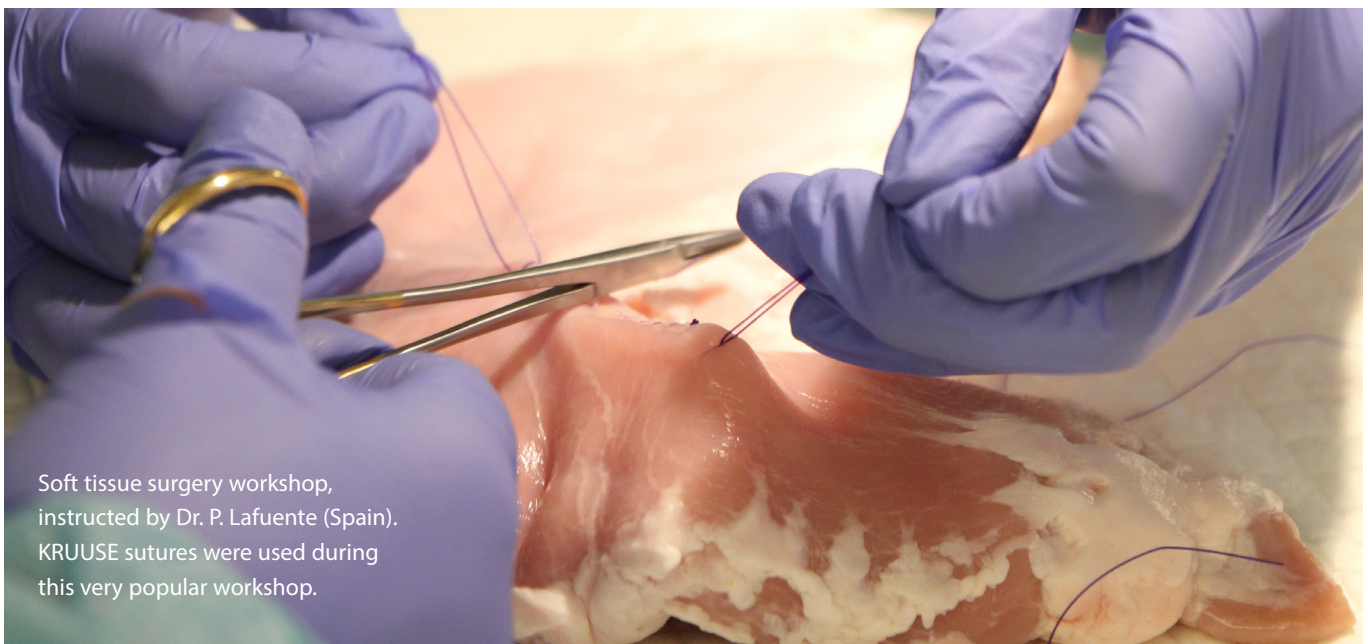
Package labelling: The name, size, length and colour of the suture as well as the type and size of the needle are clearly written on the label. Customers never have to guess exactly which type of suture the package or the peel pack contains – and it is not necessary to memorize a product code to identify and choose the correct product. Additionally, the image of the needle is shown as a 1:1 image (actual size), and the internationally known needle symbols are clearly indicated. Colour coding of the sutures follows the well-known international standards.

All KRUUSE sutures and needles are of very high and consistent quality

KRUUSE's suture manufacturer was chosen after conducting extensive market research

Package size: One package contains 18 peel packs. This is an advantage for the customers compared with the larger package size traditionally marketed, where one package contains 36 peel packs. A smaller investment is tied up in a particular type of suture, and it enables the individual veterinary practice to have a wider range of suture types and sizes available.

Product information: It has been very important for KRUUSE, that everybody quickly and easily should be able to gain an overview of the suture range, and easily find practical and useful information in the catalogue and on the website regarding the individual sutures. This is the best way for KRUUSE's veterinary customers to obtain the knowledge that will help them choose the best suture for each case. Therefore, many hours of work have gone into the design and layout of the KRUUSE Suture Catalogue as well as several other useful tools, such as informative charts showing the suture range, needle range and indications for use of the various sutures.



Soft tissue surgery workshop, instructed by Dr. P. Lafuente (Spain). KRUUSE sutures were used during this very popular workshop.



Suture displays

To make handling and usage of KRUUSE sutures as user-friendly as possible, KRUUSE has designed a practical display for the sutures in an attractive design and a choice of colours. It is intended to be used either as a wall mounted or table top display. The suture packages fit snugly into the display and it is easy for the user to get access to the individual peel packs through the end opening of the package. This display has to be seen to fully appreciate how much it will benefit the veterinary practice.

It has been very important for KRUUSE, that everybody quickly and easily should be able to gain an overview of the suture range, and easily find practical and useful information in the catalogue and on the website regarding the individual sutures

Flexibility

KRUUSE has continued their collaboration with the veterinary profession in their ongoing effort to cover all suture needs of all veterinarians worldwide. When a customer indicates a need not yet filled by the current range - maybe a different length of an already existing suture or a different needle, KRUUSE is always willing to listen and ready to introduce additional products. An interesting fact is that when KRUUSE introduced their new suture range in 2012, it consisted of 165 catalogue numbers. Now the range consists of 423 catalogue numbers. The additional 258 products were initiated by customer requests, and the good news is that KRUUSE is able to get a new product ready for marketing in as little as 4 to 5 months. Truly an accomplishment that delights the customers.

Future plans

The enthusiastic team behind the success of the KRUUSE sutures has no plans to sit back, rest on their laurels and stop their innovation and expansion of the product range.

The team members already have new plans for product line expansions, and of course they continue to collaborate with their veterinary customers.

In other words, KRUUSE is continually working towards an even better and broader suture range in order to live up to both present and future wishes of veterinarians worldwide.

Lotte Davies DVM, MRCVS
InsightPraxis



PGA is replacing Catgut

Worldwide, we see a general tendency towards moving away from using biological sutures, especially catgut.

The reason for this is partly the difficulties in getting serosa of BSE-free proven countries, but more important is the fact that catgut tends to create more substantial tissue reactions than synthetic sutures with more or less identical characteristics when it comes to knot stability and absorption time.

Some countries, e.g. Australia, have during the last couple of years become stricter in terms of legislation on import and use of bovine serosa (catgut), and the tendency seems to spread worldwide.

In human medicine, catgut has been banned for many years, partly because of the BSE, but mainly because of the more pronounced incidences of inflammation and more severe tissue reactions when using the biological suture of serosa origin.

The European Commission, Food and Health Committee conclude and recommend:

1. The Committee considers that there are sufficient alternative products to catgut sutures, i.e. synthetic absorbable sutures made from polymers such as polyglycolic acid, that provide equal, or even better, clinical performance than the catgut. Apart from considerations of TSE, there is no difference between these two types of sutures with respect to matters of safety.
2. On the basis of the considerations in the above clause, generally there are no clinical indications for the preferred use of catgut. Moreover, scientifically there is no further need for catgut sutures. The Committee recognises that there has been a diminishing use of catgut sutures during the last decade and that this decrease is likely to continue.

The European Commission, Food and Health Committee quite clearly recommend not to use catgut in surgery at all!



Use QR code to read more at
The European Commission, Food and Health Committee website

http://ec.europa.eu/health/scientific_committees/emerging/opinions/scmpmd/scmp_out05_en.htm

Catgut

Catgut is manufactured from longitudinally slitting the submucosa of bovine intestine, twisting the ribbons and joining them in wet condition. As the intestines have a certain length, they are subsequently bounded together causing a less uniform appearance of the suture (knots along the suture). Catgut being an absorbable suture is preserved in alcohol to prevent absorption. Both the gut itself and the alcohol cause severe tissue reactions, when used in vivo.

PGA

PGA is a synthetic and manufactured suture. For this reason, it is easier to produce a completely uniform suture, which is superior to catgut. PGA is a braided suture, appearing soft and flexible when handling it. The suture is coated to achieve easy-knot tying and smooth passage through tissue. PGA gives much less tissue reaction and inflammation in comparison to catgut.

Catgut

- Excellent knot stability
- Less suture consistency
- Severe tissue reaction
- Tendency to snap/break

PGA

- Good knot stability
- Completely uniform suture appearance
- Minimal tissue reaction
- Strong and reliable suture



KRUUSE Suture Display

We aim to make handling and usage of our KRUUSE sutures as user friendly as possible. We have therefore designed a practical display for the KRUUSE sutures.

The suture display has an attractive design that fits into most clinics and hospitals. It is intended to be used either as a table top rack or it can be wall mounted in your clinic. Mobile vets may choose to have the display in their practice vehicle.

Furthermore you have the possibility to expand the display either in height or length by adding another display section.

Please notice that we have designed the display with a slight protuberance/rise at the front. This ensures stable and accurate placement of the suture dispenser box during handling.

Enjoy your work with KRUUSE sutures and display!



Cat. No 150901 - Transparent

KRUUSE Suturing Pads

Practice your suturing techniques at the Suturing Pad.



Cat. No 152197

Packaging

Package labelling

- 1) Product name
- 2) Chemical composition and suture description
- 3) Suture size
- 4) Needle characteristics and symbol
- 5) Suture length
- 6) Catalogue number
- 7) Sterilization method, (⊗) = do not re-sterilize and use again
- 8) Expiry date: year and month
- 9) Batch number
- 10) Storage temperature

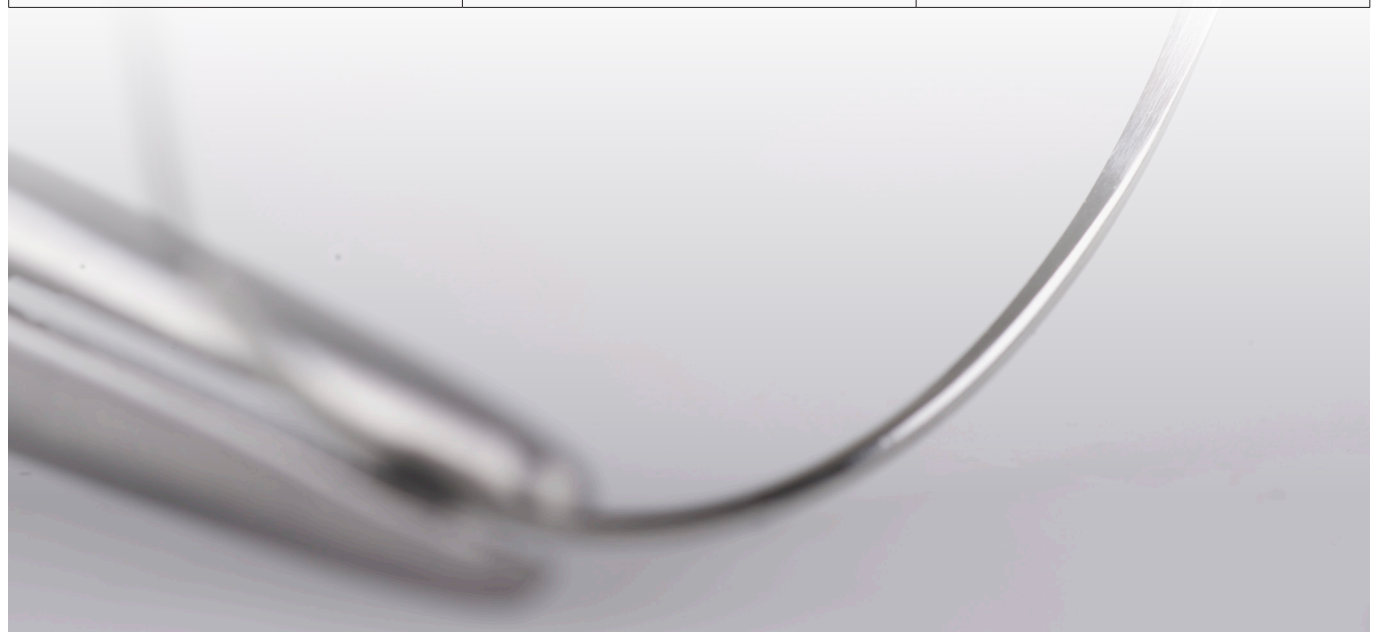


Pharmacopoeia

American and European Pharmacopoeia

The European Pharmacopoeia (EP) uses the metric system for classifying suture size, whereas the American Pharmacopoeia classifies sutures in USP. In the chart below you will find both USP and EP as well as the suture diameter range in mm.

American Pharmacopoeia USP	European Pharmacopoeia EP	Suture diameter
Absorbable and non-absorbable sutures	Absorbable and non-absorbable sutures	mm range
USP size	EP/metric size	mm
8-0	0.4	0.04-0.049
7-0	0.5	0.05-0.069
6-0	0.7	0.07-0.099
5-0	1	0.1-0.149
4-0	1.5	0.15-0.199
3-0	2	0.2-0.249
2-0	3	0.25-0.349
0	3.5	0.35-0.399
1	4	0.4-0.499
2	5	0.5-0.599
3+4	6	0.6-0.699
5	7	0.7-0.799
6	8	0.8-0.899
7	9	0.9-0.999
8	10	1.0-1.099



KRUUSE Suture Needles

Our needles have been vastly improved in terms of sharpness, and they are now 20% sharper than conventional needles.

Innovative surface grinding technology

Advanced treatment of the needle tip and innovative surface grinding technology have improved the sharpness by approximately 20% compared to conventional needles. The penetration force is significantly reduced, even after repeated use.

The markedly decreased penetration force minimizes the risk of tissue trauma during suturing.

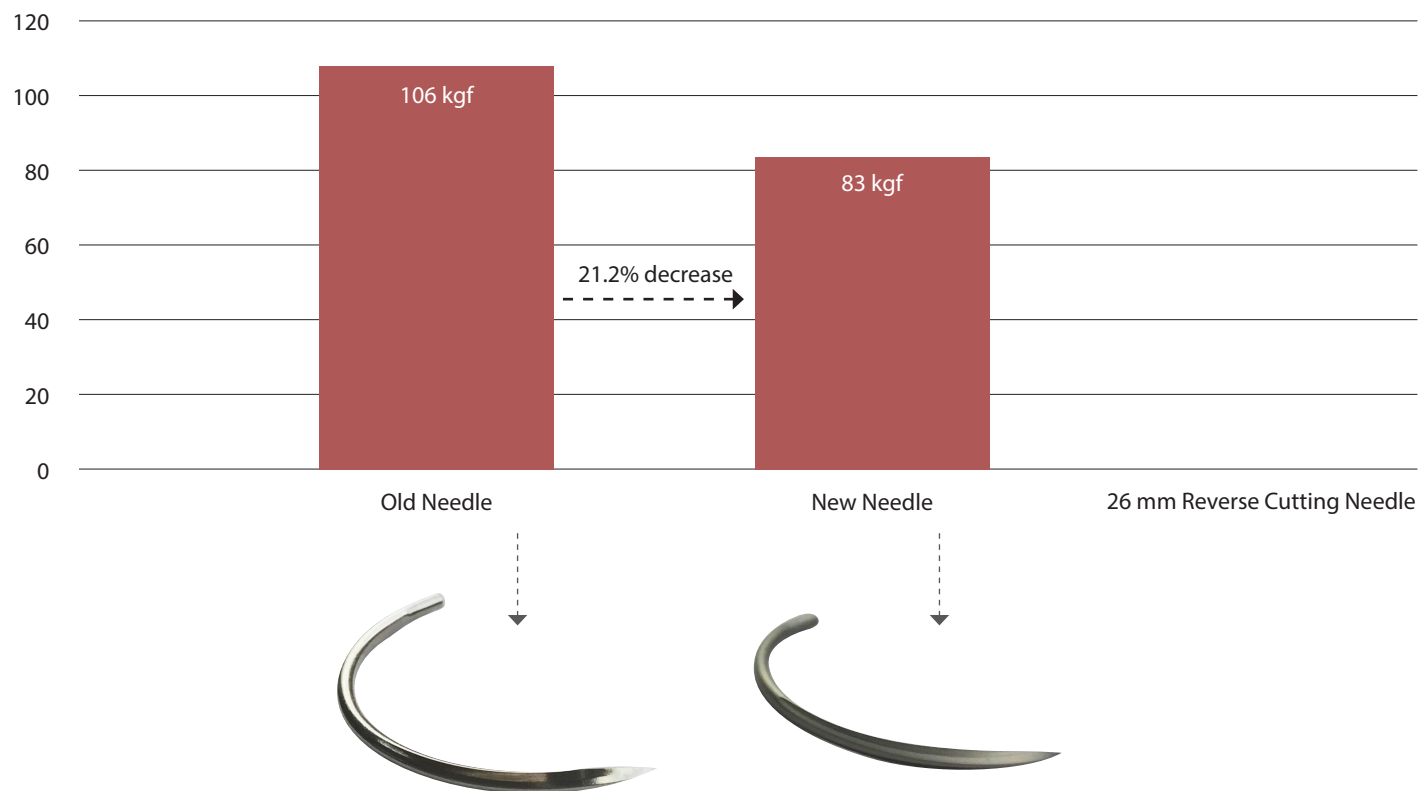
Surface lustre/shine

The surface treatment of the suture needle has been changed, and the metallic lustre diminishes the reflection of light to effectively reduce eye fatigue.

By making the needle less reflective, surgical errors can be reduced during microscopic and laparoscopic surgery.

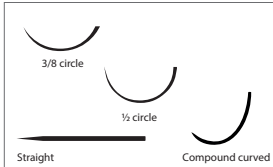
Penetration Resistance Decrease

Kilogram force



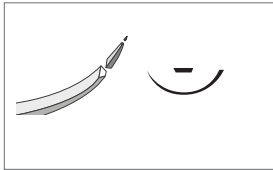
Needles

All needles are high quality stainless steel. We recommend use of needles with welded suture to minimize wound trauma due to double thread.



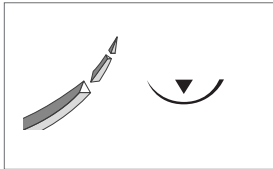
Needle shape

The shape of the needle is either 3/8 circle, 1/2 circle, compound curve or straight. Most of our 1/2 circle needles are round bodied and most of the 3/8 circle needles are reverse cutting.



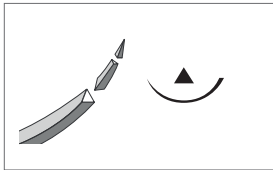
Micropoint spatula needle

This type of needle is a special needle for ophthalmic surgery. The needle is flat and thin and has an extremely sharp cutting edge, which makes it suitable for penetration between the layers of scleral or corneal tissue.



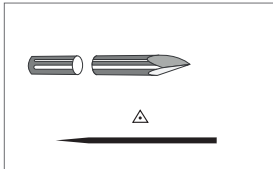
Reverse cutting needle

Reverse cutting needles have a triangular shape in cross section, with the apex cutting edge on the outside of the needle. These features facilitate tissue penetration.



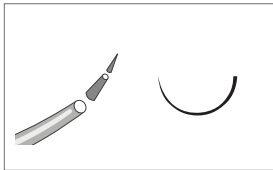
Conventional cutting needle

The conventional cutting needle has a triangular shape in cross section, and it cuts with the inner curve of the needle.



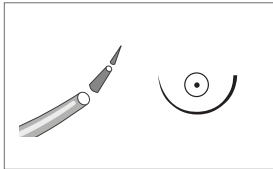
Trocar point needle

All KRUISE trocar point needles are straight. The trocar point has a very sharp tip, and this type of needle is often used in the skin.



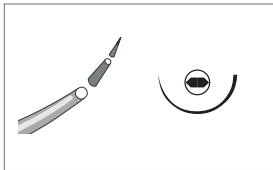
Round bodied needles

Round bodied needles are commonly used in soft tissue where separation of tissue fibers is preferred, rather than cutting the fibers apart. This would be preferable when suturing e.g. intestine, where the tissue closes tightly around the suture after passage of the needle.



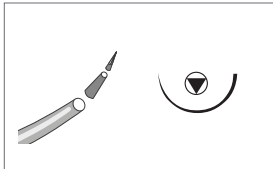
Round bodied taperpoint needle

Taperpoint is the most common tip of round bodied needles. The taperpoint provides easy and tissue-preserving penetration by the needle.



Round-bodied taperpoint extra needles

This round bodied taper point needle differs slightly from other round bodied needles, as the cross section is oval instead of round. The outermost part of the tip (less than 0.5 mm) is drilled on three sides, i.e. working with this type of needle is a matter of preference, as it may appear to be sharper than traditional round-bodied taper point needle.



Round bodied tapercut needle

A round bodied needle with a cutting point; this needle gives good and easy penetration in tough tissues with little tissue trauma.

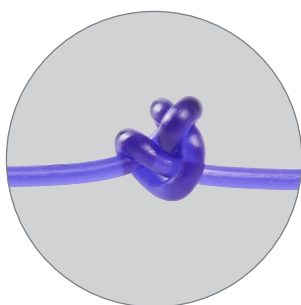
Suture range for veterinary surgery

		Chemical composition	Physical features	Colour
Absorbable sutures	KRUUSE Sacryl Rapid	Polyglactine 910	Multifilament, coated	Undyed
	KRUUSE Monofast	Polyglycolide	Monofilament	Violet and undyed
	KRUUSE Monofast Plus, antibacterial	Polyglycolide	Monofilament	Violet
	KRUUSE Sacryl	Polyglactine 910	Multifilament, coated	Violet and undyed
	KRUUSE Sacryl Plus, antibacterial	Polyglactine 910	Multifilament, coated	Violet and undyed
	KRUUSE PGA	Polyglycolic acid	Multifilament, coated	Violet
	KRUUSE PD-X	Polydioxanone	Monofilament	Violet
	KRUUSE PD-X Plus, antibacterial	Polydioxanone	Monofilament	Violet

Non-absorbable sutures	KRUUSE Promilene	Polypropylene	Monofilament	Blue
	KRUUSE Krupramid	Polyamide	Pseudo-monofilament	White and black
	KRUUSE Nylon	Polyamide	Monofilament	Blue
	KRUUSE Silk	Silk	Multifilament, braided and coated	Black
	KRUUSE Dermafil	Polyester	Multifilament, braided and coated	Green
	KRUUSE Linen	Linen based on cellulose	Multifilament, braided and coated	Whitish brown



Multifilament, braided



Monofilament




Pseudo-monofilament

Remaining tensile strength in % of strength at time of surgery					
1 week	2 weeks	3 weeks	4 weeks	Complete mass absorption	Packaging
50% (9 days)		0% (17-21 Days)		45 days	Peel pack
60 %	25 %		0 %	90-120 days	Peel pack
60 %	25 %		0 %	90-120 days	Peel pack
	70 %	50 % (6-0 and larger) 40 % (7-0 and smaller)	25 %	56-63 days	Peel pack
	70 %	50 %	25 %	56-63 days	Peel pack
	83 %	52 %	20 %	60-90 days	Peel pack/cassette
	75 %	60 %		180-210 days	Peel pack
	75 %	60 %		180-210 days	Peel pack

	Peel pack
	Peel pack/cassette
	Peel pack
	Peel pack/cassette
	Cassette
	Cassette

Indications	 KRUUSE Sacryl Rapid	 KRUUSE Monofast	 KRUUSE Monofast Plus	 KRUUSE Sacryl	 KRUUSE Sacryl Plus	 KRUUSE PGA
Abdominal wall				✓		✓
Cardiovascular surgery						
Conjunctiva	✓			✓		
Dental/Oral cavity	✓	✓	✓			
Episiotomies	✓					
Fascia				✓	✓	✓
GI surgery		✓	✓	(✓)	(✓)	(✓)
Gynaecology				✓	✓	✓
Hernias						
Intracutaneous		✓	✓			
Joint capsulas				✓	✓	✓
Ligaments						
Ligation				✓	✓	✓
Muscles				✓	✓	✓
Neuro surgery						
Ophtalmic surgery				✓		✓
Orthopaedics						
Skin closure						
Subcutaneous		✓	✓	✓	✓	✓
Tendon repair				✓	✓	✓
Urological surgery		✓	✓			
Uterus				✓	✓	✓
Vascular surgery						

 KRUUSE PD-X	 KRUUSE Promilene	 KRUUSE Krupramid	 KRUUSE Nylon	 KRUUSE Silk	 KRUUSE Dermafil	 KRUUSE Linen
✓						
	✓	✓	✓	✓		
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SACRYL RAPID

20 KRUUSE Sacryl Rapid

Multifilament, braided: For secure knot tying, high flexibility and easy handling

Coated: For easy knot tying and smooth passage through tissue

Irradiation: By gamma irradiation to accommodate rapid absorption

Absorbable: By hydrolysis

KRUUSE Sacryl Rapid is a braided and coated multifilament synthetic suture composed of Polyglactin 910.

KRUUSE Sacryl Rapid meets all the requirements established by the European Pharmacopoeia (EP) and the United States Pharmacopoeia (USP) for Synthetic Absorbable Surgical Sutures.

Due to the rapid loss of its breaking strength KRUUSE Sacryl Rapid should not be used where extended approximation of tissue under stress is required, such as cardiovascular tissue or muscle, or where wound support beyond 7 days is required.

The characteristics of rapid loss of strength are achieved by use of gamma irradiation.

Absorption: Absorbable:

- Complete mass absorption in approximately 45 days
- Absorption by hydrolysis

Chemical composition:

- KRUUSE Sacryl Rapid is composed of Polyglactin 910 (copolymer of 90% Glycolide and 10% L-lactide)

Tensile Strength:

- 55 % remains after 5 days
- 0 % remains after 10-14 days
- Complete mass absorption in approximately 45 days

Colour:

- Undyed

Indications:

KRUUSE Sacryl Rapid is suitable for use in soft tissue approximation where short term wound support and rapid absorption of the suture is indicated, including:

- Superficial skin closure, both subcuticular and cuticular
- Suturing of conjunctiva in ophthalmic surgery
- Suturing of oral cavity mucosa
- Episiotomies

Contraindications:

- Where longer or permanent support is required

Range:

- USP 5-0 to 2-0
- EP 1 to 3

Sterilization method:

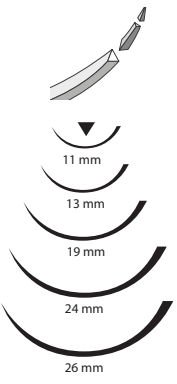


- EO

Packing:

- Boxes of 18 peel packs

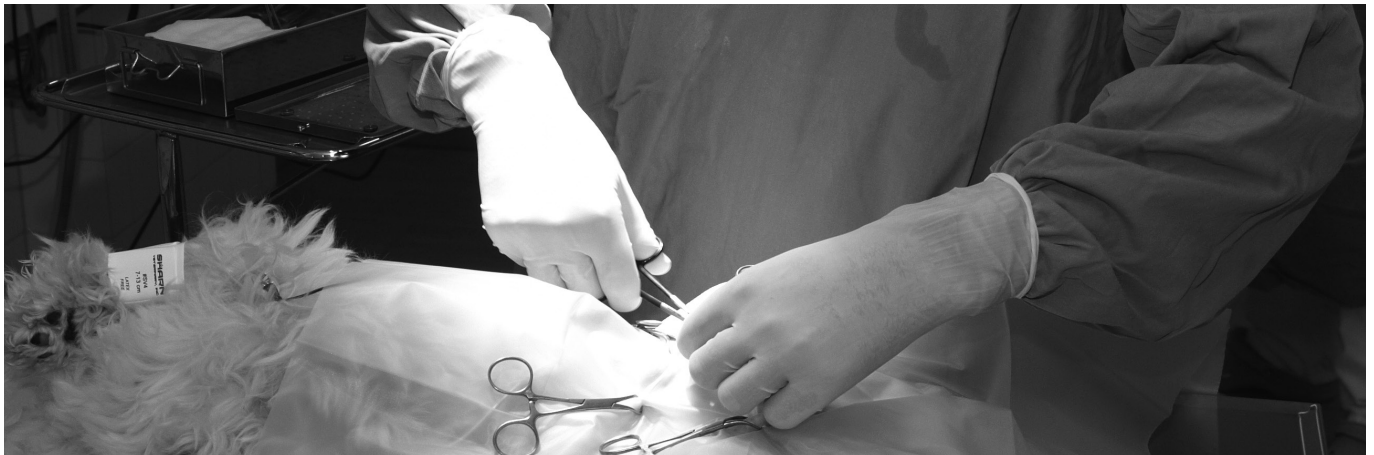


KRUUSE Sacryl Rapid

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, reverse cutting 	11	5-0	1	45	Undyed	18	152356
	11	4-0	1.5	45	Undyed	18	152358
	13	5-0	1	45	Undyed	18	152359
	19	5-0	1	45	Undyed	18	152352
	19	4-0	1.5	45	Undyed	18	152351
	19	3-0	2	70	Undyed	18	152354
	24	3-0	2	70	Undyed	18	152350
	26	2-0	3	70	Undyed	18	152357
	3/8 circle, conventional cutting 	16	4-0	1.5	70	Undyed	18
16		3-0	2	70	Undyed	18	152355
1/2 circle, round bodied, taperpoint 	11	4-0	1.5	70	Undyed	18	152349

SACRYL RAPID | 21





KRUUSE Monofast

Monofilament: For smooth passage through tissue and high tissue compatibility

Synthetic: Minimal tissue reaction

Absorbable: By hydrolysis

KRUUSE Monofast is a monofilament, synthetic suture with a smooth surface that gives minimal tissue reaction and decreased incidence of infection and trauma.

KRUUSE Monofast meets all the requirements established by the European Pharmacopoeia (EP) for Synthetic Absorbable Monofilament Surgical Sutures.

Absorption: Absorbable:

- Complete mass absorption in approximately 90-120 days
- Absorption by hydrolysis

Chemical composition:

- Monofast is fast absorbable synthetic monofilament suture material composed of Polyglycolide-poly (ε-caprolactone) copolymer (PGCL).

Tensile Strength:

- 60 % remains after 7 days
- 25 % remains after 14 days
- 0 % remains after 28 days
- Complete mass absorption in approximately 90-120 days

Colour:

- Violet and undyed

Indications:

KRUUSE Monofast is commonly used in soft tissues and ligation where absorbable sutures are indicated, including:

- Subcutaneous or intracutaneous suturing
- GI-surgery
- Urological surgery
- Suturing of oral cavity mucosa

Contraindications:

- Where prolonged support from suturing is required

Range:

- USP 6-0 to 1
- EP 0.7 to 4

Sterilization method:

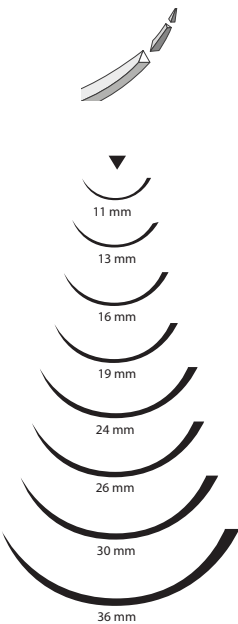
- EO

Packing:

- Boxes of 18 peel packs

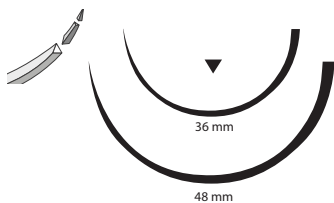
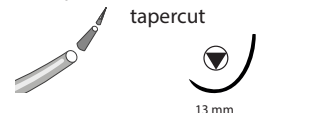

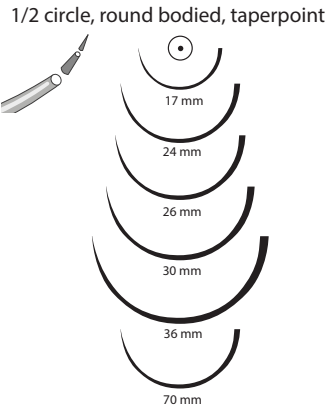
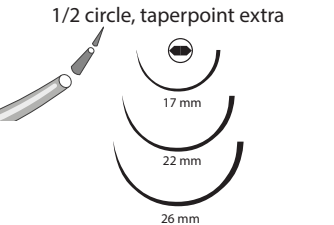

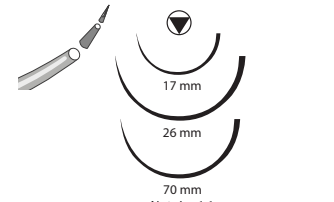


KRUUSE Monofast

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>3/8 circle, reverse cutting</p> 	11	6-0	0.7	45	Undyed	18	152829
	13	5-0	1	45	Undyed	18	152237
	13	5-0	1	45	Violet	18	152238
	13	5-0	1	70	Violet	18	152239
	13	4-0	1.5	45	Undyed	18	152235
	13	4-0	1.5	45	Violet	18	152240
	16	5-0	1	70	Violet	18	152513
	16	4-0	1.5	45	Violet	18	152241
	16	4-0	1.5	45	Undyed	18	152216
	19	4-0	1.5	45	Undyed	18	152233
	19	4-0	1.5	70	Undyed	18	152234
	19	4-0	1.5	70	Violet	18	152242
	19	4-0	1.5	90	Violet	18	152217
	19	3-0	2	45	Undyed	18	152229
	19	3-0	2	45	Violet	18	152246
	19	3-0	2	70	Undyed	18	152230
	19	3-0	2	70	Violet	18	152243
	19	3-0	2	90	Violet	18	152518
	24	3-0	2	70	Undyed	18	152231
	24	3-0	2	70	Violet	18	152247
	24	3-0	2	90	Violet	18	152218
	24	2-0	3	70	Undyed	18	152226
	24	2-0	3	70	Violet	18	152244
	24	2-0	3	90	Violet	18	152219
	26	3-0	2	70	Violet	18	152228
	26	2-0	3	70	Undyed	18	152211
	26	2-0	3	70	Violet	18	152225
	26	0	3.5	70	Violet	18	152220
	30	0	3.5	70	Violet	18	152222
	36	1	4	70	Violet	18	152223

KRUUSE Monofast

MONOFAST | 24

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
1/2 circle, reverse cutting 	36	2-0	3	90	Violet	18	152771
	36	0	3.5	90	Violet	18	152511
	36	1	4	90	Violet	18	152512
	48	2-0	3	90	Violet	18	152510
Compound curve, round bodied, tapercut 	13	5-0	1	45	Violet	18	152514
	13	5-0	1	45	Undyed	18	152236
3/8 circle, round bodied, taperpoint 	16	4-0	1.5	70	Violet	18	152101
1/2 circle, round bodied, taperpoint 	17	4-0	1.5	70	Violet	18	152248
	24	4-0	1.5	70	Violet	18	152232
	26	2-0	3	70	Violet	18	152224
	26	3-0	2	70	Violet	18	152227
	30	0	3.5	70	Violet	18	152221
	36	1	4	70	Violet	18	152245
	70 mm Not size 1:1	1	4	90	Violet	18	152828
	1/2 circle, taperpoint extra 	17	3-0	2	70	Violet	18
22	4-0	1.5	70	Violet	18	152102	
22	3-0	2	70	Violet	18	152100	
26	3-0	2	70	Violet	18	152215	
26	2-0	3	70	Violet	18	152212	
3/8 circle, round bodied, tapercut 	13	4-0	1.5	45	Violet	18	152515
1/2 circle, round bodied, tapercut 	17	5-0	1	70	Violet	18	152517
	17	4-0	1.5	70	Violet	18	152516
	26	3-0	2	70	Undyed	18	152214
	26	3-0	2	70	Violet	18	152519
	70 mm Not size 1:1	1	4	150	Violet	18	152770

KRUUSE Suture in Race Track Solution and with Improved Needle

KRUUSE now offers an assortment of sutures in the popular race track solution. For the race track solution, the suture itself is wound in the figure of a race track course, thus the name. The benefit is minimal suture memory. A suture with a high memory will spring back to its original position and consequently, most surgeons prefer suture with as little suture memory as possible. Monofilament sutures generally have more memory than multifilament sutures. KRUUSE Race Track Suture also offers an exclusive appearance. The needle is nicely presented in the plastic card and very easy to grab with your needle holder and withdraw from the retainer.



KRUUSE Monofast - Race Track

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, reverse cutting 	19	4-0	1.5	70	Violet	15	152820
	19	3-0	2	70	Violet	15	152821
	19	3-0	2	70	Undyed	15	152822
	24	3-0	2	70	Undyed	15	152823
	26	3-0	2	70	Violet	15	152824
	26	2-0	3	70	Violet	15	152825
1/2 circle, round bodied, taperpoint 	26	3-0	2	70	Violet	15	152826
	26	2-0	3	70	Violet	15	152827



KRUUSE Monofast Plus

Monofilament: For smooth passage through tissue and high tissue compatibility

Synthetic: Minimal tissue reaction

Antibacterial: To reduce incidence of infection, oedema and pain

Absorbable: By hydrolysis

KRUUSE Monofast Plus is an antibacterial, monofilament, synthetic suture and that contains Chlorhexidine diacetate. It has a smooth surface that gives minimal tissue reaction and decreased incidence of infection and trauma.

Chlorhexidine diacetate is the antibacterial component.

KRUUSE Monofast Plus, being an absorbable suture, should not be used where extended approximation of tissue under stress or tension is required and in patients with known allergic reactions to Chlorhexidine diacetate.

KRUUSE Monofast Plus tested in vitro creates a zone of inhibition against the most common surgical site pathogens including *Staphylococcus aureus*.

Absorption: Absorbable:

- Complete mass absorption in approximately 90-120 days
- Absorption by hydrolysis

Chemical composition:

- Monofast is fast absorbable synthetic monofilament suture material composed of Polyglycolide-poly (ε-caprolactone) copolymer (PGCL).

Tensile Strength:

- 60 % remains after 7 days
- 25 % remains after 14 days
- 0 % remains after 28 days
- Complete mass absorption in approximately 90-120 days

Colour:

- Violet

Indications:

KRUUSE Monofast is commonly used in soft tissues and ligation where absorbable sutures are indicated, including:

- Subcutaneous or intracutaneous suturing
- GI-surgery
- Urological surgery
- Suturing of oral cavity mucosa

Contraindications:

- Where prolonged support from suturing is required

Range:

- USP 5-0 to 0
- EP 1 to 3.5

Sterilization method:

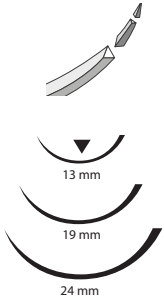
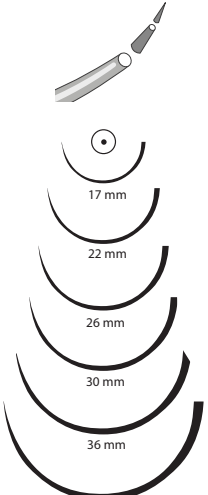

- EO

Packing:

- Boxes of 18 peel packs



KRUUSE Monofast Plus

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>3/8 circle, reverse cutting</p> 	13	5-0	1	70	Violet	18	152752
	19	5-0	1	70	Violet	18	152753
	13	4-0	1.5	70	Violet	18	152755
	19	4-0	1.5	70	Violet	18	152756
	19	3-0	2	70	Violet	18	152760
	24	3-0	2	70	Violet	18	152761
	24	2-0	3	70	Violet	18	152766
<p>1/2 circle, round bodied, taperpoint</p> 	17	5-0	1	70	Violet	18	152754
	17	4-0	1.5	70	Violet	18	152757
	22	4-0	1.5	70	Violet	18	152758
	26	4-0	1.5	70	Violet	18	152759
	17	3-0	2	70	Violet	18	152763
	22	3-0	2	70	Violet	18	152764
	26	3-0	2	70	Violet	18	152765
	22	2-0	3	70	Violet	18	152768
	26	2-0	3	70	Violet	18	152769
	36	2-0	3	70	Violet	18	152772
	30	0	3.5	70	Violet	18	152773
<p>Straight cutting</p>  <p>Not size 1:1</p>	60	3-0	2	70	Violet	18	152762
	60	2-0	3	70	Violet	18	152767



KRUUSE Sacryl

- Multifilament, braided:** For secure knot tying and easy handling
- Synthetic:** Minimal tissue reaction
- Coated:** For easy knot tying and smooth passage through tissue
- Absorbable:** By hydrolysis

KRUUSE Sacryl is a braided and coated multifilament synthetic suture composed of Polyglactine 910.

Polyglactine 910 sutures are the most widely used braided and coated synthetic absorbable sutures in the world. On account of its superior properties, this suture has replaced catgut sutures in most applications.

In use, KRUUSE Sacryl was found to be non-antigenic, eliciting only mild tissue reactivity during the absorption process.

Absorption: Absorbable:

- Complete mass absorption in approximately 56-63 days
- Absorption by hydrolysis

Chemical composition:

- KRUUSE Sacryl is composed of Polyglactine 910 (co-polymer of 90% Glycolide and 10% L-lactide)

Tensile Strength:

- 70 % remains after 14 days
- 50 % remains after 21 days (6-0 and larger)
- 40 % remains after 21 days (7-0 and smaller)
- 25 % remains after 28 days
- Complete mass absorption in approximately 56-63 days

Colour:

- Violet and undyed

Indications:

KRUUSE Sacryl sutures are indicated for soft tissue approximation and ligation, where absorbable sutures are indicated, including:

- Suturing of subcutaneous tissue
- Fascia
- Joint capsules
- Muscles
- Uterus and GI-surgery
- Vascular surgery
- Ophthalmic surgery

Contraindications:

- Where permanent support is required

Range:

- USP 8-0 to 2
- EP 0.4 to 5

Sterilization method:


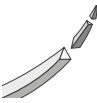
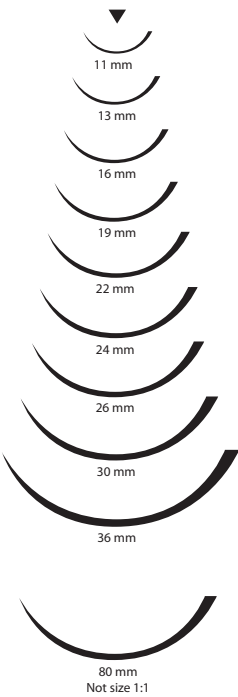

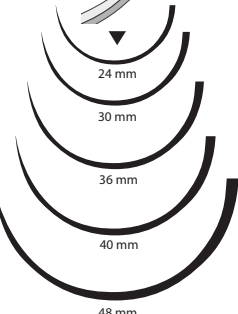
- EO

Packing:

- Boxes of 18 peel packs

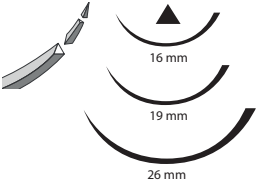
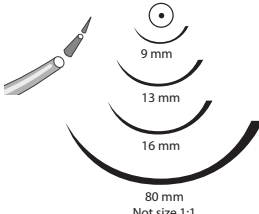
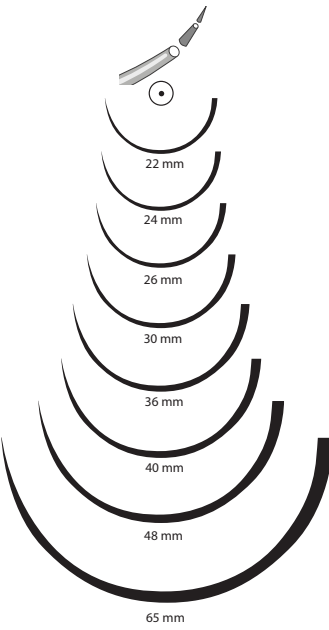
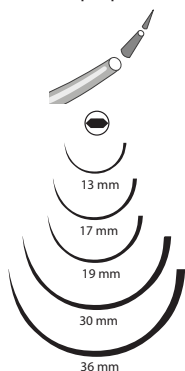


KRUUSE Sacryl

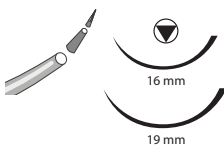
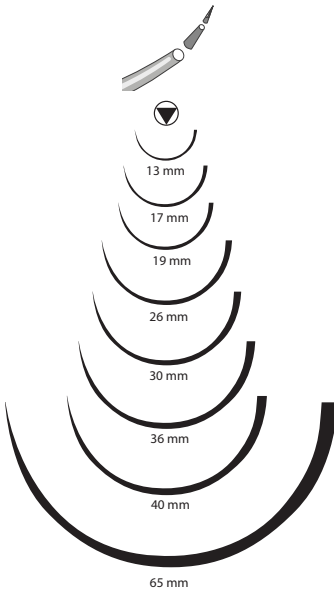
Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, micropoint spatula 	6.5	8-0	0.4	30	Violet	18	152314
	6.5 <i>Double</i>	8-0	0.4	30	Violet	18	152589
3/8 circle, reverse cutting  	11	6-0	0.7	45	Undyed	18	152551
	13	6-0	0.7	45	Undyed	18	152550
	13	6-0	0.7	45	Violet	18	152313
	13	4-0	1.5	45	Violet	18	152900
	16	6-0	0.7	45	Violet	18	152315
	16	6-0	0.7	70	Violet	18	152312
	16	5-0	1	45	Violet	18	152310
	19	5-0	1	45	Violet	18	152309
	19	4-0	1.5	45	Violet	18	152553
	19	4-0	1.5	70	Violet	18	152303
	19	3-0	2	45	Violet	18	152300
	19	3-0	2	70	Violet	18	152297
	22	6-0	0.7	45	Violet	18	152311
	22	5-0	1	45	Violet	18	152308
	24	4-0	1.5	70	Violet	18	152304
	24	4-0	1.5	90	Violet	18	152906
	24	3-0	2	70	Violet	18	152296
	24	3-0	2	90	Violet	18	152903
	24	2-0	3	70	Violet	18	152290
	24	2-0	3	90	Violet	18	152901
	26	2-0	3	70	Undyed	18	152565
	30	3-0	2	70	Violet	18	152301
	30	2-0	3	70	Violet	18	152294
	30	0	3.5	70	Violet	18	152280
	36	4-0	1.5	45	Violet	18	152306
	36	2-0	3	70	Violet	18	152587
36	1	4	70	Violet	18	152286	
80	2	5	140	Violet	18	152586	
1/2 circle, reverse cutting  	24	3-0	2	70	Violet	18	152559
	30	2-0	3	70	Violet	18	152318
	36	2-0	3	70	Violet	18	152295
	36	0	3.5	70	Violet	18	152283
	40	0	3.5	70	Violet	18	152284
	48	0	3.5	90	Violet	18	152285
	48	1	4	90	Violet	18	152288
	48	2	5	90	Violet	18	152289
	48	3+4	6	90	Violet	18	152908

KRUUSE Sacryl

SACRYL | 30

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, conventional cutting 	16	5-0	1	70	Violet	18	152552
	16	4-0	1.5	70	Violet	18	152555
	16	3-0	2	70	Violet	18	152561
	19	3-0	2	70	Undyed	18	152576
	26	3-0	2	70	Undyed	18	152560
	26	2-0	3	70	Undyed	18	152564
3/8 circle, round bodied, taperpoint 	9	6-0	0.7	30	Violet	18	152575
	13	4-0	1.5	70	Violet	18	152573
	16	4-0	1.5	45	Violet	18	152577
	80	2	5	140	Violet	18	152585
1/2 circle, round bodied, taperpoint 	22	3-0	2	70	Violet	18	152298
	22	3-0	2	90	Violet	18	152904
	24	4-0	1.5	70	Violet	18	152305
	24	4-0	1.5	90	Violet	18	152907
	26	3-0	2	70	Violet	18	152299
	26	2-0	3	70	Violet	18	152291
	26	2-0	3	90	Violet	18	152902
	30	2-0	3	70	Violet	18	152322
	30	0	3.5	70	Violet	18	152281
	36	2-0	3	45	Violet	18	152293
	36	2-0	3	70	Violet	18	152317
	36	0	3.5	70	Violet	18	152323
	36	1	4	70	Violet	18	152287
	40	1	4	90	Violet	18	152324
	48	0	3.5	90	Violet	18	152909
	48	2	5	90	Violet	18	152316
	65	1	4	90	Violet	18	152526
65	2	5	90	Violet	18	152527	
65	2	5	120-loop	Violet	18	152321	
1/2 circle, taperpoint extra 	13	6-0	0.7	30	Undyed	18	152571
	17	5-0	1	70	Violet	18	152572
	17	4-0	1.5	70	Violet	18	152557
	19	4-0	1.5	70	Violet	18	152554
	30	3-0	2	70	Violet	18	152563
	30	2-0	3	70	Violet	18	152566
	36	2-0	3	70	Violet	18	152567

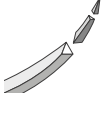
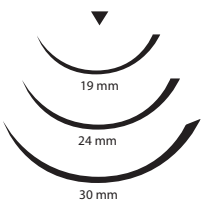
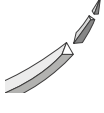
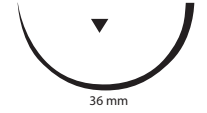

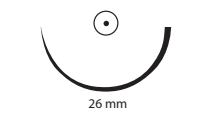
KRUUSE Sacryl

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, round bodied, tapercut 	16	5-0	1	70	Violet	18	152588
	16	4-0	1.5	70	Undyed	18	152556
	16	3-0	2	70	Undyed	18	152562
	19	4-0	2	70	Violet	18	152905
1/2 circle, round bodied, tapercut 	13	6-0	0.7	45	Violet	18	152579
	13	5-0	1	45	Violet	18	152580
	17	5-0	1	70	Violet	18	152584
	17	4-0	1.5	70	Violet	18	152583
	17	3-0	2	45	Violet	18	152581
	19	2-0	3	70	Violet	18	152582
	26	3-0	2	70	Violet	18	152558
	26	2-0	3	70	Violet	18	152326
	30	2-0	3	70	Violet	18	152327
	30	0	3.5	70	Violet	18	152569
	30	1	4	90	Violet	18	152570
	36	2-0	3	70	Violet	18	152568
	36	2-0	3	90	Violet	18	152574
	36	0	3.5	70	Violet	18	152328
	40	2-0	3	70	Undyed	18	152319
	40	0	3.5	70	Undyed	18	152320
	40	1	4	90	Violet	18	152329
	65	1	4	90	Violet	18	152524
	65	2	5	90	Violet	18	152525
	65	2	5	120-loop	Violet	18	152325

KRUUSE Sacryl without needle

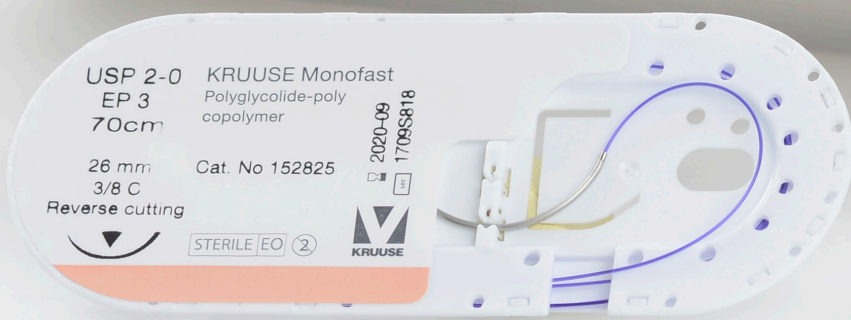
USP	EP	Length in cm	Suture colour	Number per box	Cat. No
4-0	1.5	150	Violet	18	152370
3-0	2	150	Violet	18	152371
2-0	3	150	Violet	18	152372
0	3.5	150	Violet	18	152373
1	4	150	Violet	18	152374
2	5	150	Violet	18	152375

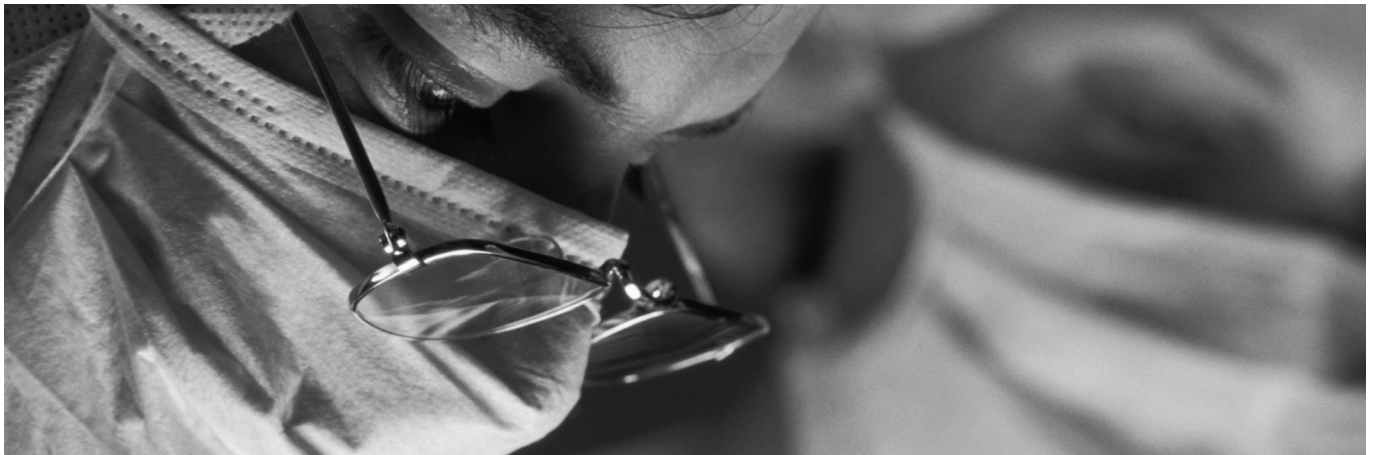
KRUUSE Sacryl - Race Track

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
 <p>3/8 circle, reverse cutting</p> 	19	3-0	2	70	Violet	15	152800
	24	3-0	2	70	Violet	15	152801
	24	2-0	3	70	Violet	15	152802
	30	2-0	3	70	Violet	15	152803
	30	0	3.5	70	Violet	15	152804
 <p>1/2 circle, reverse cutting</p> 	36	0	3.5	70	Violet	15	152805
 <p>1/2 circle, round bodied, taperpoint</p> 	26	3-0	2	70	Violet	15	152806
	26	2-0	3	70	Violet	15	152807

SACRYL | 32







KRUUSE Sacryl Plus

Multifilament, braided: For secure knot tying and easy handling
Synthetic: Minimal tissue reaction
Coated: For easy knot tying and smooth passage through tissue
Antibacterial: To reduce incidence of infection, oedema and pain
Absorbable: By hydrolysis

KRUUSE Sacryl Plus is an antibacterial, absorbable, synthetic, braided and coated suture containing Chlorhexidine diacetate. Chlorhexidine diacetate is the antibacterial component.

KRUUSE Sacryl Plus, being an absorbable suture, should not be used where extended approximation of tissue under stress or tension is required and in patients with known allergic reactions to Chlorhexidine diacetate.

KRUUSE Sacryl Plus tested in vitro creates a zone of inhibition against the most common surgical site pathogens including Staphylococcus aureus.

Absorption: Absorbable:

- Complete mass absorption in approximately 56-63 days
- Absorption by hydrolysis

Chemical composition:

- KRUUSE Sacryl is composed of Polyglactin 910 (copolymer of 90% Glycolide and 10% L-lactide)

Tensile Strength:

- 70 % remains after 14 days
- 50 % remains after 21 days
- 25 % remains after 28 days
- Complete mass absorption in approximately 56-63 days

Colour:

- Violet and undyed

Indications:

KRUUSE Sacryl sutures are indicated for soft tissue approximation and ligation, where absorbable sutures are indicated, including:

- Suturing of subcutaneous tissue
- Fascia
- Joint capsules
- Muscles
- Uterus and GI-surgery
- Vascular surgery

Contraindications:

- Where permanent support is required

Range:

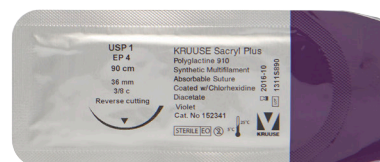
- USP 5-0 to 2
- EP 1 to 5

Sterilization method:

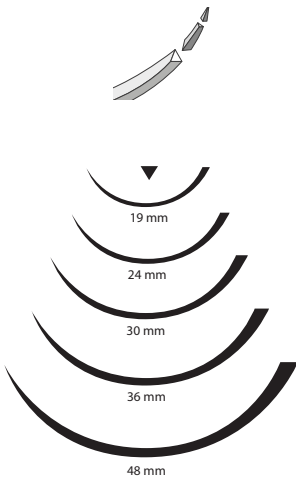
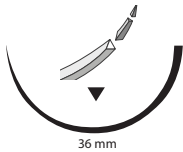

- EO

Packing:

- Boxes of 18 peel packs



KRUUSE Sacryl Plus

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>3/8 circle, reverse cutting</p> 	19	5-0	1	45	Undyed	18	152339
	19	4-0	1.5	45	Undyed	18	152338
	19	4-0	1.5	70	Violet	18	152336
	19	3-0	2	70	Violet	18	152333
	19	2-0	3	70	Violet	18	152340
	24	3-0	2	70	Undyed	18	152337
	24	3-0	2	70	Violet	18	152334
	24	2-0	3	70	Violet	18	152331
	30	3-0	2	70	Violet	18	152335
	30	2-0	3	70	Violet	18	152332
	30	0	3.5	70	Violet	18	152330
	36	1	4	90	Violet	18	152341
	48	2	5	90	Violet	18	152342
	<p>1/2 circle, reverse cutting</p> 	36	0	3.5	70	Violet	18
36		1	4	70	Violet	18	152346
<p>1/2 circle, round bodied, tapercut</p> 	26	3-0	2	70	Violet	18	152343
	26	2-0	3	70	Violet	18	152344



KRUUSE PGA

Multifilament, braided: For secure knot tying and easy handling
Synthetic: Minimal tissue reaction
Coated: For easy knot tying and smooth passage through tissue
Absorbable: By hydrolysis

KRUUSE PGA is an absorbable, synthetic, braided and coated suture.

PGA is a synthetic absorbable suture based on Polyglycolic acid. PGA sutures, coated with polycaprolactone and calcium stearate, are inert, non-antigenic and non-pyrogenic. PGA complies with the requirements of USP and EP, is extremely soft and smooth and has a high knot security.

Absorption: Absorbable:

- Complete mass absorption in approximately 60-90 days
- Absorption by hydrolysis

Chemical composition:

- KRUUSE PGA is composed of Polyglycolic acid coated with polycaprolactone and calcium stearate

Tensile Strength:

- 83 % remains after 14 days
- 52 % remains after 21 days
- Complete mass absorption in approximately 60-90 days

Colour:

- Violet

Indications:

KRUUSE PGA sutures are indicated for soft tissue approximation and ligation, where absorbable sutures are indicated, including:

- Suturing of subcutaneous tissue
- Fascia/abdominal wall closure
- Muscles
- Gynaecology
- GI-surgery
- Ophthalmic surgery

Contraindications:

- Where permanent support is required

Range:

- USP 4-0 to 6
- EP 1.5 to 8

Sterilization method:

- EO

Packing:

- Boxes of 18 peel packs
- Cassettes



KRUUSE PGA

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>3/8 circle, reverse cutting</p>	19	4-0	1.5	70	Violet	18	152415
	24	4-0	1.5	70	Violet	18	152408
	26	3-0	2	70	Violet	18	152406
	26	2-0	3	70	Violet	18	152404
	30	0	3.5	70	Violet	18	152401
	30	0	3.5	90	Violet	18	152412
	30	1	4	90	Violet	18	152413
	36	2-0	3	70	Violet	18	152522
	36	1	4	70	Violet	18	152402
	36	2	5	90	Violet	18	152414
	39	0	3.5	90	Violet	18	152521
	48	2	5	90	Violet	18	152520
	<p>1/2 circle, round bodied, taperpoint</p>	19	4-0	1.5	70	Violet	18
24		4-0	1.5	70	Violet	18	152407
26		3-0	2	70	Violet	18	152405
26		2-0	3	70	Violet	18	152403
30		0	3.5	70	Violet	18	152400
30		0	3.5	90	Violet	18	152409
30		1	4	90	Violet	18	152410
36		2	5	90	Violet	18	152411
65		5	7	150	Violet	18	152742
65		6	8	150	Violet	18	152743
76		3+4	6	150	Violet	18	152744
<p>1/2 circle, round bodied, tapercut</p>		48	6	8	150	Violet	18
	65	5	7	150	Violet	18	152528
	65	6	8	150	Violet	18	152529



KRUUSE PD-X

Monofilament: For smooth passage through tissue and high tissue compatibility

Synthetic: Minimal tissue reaction

Absorbable: By hydrolysis

KRUUSE PD-X is a monofilament synthetic suture with a smooth surface that gives minimal tissue reaction and decreased incidence of infection and trauma.

KRUUSE PD-X meets all the requirements established by the European Pharmacopoeia (EP) and the US Pharmacopoeia (USP) for Synthetic Absorbable Monofilament Surgical Sutures.

Absorption: Absorbable:

- Complete mass absorption in approximately 180-210 days
- Absorption by hydrolysis

Chemical composition:

- KRUUSE PD-X is a slowly absorbable synthetic monofilament suture, and the material is composed of Polydioxanone (PDO)

Tensile Strength:

- 75 % remains after 14 days
- 60 % remains after 28 days
- Complete mass absorption in approximately 180-210 days

Colour:

- Violet

Indications:

KRUUSE PD-X is commonly used in soft tissues and ligation where absorbable sutures are indicated, including:

- Abdominal wall closure
- GI-surgery
- Fascia and ligaments
- Tendon repair
- Hernias
- Orthopaedics
- Vascular surgery

Contraindications:

- Where permanent support is required

Range:

- USP 7-0 to 2
- EP 0.5 to 5

Sterilization method:



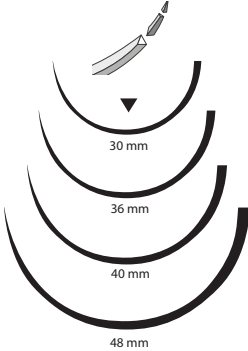
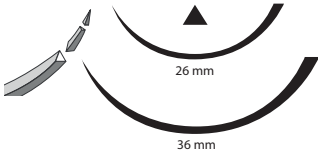

- EO

Packing:

- Boxes of 18 peel packs

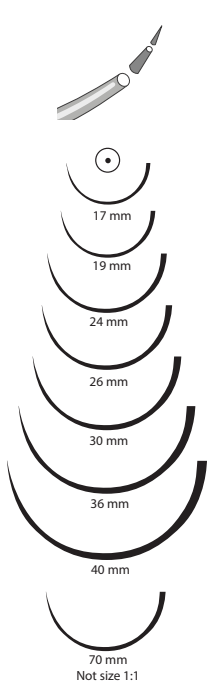
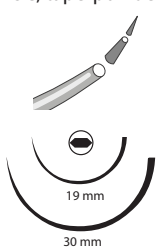
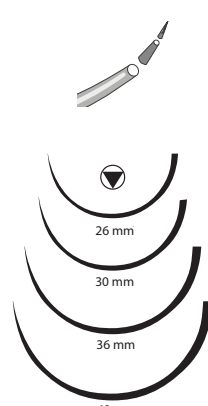


KRUUSE PD-X


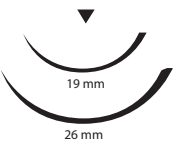

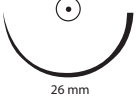
Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, micropoint spatula 	13	5-0	1	45	Violet	18	152268
3/8 circle, reverse cutting  9 mm 13 mm 19 mm 24 mm 26 mm 30 mm 36 mm 70 mm Not size 1:1	9	7-0	0.5	45	Violet	18	152598
	9	6-0	0.7	45	Violet	18	152597
	13	5-0	1	45	Violet	18	152269
	19	4-0	1.5	70	Violet	18	152267
	19	3-0	2	70	Violet	18	152265
	24	4-0	1.5	70	Violet	18	152595
	26	3-0	2	45	Violet	18	152591
	26	3-0	2	70	Violet	18	152260
	26	2-0	3	70	Violet	18	152255
	30	0	3.5	70	Violet	18	152250
	36	1	4	70	Violet	18	152253
	70	2-0	3	70	Violet	18	152817
	1/2 circle, reverse cutting 	36	2-0	3	70	Violet	18
36		0	3.5	70	Violet	18	152252
36		1	4	70	Violet	18	152270
40		2	5	70	Violet	18	152254
48		3+4	6	90	Violet	18	152709
3/8 circle, conventional cutting 	26	3-0	2	70	Violet	18	152249
	36	2-0	3	70	Violet	18	152279
Straight, trocar point 	45	0	3.5	45	Violet	18	152276
	45	1	4	45	Violet	18	152277
	45	2	5	45	Violet	18	152278

KRUUSE PD-X

PD-X | 40

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>1/2 circle, round bodied, taperpoint</p> 	17	3-0	2	70	Violet	18	152258
	19	4-0	1.5	45	Violet	18	152272
	24	4-0	1.5	70	Violet	18	152266
	24	4-0	1.5	90	Violet	18	152818
	26	3-0	2	70	Violet	18	152263
	26	3-0	2	90	Violet	18	152816
	26	2-0	3	70	Violet	18	152256
	26	2-0	3	90	Violet	18	152815
	26	0	3.5	70	Violet	18	152274
	30	3-0	2	70	Violet	18	152264
	30	0	3.5	70	Violet	18	152251
	36	1	4	70	Violet	18	152273
	40	2-0	3	70	Violet	18	152261
	70	1	4	90	Violet	18	152599
<p>1/2 circle, taperpoint extra</p> 	19	3-0	2	70	Violet	18	152590
	30	2-0	3	70	Violet	18	152592
<p>1/2 circle, round bodied, tapercut</p> 	26	3-0	2	70	Violet	18	152262
	26	2-0	3	70	Violet	18	152257
	30	0	3.5	70	Violet	18	152271
	30	1	4	70	Violet	18	152596
	36	2-0	3	70	Violet	18	152593
	36	0	3.5	70	Violet	18	152594
	40	0	3.5	90	Violet	18	152275

KRUUSE PD-X - Race Track

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, reverse cutting  	19	3-0	2	70	Violet	15	152810
	26	3-0	2	70	Violet	15	152811
	26	2-0	3	70	Violet	15	152812
1/2 circle, round bodied, taperpoint  	26	3-0	2	70	Violet	15	152813
	26	2-0	3	70	Violet	15	152814

PD-X | 41



KRUUSE PD-X Plus

Monofilament: For smooth passage through tissue and high tissue compatibility

Synthetic: Minimal tissue reaction

Antibacterial: To reduce incidence of infection, oedema and pain

Absorbable: By hydrolysis

KRUUSE PD-X Plus is an antibacterial, absorbable, monofilament synthetic suture with a smooth surface that gives minimal tissue reaction. Chlorhexidine diacetate is the antibacterial component.

KRUUSE PD-X Plus, being an absorbable suture, should not be used where extended approximation of tissue under stress or tension is required and in patients with known allergic reactions to Chlorhexidine diacetate.

KRUUSE PD-X Plus tested in vitro creates a zone of inhibition against the most common surgical site pathogens including Staphylococcus aureus.

Absorption: Absorbable:

- Complete mass absorption in approximately 180-210 days
- Absorption by hydrolysis

Chemical composition:

- KRUUSE PD-X Plus is a slowly absorbable synthetic monofilament suture, and the material is composed of Polydioxanone (PDO)

Tensile Strength:

- 75 % remains after 14 days
- 60 % remains after 28 days
- Complete mass absorption in approximately 180-210 days

Colour:

- Violet

Indications:

KRUUSE PD-X Plus is commonly used in soft tissues and ligation where absorbable sutures are indicated, including:

- Abdominal wall closure
- GI-surgery
- Fascia and ligaments
- Tendon repair
- Hernias
- Orthopaedics
- Vascular surgery

Contraindications:

- Where permanent support is required

Range:

- USP 3-0 to 1
- EP 2 to 4


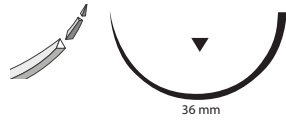
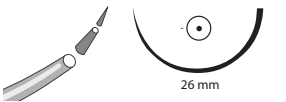

Sterilization method:

- EO

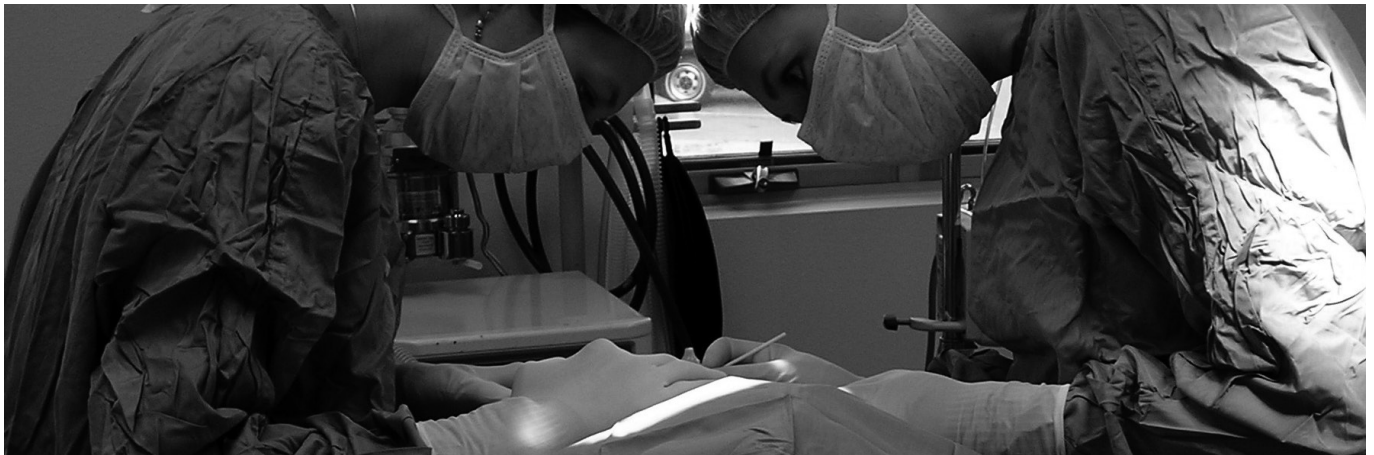
Packing:

- Boxes of 18 peel packs

KRUUSE PD-X Plus

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, reverse cutting 	24	3-0	2	70	Violet	18	152715
	24	2-0	3	70	Violet	18	152716
1/2 circle, reverse cutting 	36	2-0	3	70	Violet	18	152712
	36	0	3.5	70	Violet	18	152713
	36	1	4	70	Violet	18	152714
1/2 circle, round bodied, taperpoint 	26	3-0	2	70	Violet	18	152717
	26	2-0	3	70	Violet	18	152718
1/2 circle, round bodied tapercut 	26	3-0	2	70	Violet	18	152710
	26	2-0	3	70	Violet	18	152711





KRUUSE Promilene

Monofilament: For smooth passage through tissue and high tissue compatibility

Synthetic: For minimal tissue reaction

Non-absorbable: Provides permanent tensile strength

KRUUSE Promilene sutures are coloured blue for easy identification during surgery. The monofilament and synthetic properties of the suture give a smooth surface, minimal tissue reaction and decreased incidence of infection and trauma. The suture is resistant to repeated bending.

Absorption:

- Non-absorbable

Chemical composition:

- KRUUSE Promilene is composed of an isotactic crystalline stereoisomer of polypropylene, a polymer of propylene

Colour:

- Blue and Pink Fluorescence

Indications:

KRUUSE Promilene is commonly used in soft tissue approximation and ligation where a permanent support is needed. Areas of use include:

- Skin closure
- Ophthalmic surgery
- Vascular and cardiovascular surgery
- Neurosurgery

Range:

- USP 6-0 to 2
- EP 0.7 to 5

Sterilization method:

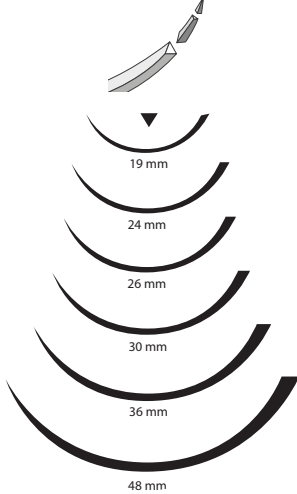
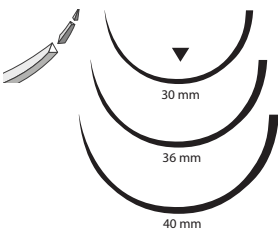
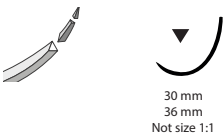
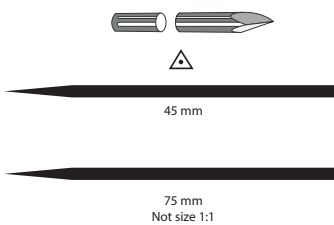
- EO

Packing:

- Boxes of 18 peel packs

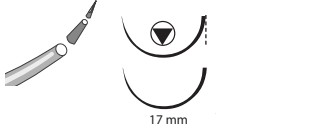


KRUUSE Promilene

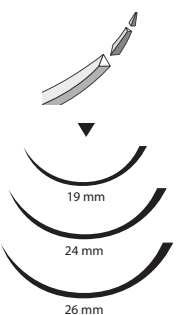
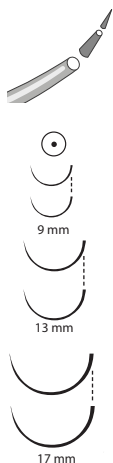
Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>3/8 circle, reverse cutting</p> 	19	4-0	1.5	45	Blue	18	152368
	19	3-0	2	45	Blue	18	152366
	24	4-0	1.5	70	Blue	18	152367
	24	4-0	1.5	70	Pink Fluorescence	18	152790
	26	3-0	2	70	Blue	18	152364
	26	3-0	2	70	Pink Fluorescence	18	152791
	26	2-0	3	70	Blue	18	152362
	26	2-0	3	70	Pink Fluorescence	18	152546
	30	3-0	2	70	Blue	18	152365
	30	0	3.5	70	Blue	18	152360
	30	0	3.5	70	Pink Fluorescence	18	152547
	36	2-0	3	70	Blue	18	152363
	36	1	4	70	Blue	18	152361
	36	1	4	70	Pink Fluorescence	18	152548
<p>1/2 circle, reverse cutting</p> 	26	2-0	3	70	Blue	18	152536
	40	0	3.5	100	Blue	18	152535
	48	1	4	100	Blue	18	152540
	<p>Compound curve, reverse cutting</p> 	30	2-0	3	70	Blue	18
30		1	4	70	Blue	18	152932
36		1	4	90	Blue	18	152930
<p>Straight, trocar point</p> 	45	2-0	3	45	Blue	18	152530
	45	0	3.5	45	Blue	18	152531
	45	1	4	45	Blue	18	152532
	45	2	5	45	Blue	18	152533
	75	3-0	2	100	Blue	18	152931

KRUUSE Promilene

PROMILENE | 46

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
1/2 circle, round bodied, tapercut 	30	2-0	3	90	Blue	18	152541
	45	1	4	100	Blue	18	152534
1/2 circle, round bodied, tapercut - double needle 	17	4-0	1.5	90	Blue	18	152539
	17	3-0	2	90	Blue	18	152538
	17	2-0	3	90	Blue	18	152537

KRUUSE Promilene - Race Track

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, reverse cutting 	19	3-0	2	45	Blue	15	152851
	24	4-0	1.5	70	Blue	15	152850
	26	3-0	2	70	Blue	15	152852
	26	2-0	3	70	Blue	15	152853
1/2 circle, round bodied, taperpoint 	9	6-0	0.7	70	Blue	6	152542
	13	4-0	1.5	70	Blue	6	152544
	17	5-0	1	70	Blue	6	152543
	17	4-0	1.5	70	Blue	6	152545





KRUUSE Krupramid

Pseudo-monofilament: For smooth passage through tissue, high tissue compatibility and excellent handling properties

Synthetic: Minimal tissue reaction

Non-absorbable: Provides permanent tensile strength

KRUUSE Krupramid sutures have a twisted structure and are unique in that they are made of many fine inner nylon fibers which are enclosed in a smooth nylon outer shell. As a result, KRUUSE Krupramid sutures feel smooth like monofilament sutures but they tie better, with fewer knots, and stay tied even with short tag ends. KRUUSE Krupramid is very strong and has excellent handling properties and knot security. It gives permanent tissue support with high flexibility.

Absorption:

- Non-absorbable

Chemical composition:

- KRUUSE Krupramid is composed of synthetic Polyamide 6.6 strands enclosed in a polyamide 6 sheet

Colour:

- White and black

Indications:

KRUUSE Krupramid is commonly used in soft tissue approximation and ligation where permanent support is needed. Areas of use include:

- Skin closure
- Ophthalmic surgery
- Vascular and cardiovascular surgery
- Neurosurgery

Range:

- USP 4-0 to 1
- EP 1.5 to 4

Sterilization method:

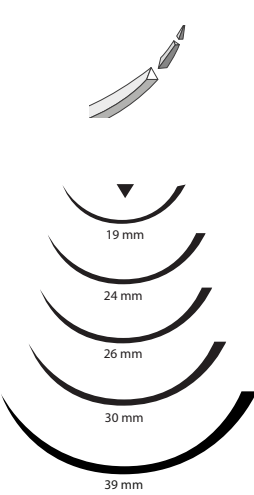
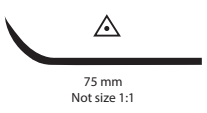
- EO

Packing:

- Boxes of 18 peel packs
- Cassettes



KRUUSE Krupramid

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>3/8 circle, reverse cutting</p> 	19	4-0	1.5	70	Black	18	152750
	19	3-0	2	45	Black	18	152399
	24	3-0	2	45	Black	18	152398
	24	3-0	2	70	Black	18	152385
	24	2-0	3	45	Black	18	152395
	24	2-0	3	70	Black	18	152386
	26	3-0	2	70	White	18	152392
	26	2-0	3	70	White	18	152391
	30	3-0	2	45	Black	18	152397
	30	2-0	3	45	Black	18	152394
	30	0	3.5	70	White	18	152390
	30	2	5	90	White	18	152751
	39	3-0	2	70	Black	18	152396
	39	2-0	3	70	Black	18	152393
	39	0	3.5	70	Black	18	152389
	39	1	4	70	Black	18	152388
	39	1	4	90	White	18	152387
	<p>Ski-shape, trocar point</p>  <p>75 mm Not size 1:1</p>	75	3+4	6	150	White	18



KRUUSE Nylon

Monofilament: For smooth passage through tissue and high tissue compatibility

Synthetic: Minimal tissue reaction

Non-absorbable: Provides permanent tensile strength

KRUUSE Nylon sutures are coloured blue for easy identification during surgery. The monofilament and synthetic properties of the suture give a smooth surface, minimal tissue reaction and decreased incidence of infection and trauma.

KRUUSE Nylon suture is quite pliable and does not support bacterial growth due to the smooth surface. The elasticity of KRUUSE Nylon suture makes it useful in retention and skin closure.

Absorption:

- Non-absorbable

Chemical composition:

- KRUUSE Nylon monofilament suture is made of monofilament polyamide 6&66 by extruding a strong uniform strand.

Colour:

- Blue

Indications:

KRUUSE Nylon is commonly used in soft tissue approximation and ligation where permanent support is needed. Areas of use include:

- Skin closure
- Ophthalmic surgery
- Vascular and cardiovascular surgery
- Neurosurgery

Range:

- USP 5-0 to 2
- EP 1 to 5

Sterilization method:

- EO

Packing:

- Boxes of 18 peel packs

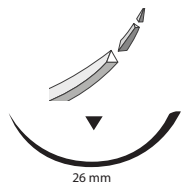


KRUUSE Nylon

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>3/8 circle, reverse cutting</p>	13	5-0	1	45	Blue	18	152033
	19	5-0	1	45	Blue	18	152417
	19	4-0	1.5	45	Blue	18	152030
	19	3-0	2	45	Blue	18	152031
	19	3-0	2	70	Blue	18	152507
	24	4-0	1.5	70	Blue	18	152425
	24	3-0	2	70	Blue	18	152508
	24	0	3.5	70	Blue	18	152420
	26	3-0	2	70	Blue	18	152424
	26	2-0	3	70	Blue	18	152423
	30	2-0	3	90	Blue	18	152429
	30	0	3.5	70	Blue	18	152421
	36	1	4	70	Blue	18	152422
	39	2-0	3	70	Blue	18	152418
45	2-0	3	90	Blue	18	152032	
<p>1/2 circle, reverse cutting</p>	40	0	3.5	90	Blue	18	152426
	48	1	4	90	Blue	18	152427
<p>3/8 circle, conventional cutting</p>	90	1	4	100	Blue	18	152730
	90	2	5	90	Blue	18	152428
	90	2	5	200	Blue	18	152731
<p>Straight, cutting</p>	55	2-0	3	90	Blue	18	152419
<p>1/2 circle, round bodied, taperpoint</p>	48	2	5	90	Blue	18	152509

NYLON | 51

KRUUSE Nylon - Race Track

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, reverse cutting 	26	3-0	2	70	Blue	15	152840
	26	2-0	3	70	Blue	15	152841



NYLON | 52







KRUUSE Silk

Multifilament, braided: For secure knot tying and easy handling
Coated (wax): For easy knot tying and smooth passage through tissue

Non-absorbable: Provides permanent tensile strength

KRUUSE Silk is a natural, braided and coated suture. As silk is a natural fiber, more tissue reaction can be expected using this type of suture compared to synthetic sutures.

Natural silk contains two glycoproteins: Fibroin and sericin. Sericin can cause an immune response and is removed from KRUUSE Silk.

Absorption:

- Non-absorbable

Chemical composition:

- KRUUSE Silk is composed of 100% fibroin (Sericin, which can cause an immune response, is removed)

Colour:

- Black

Indications:

KRUUSE Silk sutures are indicated for soft tissue approximation and ligation, where permanent support is indicated, including:

- Ophthalmic surgery
- Vascular and cardiovascular surgery
- Neurosurgery
- Dental surgery
- Ligation

Contraindications:

- Where a minimum of tissue reaction/foreign body reaction is required

Range:

- USP 4-0 to 0
- EP 1.5 to 3.5

Sterilization method:

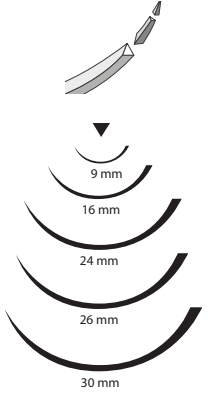
- EO

Packing:

- Boxes of 18 peel packs
- Cassettes



KRUUSE Silk

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
<p>3/8 circle, reverse cutting</p> 	9	4-0	1.5	70	Black	18	152384
	16	3-0	2	45	Black	18	152379
	24	4-0	1.5	70	Black	18	152383
	26	3-0	2	70	Black	18	152382
	26	2-0	3	70	Black	18	152381
	30	0	3.5	70	Black	18	152380

SILK | 55



Cat. No 150901 - Display



KRUUSE PGA

Multifilament, braided: For secure knot tying and easy handling
Synthetic: Minimal tissue reaction
Coated: For easy knot tying and smooth passage through tissue
Absorbable: By hydrolysis

KRUUSE PGA is an absorbable, synthetic, braided and coated suture.

PGA is a synthetic absorbable suture based on Polyglycolic acid. PGA sutures, coated with polycaprolactone and calcium stearate, are inert, non-antigenic and non-pyrogenic. PGA complies with the requirements of USP and EP, is extremely soft and smooth and has a high knot security.

Absorption: Absorbable

- Complete mass absorption in approximately 60-90 days
- Absorption by hydrolysis

Chemical composition:

- KRUUSE PGA is composed of Polyglycolic acid coated with polycaprolactone and calcium stearate

Tensile Strength:

- 83 % remains after 14 days
- 52 % remains after 21 days
- Complete mass absorption in approximately 60-90 days

Colour:

- Violet

Indications:

KRUUSE PGA sutures are indicated for soft tissue approximation and ligation, where absorbable sutures are indicated, including:

- Suturing of subcutaneous tissue
- Fascia/abdominal wall closure
- Muscles
- Gynaecology
- GI-surgery
- Ophthalmic surgery

Contraindications:

- Where permanent support is required

Range:

- USP 3-0 to 6
- EP 2 to 8

Sterilization method:

- EO

Packing:

- Boxes of 18 peel packs
- Cassettes



KRUUSE PGA

USP	EP	Length in m	Suture colour	Cat. No
3-0	2	15	Violet	152495
2-0	3	15	Violet	152493
0	3.5	15	Violet	152490
1	4	15	Violet	152491
2	5	15	Violet	152492
3+4	6	15	Violet	152494
5	7	15	Violet	152496
6	8	15	Violet	152497

NB. Expires 3 month after opening of foil pouch



KRUUSE Krupramid

Pseudo-monofilament: For smooth passage through tissue, high tissue compatibility and excellent handling properties

Synthetic: Minimal tissue reaction

Non-absorbable: Provides permanent tensile strength

KRUUSE Krupramid sutures have a twisted structure and are unique in that they are made of many fine inner nylon fibers which are enclosed in a smooth nylon outer shell. As a result, KRUUSE Krupramid sutures feel smooth like monofilament sutures but they tie better, with fewer knots, and stay tied even with short tag ends. KRUUSE Krupramid is very strong and has excellent handling properties and knot security. It gives permanent tissue support with high flexibility.

Absorption:

- Non-absorbable

Chemical composition:

- KRUUSE Krupramid is composed of synthetic Polyamide 6.6 strands enclosed in a polyamide 6 sheet

Colour:

- White

Indications:

KRUUSE Krupramid is commonly used in soft tissue approximation and ligation where permanent support is needed. Areas of use include:

- Skin closure
- Ophthalmic surgery
- Vascular and cardiovascular surgery
- Neurosurgery

Range:

- USP 3-0 to 6
- EP 2 to 8

Sterilization method:

- EO

Packing:

- Boxes of 18 peel packs
- Cassettes



KRUUSE Krupramid

USP	EP	Length in m	Suture colour	Cat. No
3-0	2	100	White	152485
2-0	3	100	White	152483
0	3.5	100	White	152480
1	4	100	White	152481
2	5	75	White	152482
3+4	6	50	White	152484
5	7	50	White	152486
6	8	50	White	152487



KRUUSE Silk

Multifilament, braided: For secure knot tying and easy handling
Coated (wax): For easy knot tying and smooth passage through tissue
Non-absorbable: Provides permanent tensile strength

KRUUSE Silk is a natural, braided and coated suture. As silk is a natural fiber, more tissue reaction can be expected using this type of suture compared to synthetic sutures.

Natural silk contains two glycoproteins: Fibroin and sericin. Sericin can cause an immune response and is removed from KRUUSE Silk.

Absorption:

- Non-absorbable

Chemical composition:

- KRUUSE Silk is composed of 100% fibroin (Sericin, which can cause an immune response, is removed)

Colour:

- Black

Indications:

KRUUSE Silk sutures are indicated for soft tissue approximation and ligation, where permanent support is indicated, including:

- Ophthalmic surgery
- Vascular and cardiovascular surgery
- Neurosurgery
- Dental surgery
- Ligation

Contraindications:

- Where a minimum of tissue reaction/foreign body reaction is required

Range:

- USP 3-0 to 5
- EP 2 to 7

Sterilization method:

- EO

Packing:

- Boxes of 18 peel packs
- Cassettes



KRUUSE Silk

USP	EP	Length in m	Suture colour	Cat. No
3-0	2	100	Black	152475
2-0	3	100	Black	152473
0	3.5	100	Black	152470
1	4	100	Black	152471
2	5	100	Black	152472
3+4	6	50	Black	152474
5	7	50	Black	152476



KRUUSE Dermafil

- Multifilament, braided:** For secure knot tying, high flexibility and easy handling
- Synthetic:** Minimal tissue reaction
- Coated:** For easy knot tying and smooth passage through tissue
- Non-absorbable:** Provides permanent tensile strength

KRUUSE Dermafil is a braided and coated multifilament synthetic suture composed of polyester. It is coloured green for easy identification during surgery.

Braided polyester is extremely strong providing long term tissue support. It is soft and pliable providing excellent knot security. KRUUSE Dermafil is biologically inert, eliciting only minimal tissue reaction.

Absorption:

- Non-absorbable

Chemical composition:

- KRUUSE Dermafil is composed of polyester and coated with silicone

Colour:

- Green

Indications:

KRUUSE Dermafil is commonly used in soft tissue approximation and ligation where permanent support is needed.

Areas of use include:

- Skin closure
- Ophthalmic surgery
- Neurosurgery

Range:

- USP 4-0 to 3+4
- EP 1.5 to 6

Sterilization method:

- EO

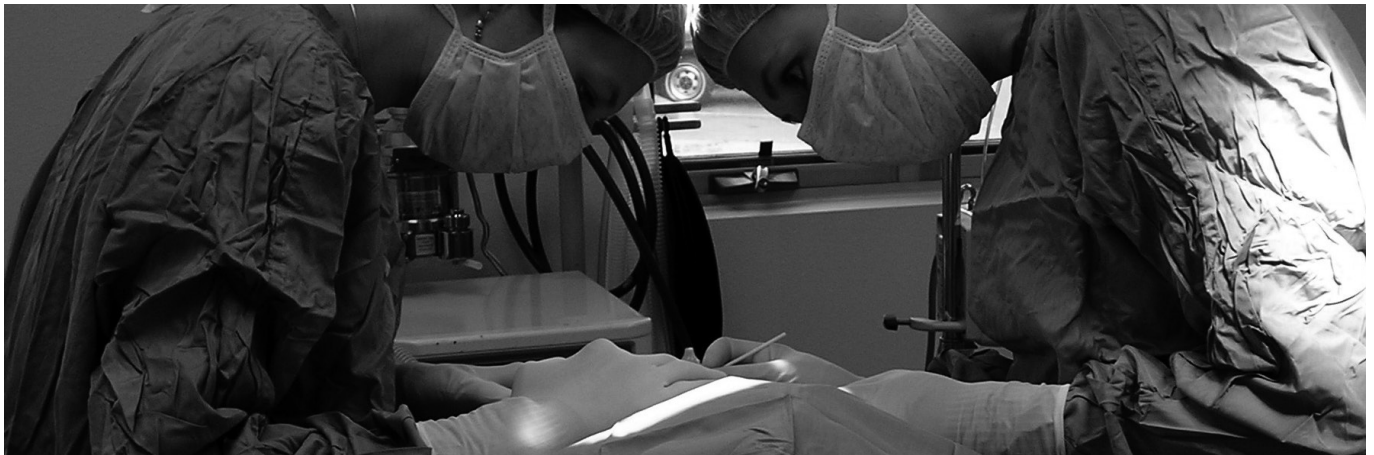
Packing:

- Cassettes



KRUUSE Dermafil

USP	EP	Length in m	Suture colour	Cat. No
4-0	1.5	100	Green	152500
3-0	2	100	Green	152501
2-0	3	100	Green	152502
0	3.5	100	Green	152503
1	4	100	Green	152504
2	5	75	Green	152505
3+4	6	50	Green	152506



KRUUSE Linen

Multifilament, braided: For secure knot tying, high flexibility and easy handling

Coated: For easy knot tying and smooth passage through tissue
Non-absorbable

KRUUSE Linen is a braided and coated multifilament, non-absorbable suture based on cellulose and is derived from twisted long staple flax.

KRUUSE Linen is packaged dry, but gains a substantial and immediate increase in strength if wetted before use. It possesses a higher tissue reactivity and greater capillarity than cotton. One of the greatest assets of linen is its low extensibility and thus ability to hold a tight knot.

Absorption:

- Non-absorbable

Chemical composition:

- KRUUSE Linen sutures are based on cellulose and derived from twisted long staple flax

Colour:

- Whitish brown

Indications:

KRUUSE Linen is commonly used in soft tissue approximation and ligation where a permanent support is needed. Areas of use include:

- GI-anastomosis
- Hernia
- Tonsillectomies

Range:

- USP 3+4
- EP 6

Sterilization method:

- EO

Packing:

- Cassettes



KRUUSE Linen

USP	EP	Length in m	Suture colour	Cat. No
3+4	6	50	White	152460



Cassette holder



Cat. No 150900

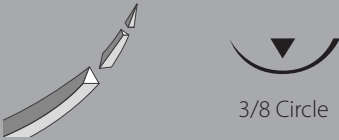
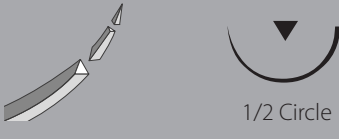

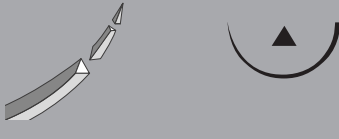

KRUUSE Suture Needles - Regular Eye, 10/pk

Stainless steel suture needles in supreme quality regarding both strength and sharpness. Cutting needle is the preferred needle type when suturing in more fibrous tissues like the skin, whereas most surgeons prefer the round bodied needle when suturing soft tissues like intestines and bladder.



Regular eye

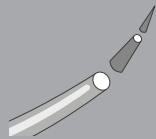

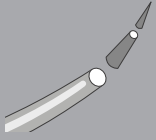

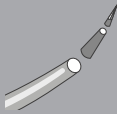

REGULAR EYE NEEDLES | 66

Cat. No	Shape	Length, mm	Symbol
152600	3/8 circle, reverse cutting	17 mm	 <p>3/8 Circle</p>
152601	3/8 circle, reverse cutting	21 mm	
152602	3/8 circle, reverse cutting	25 mm	
152603	3/8 circle, reverse cutting	29 mm	
152604	3/8 circle, reverse cutting	41 mm	
152605	3/8 circle, reverse cutting	49 mm	
152606	3/8 circle, reverse cutting	61 mm	
152607	3/8 circle, reverse cutting	89 mm (diam 1.1 mm)	
152608	3/8 circle, reverse cutting	89 mm (diam 1.6 mm)	
152620	1/2 circle, reverse cutting	41 mm	 <p>1/2 Circle</p>
152621	1/2 circle, reverse cutting	49 mm	
152622	1/2 circle, reverse cutting	69 mm	
152663	3/8 circle, conventional cutting	19 mm	 <p>3/8 Circle</p>
152664	3/8 circle, conventional cutting	25 mm	
152665	3/8 circle, conventional cutting	29 mm	
152666	3/8 circle, conventional cutting	39 mm	
152667	3/8 circle, conventional cutting	65 mm	
152668	3/8 circle, conventional cutting	89 mm	
152661	1/2 circle, conventional cutting	25 mm	
152662	1/2 circle, conventional cutting	39 mm	
152627	Straight, Cutting	60 mm	 <p>Straight</p>
152628	Straight, Cutting	90 mm	

KRUUSE Suture Needles - Regular Eye, 10/pk

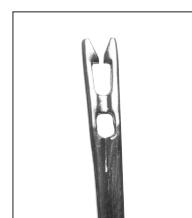


Regular eye

Cat. No	Shape	Length, mm	Symbol
152625	3/8 Circle, Round Body, Taper point	28 mm	  3/8 Circle
152626	3/8 Circle, Round Body, Taper point	69 mm	
152610	1/2 Circle, Round Body, Taper point	23 mm	  1/2 Circle
152611	1/2 Circle, Round Body, Taper point	28 mm	
152612	1/2 Circle, Round Body, Taper point	38 mm	
152613	1/2 Circle, Round Body, Taper point	48 mm	
152614	1/2 Circle, Round Body, Taper point	53 mm	
152615	1/2 Circle, Round Body, Taper point	68 mm	
152617	1/2 Circle, Round Body, Taper cut	23 mm	  1/2 Circle

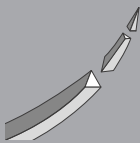




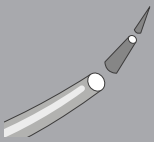

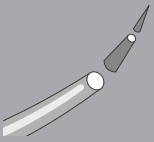

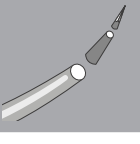

KRUUSE Suture Needles - Spring Eye, 10/pk

Stainless steel suture needles in supreme quality regarding both strength and sharpness. Cutting needle is the preferred needle type when suturing in more fibrous tissues like the skin, whereas most surgeons prefer the round bodied needle when suturing soft tissues like intestines and bladder.



Spring eye

SPRING EYE NEEDLES | 68

Cat. No	Shape	Length, mm	Symbol
152630	3/8 circle, reverse cutting	17 mm	  <p>3/8 Circle</p>
152631	3/8 circle, reverse cutting	21 mm	
152632	3/8 circle, reverse cutting	25 mm	
152633	3/8 circle, reverse cutting	29 mm	
152634	3/8 circle, reverse cutting	41 mm	
152635	3/8 circle, reverse cutting	45 mm	
152636	3/8 circle, reverse cutting	49 mm	
152637	3/8 circle, reverse cutting	61 mm	
152638	3/8 circle, reverse cutting	89 mm	
152646	1/2 circle, reverse cutting	29 mm	  <p>1/2 Circle</p>
152647	1/2 circle, reverse cutting	41 mm	
152648	1/2 circle, reverse cutting	69 mm	
152660	Straight, cutting	75 mm	 <p>Straight</p>
152640	3/8 circle, round bodied, taperpoint	18 mm	  <p>3/8 Circle</p>
152641	3/8 circle, round bodied, taperpoint	23 mm	
152642	3/8 circle, round bodied, taperpoint	28 mm	
152650	1/2 circle, round bodied, taperpoint	23 mm	  <p>1/2 Circle</p>
152651	1/2 circle, round bodied, taperpoint	28 mm	
152652	1/2 circle, round bodied, taperpoint	38 mm	
152653	1/2 circle, round bodied, taperpoint	48 mm	
152654	1/2 circle, Round Bodied, Taperpoint	53 mm	
152657	1/2 circle, round bodied, tapercut	23 mm	  <p>1/2 Circle</p>

Needle holder

Mathieu

German top quality with tungsten carbide inserts, stainless steel:

- 151723 Needle holder Mathieu 14 cm, tungsten
- 151726 Needle holder Mathieu 17 cm, tungsten
- 151750 Needle holder Mathieu 20 cm, tungsten

KRUUSE quality, stainless steel:

- 151724 Needle holder Mathieu, 14 cm
- 151725 Needle holder Mathieu, 17 cm
- 151730 Needle holder Mathieu, 20 cm

European quality, stainless steel:

- 151720 Needle holder Mathieu, 17 cm
- 151755 Needle holder Mathieu, 20 cm

Standard quality, stainless steel:

- 151722 Needle holder Mathieu, 14 cm
- 151721 Needle holder Mathieu, 17 cm
- 151756 Needle holder Mathieu, 20 cm



Mathieu-Olsen

German top quality with tungsten carbide inserts, stainless steel:

- 151718 Needle holder Mathieu-Olsen, 14 cm, tungsten
- 151780 Needle holder Mathieu-Olsen, 16 cm, tungsten
- 151785 Needle holder Mathieu-Olsen, 20 cm, tungsten

KRUUSE quality, stainless steel:

- 151719 Needle holder Mathieu-Olsen, 17 cm, tungsten



Hegar Olsen

German top quality with tungsten carbide inserts, stainless steel:

- 151765 Needle holder Hegar Olsen, 14 cm, tungsten

KRUUSE quality, stainless steel:

- 151760 Needle holder Hegar Olsen, 14 cm

Standard quality, with tungsten carbide inserts, stainless steel:

- 151770 Needle holder Hegar Olsen, 20 cm, tungsten



Mayo Hegar

German top quality with tungsten carbide inserts, stainless steel:

- 151713 Needle holder Mayo Hegar, 13 cm, tungsten



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