

5th edition



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For more information visit: www.kruuse.com



KRUUSE sutures - new and improved quality

KRUUSE is proud to present our new and improved assortment of high quality sutures. We hope you will enjoy your suturing work with our new KRUUSE sutures.

The needles are high quality stainless steel from a highly recommended supplier. The supplier of the suture materials is also highly recommended and known for excellent quality. Both suppliers deliver needles/sutures to the humane markets.

Both sutures and needles are manufactured to meet our high standard of inspection and control, as KRUUSE is committed to our "Code of Conduct". This applies to Quality/Environmental/Occupational Health and Safety Policy - Code of Conduct.

Regarding quality and environment, KRUUSE aspires to use quality-orientated and environmentally certified suppliers, or alternatively, suppliers that are otherwise able to substantiate implementation of environmental management systems or other environmental-enhancing measures.

Code of conduct is valid for both supplier and sub-supplier if any.

Key points from the Environmental Policy specify, among other things, that the supplier must:

- Aim to reduce over-packaging
- · Aim to use recycled board for packaging
- Aim to ship all KRUUSE deliveries in joint consignments in order to promote efficient, fuel-saving transportation

Regarding Occupational Health and Safety, KRUUSE Code of Conduct specifies, among other things, that our suppliers:

- Must on demand procure documentation for compliance with health and safety regulations and/or other relevant legislation
- Must aspire to ensure a healthy and safe working environment for his/her employees in terms of preventing accidents or circumstances that are detrimental to the health – caused by/in connection with/occurring during working hours or as a result of the work process/functions
- Are to respect that profiting from/exploitation of vulnerable groups such as children or illegal immigrants is unacceptable
- Must comply with (and act in accordance with) all international human rights conventions and standards on bans on employment of minors etc. – and for Denmark, according to Danish legislation standards on employment of minors to carry out certain tasks, not precluding employment carried out in countries outside Denmark – during manufacture of products delivered to KRUUSE.

All of the above specifications are part of our KRUUSE company policy – Code of Conduct and secure the end-user as well.

Enjoy your work with KRUUSE sutures!



Article published in the Danish veterinary magazine "Dyrlægemagasinet" in October 2012

NEW, **IMPROVED SUTURE RANGE** FROM KRUUSE

The new KRUUSE suture range has been tested and approved by Danish and foreign vets alike. All suppliers are to comply with KRUUSE's code of ethics, eg with regard to quality, work environment and the environment in general.

By Erik Kjærsgaard Christensen

JØRGEN KRUUSE A/S is – at this very moment in time – coming forward with a new, extensive range of suture.

- "We have endeavoured to compile a range which, in every aspect, complies with our customers' demands and expectations. Consequently, we have put sutures and needles through extensive testing processes in which both Danish and foreign vets have been involved", states Product Manager Rikke Jarlkvist from KRUUSE

- "The product range stems from a new supplier, which is why we have strongly prioritised a "thumbs-up" from professional vets prior to launching sales", she continues

A marked improvement

The outcome is a range of suture, which presents a marked improvement compared to the existing range. All sutures are individually wrapped in sterile peel packs. These, in turn, are then packed in boxes of 18 units per box – to enable the respective clinic or hospital to store a wider range of sutures locally.

Furthermore, displays for the suture boxes are offered in a handsome white or transparent design – each with a capacity for 12 sutures. These displays can function as table stands or as wall-mounted units.



User-friendly catalogue

- "We have also attached great importance to the fact that it must be quick and easy for our customers to form a general idea of this extensive range of sutures, and we have put a lot of work into the design and composition of the catalogue on our website: www.kruuse.com ie to make it practical and logical. For instance, all needles are depicted as full size images in order to quickly find the relevant needle", Rikke Jarlkvist explains. She carries on by saying that KRUUSE's code of ethics (Code of Conduct) forms the basis of the agreement with the new supplier.
- "As a rule, we strive to use certified suppliers when it comes to quality and environmental issues", says the product manager and she further expands:

Supplier requirements

- "One of our requirements, for instance in terms of packaging, is for the supplier to utilise reusable cardboard. Furthermore, we demand that packaging must be PVC-free".

KRUUSE's suppliers are also required to adhere to relevant legislation in the country of operation pertaining to work environment issues in force at the time in question.

"If we are informed of incidents of forced labour or if the work carried out results in physical or psychological mistreatment of employees – this will be perceived as a breach of contract on the supplier's or subcontractor's part. Similarly, discrimination or abuse of any kind of employees will not be tolerated either", states Rikke larlkvist.

		Chemical composition	Physical features	Absorption time
	KRUUSE Sacryl Rapid	Polyglactine 910	Multifilament, coated	Short
	KRUUSE Catgut	Natural purified collagen	Multifilament with a monofilament appearance	Short
ures	KRUUSE Monofast	Polyglycolide	Monofilament	Medium
le sut	KRUUSE Sacryl	Polyglactine 910	Multifilament, coated	Medium
Absorbable sutures	KRUUSE Sacryl Plus, antibacterial	Polyglactine 910	Multifilament, coated	Medium
	KRUUSE PGA	Polyglycolic acid	Multifilament, coated	Medium
	KRUUSE Chromic Catgut	Chrome-treated natural purified collagen	Multifilament with a monofilament appearance	Medium
	KRUUSE PD-X	Polydioxanone	Monofilament	Long
res	KRUUSE Promilene	Polypropylene	Monofilament	
e sutu	KRUUSE Krupramid	Polyamide	Pseudo-monofilament	
orbabl	KRUUSE Nylon	Polyamide	Monofilament	
Non- absorbable sutures	KRUUSE Silk	Silk	Multifilament, braided and coated	
No	KRUUSE Linen	Linen based on cellulose	Multifilament, braided and coated	

Suture materials for veterinary surgery

		Chemical composition	Physical features	Absorption time
	KRUUSE Sacryl Rapid	Polyglactine 910	Multifilament, coated	Short
	KRUUSE Catgut	Natural purified collagen	Multifilament with a monofilament appearance	Short
	KRUUSE Monofast			Medium
res	KRUUSE Sacryl	Polyglactine 910	Multifilament, coated	Medium
Absorbable sutures	KRUUSE Sacryl Plus, antibacterial	Polyglactine 910	Multifilament, coated	Medium
sorbak	KRUUSE PGA	Polyglycolic acid	Multifilament, coated	Medium
Ab	KRUUSE Chromic Catgut	Chrome-treated natural purified collagen	Multifilament with a monofilament appearance	Medium
	KRUUSE PD-X	Polydioxanone	Monofilament	Long
	KRUUSE PD-X PLUS	Polydioxanone	Monofilament	Long
	KRUUSE Promilene	Polypropylene	Monofilament	
ures	KRUUSE Krupramid	Polyamide	Pseudo-monofilament	
sorbable sutures	KRUUSE Nylon			
	KRUUSE Silk	Silk	Multifilament, braided and coated	
Non- absorba	KRUUSE Dermafil	Polyester	Multifilament, braided and coated	
Z	KRUUSE Linen	Linen based on cellulose	Multifilament, braided and coated	



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 150902 - White

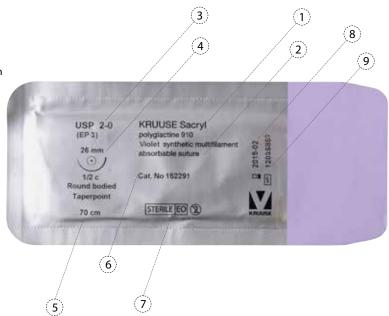




Packaging

Package labelling

- 1) Product name
- 2) Chemical composition and suture description
- 3) Suture size
- 4) Needle characteristics
- 5) Suture length
- 6) Catalogue number
- 7) Sterilization method, 2 = do not re-sterilize and use again
- 8) Expiry date: year and month
- 9) Batch number
- 10) Box of 18 peel packs







Peel Pack



User friendly dispensing of end opening peel packs



Easy to identify suture and needle



Easy opening of the peel pack



Sterile inner card with clear product information



Direct access to needle on the inner card



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.

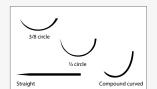
Please note that Catgut and Chromic Catgut have different USPs than the rest of the sutures. These follow the international standards in Catgut sutures.

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



Needles

All needles are high quality stainless steel from a highly recommended Japanese supplier. 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, $\frac{1}{2}$ circle, compound curve or straight. Most of our $\frac{1}{2}$ circle needles are round bodied and most of the $\frac{3}{8}$ 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 KRUUSE 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

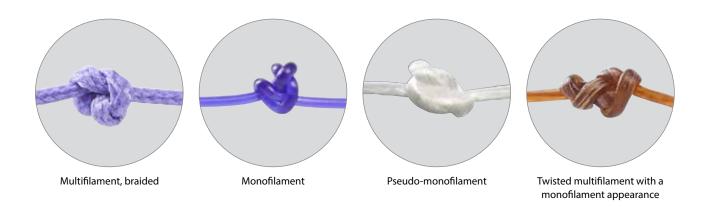
A round bodied needle with a cutting point; this needle gives good and easy penetration in tough tissues with little tissue trauma.



Suture range for veterinary surgery

		Chemical composition	Physical features	Colour
	KRUUSE Sacryl Rapid	Polyglactine 910	Multifilament, coated	Undyed
ures	KRUUSE Catgut	Natural purified collagen	Multifilament with a monofila- ment appearance	Natural
	KRUUSE Monofast	Polyglycolide	Monofilament	Violet and undyed
	KRUUSE Sacryl	Polyglactine 910	Multifilament, coated	Violet and undyed
Absorbable sutures	KRUUSE Sacryl Plus, antibacterial	Polyglactine 910	Multifilament, coated	Violet and undyed
sorbal	KRUUSE PGA	Polyglycolic acid	Multifilament, coated	Violet
Abs	KRUUSE Chromic Catgut	Chrome-treated natural purified collagen	Multifilament with a monofilament appearance	Natural
	KRUUSE PD-X	Polydioxanone	Monofilament	Violet
	KRUUSE PD-X PLUS	Polydioxanone	Monofilament	Violet

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





Remain	ing 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
50 %				63 days	Cassette
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
	65 %	35 %		60-90 days	Peel pack/cassette
	50 %			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

			l –			1 -
Indications	KRUUSE Sacryl Rapid	KRUUSE Catgut	KRUUSE Monofast	KRUUSE Sacryl	KRUUSE Sacryl Plus	KRUUSE PGA
Abdominal wall	, ,	J		x		X
Cardivascular surgery						
Conjunctiva	X					
Dental surgery						
Episiotomies	X					
Fascia				х	х	х
Gl surgery			х	х	х	х
Gynaecology				х		x
Hernias						
Intracutaneous			x			
Joint capsulas				x	x	
Ligaments		х				
Ligation ovarian vessels		х				
Muscles				x	x	x
Neuro surgery						
Ophtalmic surgery				х		х
Oral surgery	X		x			
Orthopeadics						
Skin closure						
Subcutaneous	x	X	x	x	x	x
Tendon repair						
Tonsillectomy						
Urological surgery			x			
Uterus		X		x	x	x
Vascular surgery				x	x	



KRUUSE Chromic Catgut	KRUUSE PD-X	KRUUSE Promilene	KRUUSE Krupramid	KRUUSE Nylon	KRUUSE Silk	KRUUSE Dermafil	KRUUSE Linen
cinoniae catgat	X	Tronniene	Тартанна	, injien	Sint	Berman	Emen
		x	х	х	x		
					х		
	х						
	x						
	X						X
X	X						
Х							
		X	X	x	X		
		X	X	x	X		
					X		
	х						
		x	x	x		x	
х							
	х						
							х
Х							
	X	X	X	X	X		
							/



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 3-0
- EP 1 to 2

Sterilization method:

• EO

Packing:

Boxes of 18 peel packs





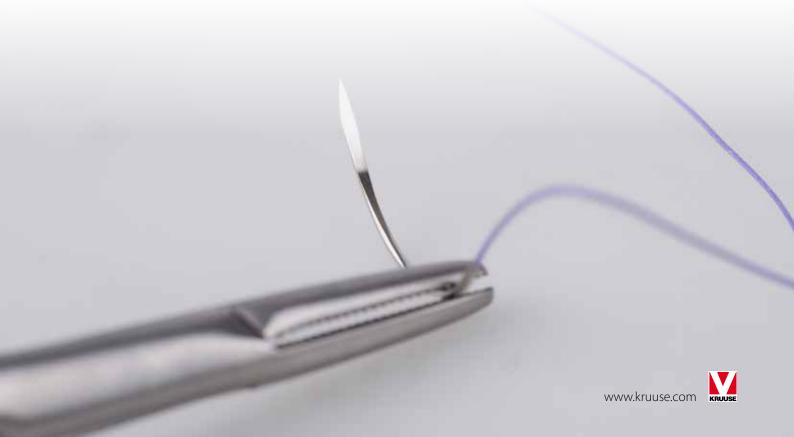




KRUUSE Sacryl Rapid

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
	19	5-0	1	45	Undyed	18	152352
11 mm	19	4-0	1.5	45	Undyed	18	152351
24 mm	19	3-0	2	70	Undyed	18	152354
26 mm	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	152353
16 mm	16	3-0	2	70	Undyed	18	152355

For more information visit: www.kruuse.com





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 (e-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
- Gl-surgery
- · Urological surgery
- · Suturing of oral cavity mucosa

Contraindications:

Where prolonged support from suturing is required

Range:

- USP 5-0 to 1
- EP 1 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
3/8 circle, reverse cutting	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 mm	13	4-0	1.5	45	Violet	18	152240
16 mm	16	4-0	1.5	45	Violet	18	152241
19 mm	16	4-0	1.5	45	Undyed	18	152216
24 mm	19	4-0	1.5	45	Undyed	18	152233
26 mm	19	4-0	1.5	70	Undyed	18	152234
30 mm	19	4-0	1.5	70	Violet	18	152242
36 mm	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
	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

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
Compound curve, round bodied, tapercut	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	Undyed	18	152232
17 mm	26	2-0	3	70	Violet	18	152224
24 mm	26	3-0	2	70	Violet	18	152227
30 mm	30	0	3.5	70	Violet	18	152221
36 mm	36	1	4	70	Violet	18	152245
1/2 circle, taperpoint extra	17	3-0	2	70	Violet	18	152213
	22	4-0	1.5	70	Violet	18	152102
17 mm	22	3-0	2	70	Violet	18	152100
26 mm	26	3-0	2	70	Violet	18	152215
	26	2-0	3	70	Violet	18	152212
1/2 circle, round bodied, tapercut	26	3-0	2	70	Undyed	18	152214



For more information visit: www.kruuse.com





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 Polyglactin 910.

Polyglactin 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 Polyglactin 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
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
▼ /	16	6-0	0.7	45	Violet	18	152315
11 mm	16	6-0	0.7	70	Violet	18	152312
13 mm	16	5-0	1	45	Violet	18	152310
16 mm	19	5-0	1	45	Violet	18	152309
19 mm	19	4-0	1.5	45	Violet	18	152553
22 mm	19	4-0	1.5	70	Violet	18	152303
24 mm	19	3-0	2	45	Violet	18	152300
26 mm	19	3-0	2	70	Violet	18	152297
	22	6-0	0.7	45	Violet	18	152311
30 mm	22	5-0	1	45	Violet	18	152308
36 mm	24	4-0	1.5	70	Violet	18	152304
	24	3-0	3	70	Violet	18	152296
	24	2-0	3	70	Violet	18	152290
	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	1	4	70	Violet	18	152286
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
24 mm 30 mm	36	0	3.5	70	Violet	18	152283
	40	0	3.5	70	Violet	18	152284
36 mm	48	0	3.5	70	Violet	18	152285
40 mm	48	1	4	70	Violet	18	152288
48 mm	48	2	5	90	Violet	18	152289

KRUUSE Sacryl

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
A /	16	3-0	2	70	Violet	18	152561
16 mm	19	3-0	2	70	Undyed	18	152576
19 mm	26	3-0	2	70	Undyed	18	152560
26 mm	26	2-0	3	70	Undyed	18	152564
3/8 circle, round bodied, taperpoint	9	6-0	0.7	30	Violet	18	152575
13 mm	13	4-0	1.5	70	Violet	18	152573
1/2 circle, round bodied, taperpoint	22	3-0	2	70	Violet	18	152298
	24	4-0	1.5	70	Violet	18	152305
<u></u>	26	3-0	2	70	Violet	18	152299
	26	2-0	3	70	Violet	18	152291
22 mm	30	2-0	3	70	Violet	18	152322
26 mm	30	0	3.5	70	Violet	18	152281
30 mm	36	2-0	3	70	Violet	18	152317
36 mm	36	2-0	3	45	Violet	18	152293
	36	0	3.5	70	Violet	18	152323
40 mm	36	1	4	70	Violet	18	152287
48 mm	40	1	4	90	Violet	18	152324
65 mm	48	2	5	90	Violet	18	152316
	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
13 mm	19	4-0	1.5	70	Violet	18	152554
17 mm	30	3-0	2	70	Violet	18	152563
19 mm	30	2-0	3	70	Violet	18	152566
36 mm	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	4-0	1.5	70	Undyed	18	152556
16 mm	16	3-0	2	70	Undyed	18	152562
1/2 circle, round bodied, tapercut	26	3-0	2	70	Violet	18	152558
1	26	2-0	3	70	Violet	18	152326
	30	2-0	3	70	Violet	18	152327
	30	0	3.5	70	Violet	18	152569
26 mm	30	1	4	70	Violet	18	152570
30 mm	36	2-0	3	70	Violet	18	152568
40 mm	36	2-0	3	90	Violet	18	152574
	36	0	3.5	70	Violet	18	152328
65 mm	40	2-0	3	70	Undyed	18	152319
	40	0	3.5	70	Undyed	18	152320
	40	1	4	90	Violet	18	152329
	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 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
3/8 circle, reverse cutting	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 mm	19	3-0	2	70	Violet	18	152333
30 mm	19	2-0	3	70	Violet	18	152340
36 mm	24	3-0	2	70	Undyed	18	152337
48 mm	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
1/2 circle, round bodied, tapercut	26	3-0	2	70	Violet	18	152343
26 mm	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:

- 65 % remains after 14 days
- 35 % 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
- · Gl-surgery
- Ophthalmic surgery

Contraindications:

Where permanent support is required

Range:

- USP 4-0 to 2
- EP 1.5 to 5

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
3/8 circle, reverse cutting	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
24 mm	26	2-0	3	70	Violet	18	152404
30 mm	30	0	3.5	70	Violet	18	152401
36 mm	30	0	3.5	90	Violet	18	152412
	30	1	4	90	Violet	18	152413
	36	1	4	70	Violet	18	152402
	36	2	5	90	Violet	18	152414
1/2 circle, round bodied, taperpoint	19	4-0	1.5	70	Violet	18	152416
\odot	24	4-0	1.5	70	Violet	18	152407
	26	3-0	2	70	Violet	18	152405
24 mm	26	2-0	3	70	Violet	18	152403
30 mm	30	0	3.5	70	Violet	18	152400
36 mm	30	0	3.5	90	Violet	18	152409
	30	1	4	90	Violet	18	152410
	36	2	5	90	Violet	18	152411



KRUUSE Chromic Catgut

Twisted multifilament with a monofilament appearance:

For secure knot tying and easy handling **Coated:** Chromic coating for prolonged absorption time **Absorbable:** By hydrolysis

KRUUSE Chromic Catgut, an absorbable suture, is obtained by longitudinally slitting the submucosa of bovine intestine, twisting the ribbons and joining them in wet condition to give a monofilament finish. The rate of absorption is slowed down by treatment with chromic salt solution.

Absorption is faster in infected tissue and in tissues with increased levels of proteolytic enzymes (stomach, cervix, vagina).

Absorption: Absorbable:

- Complete mass absorption in approximately 90 days
- Absorption by hydrolysis and enzymatic proteolysis

Chemical composition:

- Chrome-treated natural purified collagen
- Obtained by longitudinally slitting the submucosa of bovine intestine, twisting the ribbons and joining them in wet condition to give a monofilament finish
- Treated with chromium salt solution

Tensile Strength:

- 50 % remains after 14 days
- Complete mass absorption in approximately 90 days

Colour:

Natural

Indications:

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

- Subcutaneous tissue
- Uterus
- Ligation of ovarian vessels and ligaments

Contraindications:

Where longer or permanent support is required

Range:

- USP 4-0 to 1
- EP 2 to 5

Sterilization method:

Gamma radiation

Packing:

- 18 peel packs per box
- Cassettes







KRUUSE Chromic Catgut

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
3/8 circle, reverse cutting	16	4-0	2	70	Natural	18	152210
	24	4-0	2	70	Natural	18	152208
16 mm	26	3-0	3	70	Natural	18	152206
24 mm	26	2-0	3.5	70	Natural	18	152204
30 mm	30	0	4	70	Natural	18	152200
36 mm	36	1	5	70	Natural	18	152202
3/8 circle, round bodied taperpoint 80 mm Not size 1:1	80	3	7	120	Natural	18	152438
1/2 circle, round bodied, taperpoint	24	4-0	2	70	Natural	18	152209
	26	3-0	3	70	Natural	18	152207
24 mm	26	2-0	3.5	70	Natural	18	152205
26 mm	30	0	4	70	Natural	18	152201
36 mm	36	1	5	70	Natural	18	152203
80 mm Not size 1:1	80	3	7	120	Natural	18	152437

KRUUSE Chromic Catgut without needle

USP	EP	Length in cm	Length in cm Suture colour		Cat. No
4-0	2	100	Natural	18	152449
3	7	120	Natural	12	152439





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
- Gl-surgery
- Fascia and ligaments
- Tendon repair
- Hernias
- Orthopaedics
- · 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 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	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
\	26	3-0	2	45	Violet	18	152591
19 mm	26	3-0	2	70	Violet	18	152260
26 mm	26	2-0	3	70	Violet	18	152255
30 mm	30	0	3.5	70	Violet	18	152250
36 mm	36	1	4	70	Violet	18	152253
1/2 circle, reverse cutting	30	0	3.5	70	Violet	18	152250
	36	2-0	3	70	Violet	18	152259
30 mm	36	0	3.5	70	Violet	18	152252
36 mm	36	1	4	70	Violet	18	152270
40 mm	40	2	5	70	Violet	18	152254
3/8 circle, conventional cutting	26	3-0	2	70	Violet	18	152249
26 mm	36	2-0	3	70	Violet	18	152279
Straight, trocar point	45	0	3.5	45	Violet	18	152276
Δ	45	1	4	45	Violet	18	152277
	45	2	5	45	Violet	18	152278
1/2 circle, round bodied, taperpoint	19	4-0	1.5	45	Violet	18	152272
	24	4-0	1.5	70	Violet	18	152266
	26	3-0	2	70	Violet	18	152263
19 mm	26	2-0	3	70	Violet	18	152256
24 HIIII	26	0	3.5	70	Violet	18	152274
30 mm	30	0	3.5	70	Violet	18	152251
36 mm	36	1	4	70	Violet	18	152273

KRUUSE PD-X

Shape of needle	Needle length mm	USP	EP	Length in cm	Suture colour	Number per box	Cat. No
1/2 circle, taperpoint extra	19	3-0	2	70	Violet	18	152590
19 mm	30	2-0	3	70	Violet	18	152592
1/2 circle, round bodied, tapercut	26	3-0	2	70	Violet	18	152262
	26	2-0	3	70	Violet	18	152257
26 mm	30	0	3.5	70	Violet	18	152271
30 mm	36	2-0	3	70	Violet	18	152593
40 mm	36	0	3.5	70	Violet	18	152594
	40	0	3.5	90	Violet	18	152275



KRUUSE PD-X PLUS

 $\textbf{Monofilament:} \ For \ smooth \ passage \ through \ tissue \ and \ high \ tissue$

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
- Gl-surgery
- · Fascia and ligaments
- · Tendon repair
- Hernias
- Orthopaedics
- Vascular surgery

Contraindications:

· Where permanent support is required

Range:

- USP 4-0 to 2
- EP 1.5 to 5

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
1/2 circle, round bodied tapercut							
	26	3-0	2	70	Violet	18	152710
26 mm	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

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 4-0 to 2
- EP 1.5 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
3/8 circle, reverse cutting	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
19 mm	26	3-0	2	70	Blue	18	152364
26 mm	26	2-0	3	70	Blue	18	152362
30 mm	30	3-0	2	70	Blue	18	152365
48 mm	30	0	3.5	70	Blue	18	152360
	36	2-0	3	70	Blue	18	152363
	36	1	4	70	Blue	18	152361
	48	2	5	90	Blue	18	152369
Straight, trocar point	45	2-0	3	45	Blue	18	152530
A	45	0	3.5	45	Blue	18	152531
	45	1	4	45	Blue	18	152532
	45	2	5	45	Blue	18	152533





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 3-0 to 1
- EP 2 to 4

Sterilization method:

• EO

- 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
3/8 circle, reverse cutting	19	3-0	2	45	Black	18	152399
	24	3-0	2	45	Black	18	152398
* /	24	2-0	3	45	Black	18	152395
19 mm	26	3-0	2	70	White	18	152392
26 mm	26	2-0	3	70	White	18	152391
30 mm	30	3-0	2	45	Black	18	152397
39 mm	30	2-0	3	45	Black	18	152394
	30	0	3.5	70	White	18	152390
	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





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 4-0 to 1
- EP 1.5 to 4

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
3/8 circle, reverse cutting	19	4-0	1.5	45	Blue	18	152030
	19	3-0	2	45	Blue	18	152031
~	24	4-0	1.5	70	Blue	18	152425
19 mm	24	0	3.5	70	Blue	18	152420
24 mm 26 mm	26	3-0	2	70	Blue	18	152424
30 mm	26	2-0	3	70	Blue	18	152423
36 mm	30	2-0	3	90	Blue	18	152429
45 mm	30	0	3.5	70	Blue	18	152421
	36	1	4	70	Blue	18	152422
	45	2-0	3	90	Blue	18	152032
1/2 circle, reverse cutting	40	0	3.5	90	Blue	18	152426
40 mm 48 mm	48	1	4	90	Blue	18	152427
3/8 circle, conventional cutting	90	2	5	90	Blue	18	152428
Straight cutting Not size 1:1	55	2-0	3	90	Blue	18	152419



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

- 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
3/8 circle, reverse cutting	24	4-0	1.5	70	Black	18	152383
V	26	3-0	2	70	Black	18	152382
24 mm	26	2-0	3	70	Black	18	152381
30 mm	30	0	3.5	70	Black	18	152380



Cat. No 150902 - White







KRUUSE Catgut Plain

Twisted multifilament with a monofilament appearance: For secure knot tying and easy handling **Absorbable:** By hydrolysis

KRUUSE Catgut, an absorbable suture, is obtained by longitudinally slitting the submucosa of bovine intestine, twisting the ribbons and joining them in wet condition to give a monofilament finish.

Absorption is faster in infected tissue and in tissues with increased levels of proteolytic enzymes (stomach, cervix, vagina).

Absorption: Absorbable:

- Complete mass absorption in approximately 63 days
- Absorption by hydrolysis and enzymatic proteolysis

Chemical composition:

- Natural purified collagen
- Obtained by longitudinally slitting the sub mucosa of bovine intestine, twisting the ribbons and joining them in wet condition to give a monofilament finish

Tensile Strength:

- 50 % remains after 7 days
- Complete mass absorption in approximately 63 days

Colour:

Natural

Indications:

KRUUSE Catgut sutures are indicated for soft tissue approximation and ligation, where absorbable sutures are indicated, including: $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left(\frac{$

- Subcutaneous tissue
- Uterus
- · Ligation of ovarian vessels and ligaments

Contraindications:

· Where longer or permanent support is required

Range:

- USP 0 to 6
- EP 4 to 10

Sterilization method:

Gamma radiation

Packing:

Cassettes





KRUUSE Catgut Plain

USP	EP	Length in m	Suture colour	Cat. No
0	4	100	natural	152430
1	5	75	natural	152431
2	6	50	natural	152432
3	7	50	natural	152433
4	8	30	natural	152434
5	9	30	natural	152435
6	10	30	natural	152436



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:

- 65 % remains after 14 days
- 35 % 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
- Gl-surgery
- · Ophthalmic surgery

Contraindications:

Where permanent support is required

Range:

- USP 3-0 to 3+4
- EP 2 to 6

Sterilization method:

• EO

- 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

NB. Expires 3 month after opening of foil pouch



KRUUSE Chromic Catgut

Twisted multifilament with a monofilament appearance: For secure knot tying and easy handling

Coated: Chromic coating for prolonged absorption time **Absorbable:** By hydrolysis

KRUUSE Chromic Catgut, an absorbable suture, is obtained by longitudinally slitting the submucosa of bovine intestine, twisting the ribbons and joining them in wet condition to give a monofilament finish. The rate of absorption is slowed down by treatment with chromic salt solution.

Absorption is faster in infected tissue and in tissues with increased levels of proteolytic enzymes (stomach, cervix, vagina).

Absorption: Absorbable:

- Complete mass absorption in approximately 90 days
- Absorption by hydrolysis and enzymatic proteolysis

Chemical composition:

- Chrome-treated natural purified collagen
- Obtained by longitudinally slitting the submucosa of bovine intestine, twisting the ribbons and joining them in wet condition to give a monofilament finish
- Treated with chromium salt solution

Tensile Strength:

- 50 % remains after 14 days
- Complete mass absorption in approximately 90 days

Colour:

Natural

Indications:

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

- Subcutaneous tissue
- Uterus
- Ligation of ovarian vessels and ligaments

Contraindications:

• Where longer or permanent support is required

Range:

- USP 3-0 to 5
- EP 3 to 9

Sterilization method:

Gamma radiation

- Boxes of 18 peel packs
- Cassettes





KRUUSE Chromic Catgut

USP	EP	Length in m	Suture colour	Cat. No
3-0	3	100	natural	152445
2-0	3.5	100	natural	152443
0	4	100	natural	152440
1	5	75	natural	152441
2	6	50	natural	152442
3	7	50	natural	152444
4	8	30	natural	152446
5	9	30	natural	152447



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, KR地场野座PD+xitial和SSPFIDFEed 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
- Gl-surgery
- · Fascia and ligaments
- Tendon repair
- Hernias
- Orthopaedics
- · Vascular surgery

Contraindications:

Where permanent support is required

Range:

- USP 3-0 to 2-0
- EP 2 to 3

Sterilization method:

EO

Packing:

• Boxes of 18 peel packs





KRUUSE PD-X

USP	EP	Length in m	Suture colour	Cat. No
3-0	2	15	Violet	152700
3-0	2	25	Violet	152702
2-0	3	15	Violet	152701
2-0	3	25	Violet	152703



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 3-0 to 3+4
- EP 2 to 6

Sterilization method:

EO

- 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



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

- 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 2
- EP 1.5 to 5

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:

- Gl-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 - SPRING EYE, 10/pk

Stainless steel suture needles in supreme quality regarding both strength and sharpness.

All reverse cutting needles are cutting PRIME quality which is gold standard when it comes to skin closure – the PRIME quality makes the suturing more accurate. PRIME needles are also first choice amongst human surgeons.

Round bodied needles with a taper point edge is the preferred needle type in soft tissue such as intestines, bladder and stomach.



Spring eye

Cat. No	Shape	Length, mm	Symbol
152630	3/8 Circle, Reverse cutting	17 mm	
152631	3/8 Circle, Reverse cutting	21 mm	
152632	3/8 Circle, Reverse cutting	25 mm	
152633	3/8 Circle, Reverse cutting	29 mm	<u>a</u>
152634	3/8 Circle, Reverse cutting	41 mm	3/8 Circle
152635	3/8 Circle, Reverse cutting	45 mm	3/8 Circle
152636	3/8 Circle, Reverse cutting	49 mm	
152637	3/8 Circle, Reverse cutting	61 mm	
152638	3/8 Circle, Reverse cutting	89 mm	
152640	3/8 Circle, Round Body, Taper point	18 mm	
152641	3/8 Circle, Round Body, Taper point	23 mm	
152642	3/8 Circle, Round Body, Taper point	28 mm	3/8 Circle
152646	½ Circle, Reverse cutting	29 mm	_
152647	½ Circle, Reverse cutting	41 mm	
152648	½ Circle, Reverse cutting	69 mm	1/2 Circle
152650	½ Circle, Round Body, Taper point	23 mm	
152651	½ Circle, Round Body, Taper point	28 mm	A
152652	½ Circle, Round Body, Taper point	38 mm	
152653	½ Circle, Round Body, Taper point	48 mm	1/2 Circle
152654	½ Circle, Round Body, Taper point	53 mm	
			A \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
152657	½ Circle, Round Body, Taper cut	23 mm	1/2 Circle
			172 CIICIC
152660	Straight, Cutting	75 mm	▼



KRUUSE SUTURE NEEDLES - REGULAR EYE, 10/pk



Regular eye

Cat. No	Shape	Length, mm	Symbol	
152600	3/8 Circle, Reverse cutting	17 mm		
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	3/8 Circle	
152605	3/8 Circle, Reverse cutting	49 mm	3/8 Circle	
152606	3/8 Circle, Reverse cutting	61 mm	S/o circle	
152607	3/8 Circle, Reverse cutting	89 mm (diam 1.1 mm)		
152608	3/8 Circle, Reverse cutting	89 mm (diam 1.6 mm)		
152625	3/8 Circle, Round Body, Taper point	28 mm	3/8 Circle	
152610	½ Circle, Round Body, Taper point	23 mm		
152611	½ Circle, Round Body, Taper point	28 mm	1	
152612	½ Circle, Round Body, Taper point	38 mm		
152613	½ Circle, Round Body, Taper point	48 mm	125	
152614	½ Circle, Round Body, Taper point	53 mm	1/2 Circle	
152615	½ Circle, Round Body, Taper point	68 mm		
152620	½ Circle, Reverse cutting	41mm		
152621	½ Circle, Reverse cutting	49 mm		
152622	½ Circle, Reverse cutting	69 mm	1/2 Circle	
152617	½ Circle, Round Body, Taper cut	23 mm	1/2 Circle	
152627	Straight, Cutting	60 mm	~	
152628	Straight, Cutting	90 mm		



Needle holders

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 cm151755 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



