VMG Vitrex Medical Group

Vet care

Surgical Sutures, Diagnostics and Medical Devices

VMG vet
by Vitrex Medical Group

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Surgical sutures

Guideline for selecting suture in small animal surgery

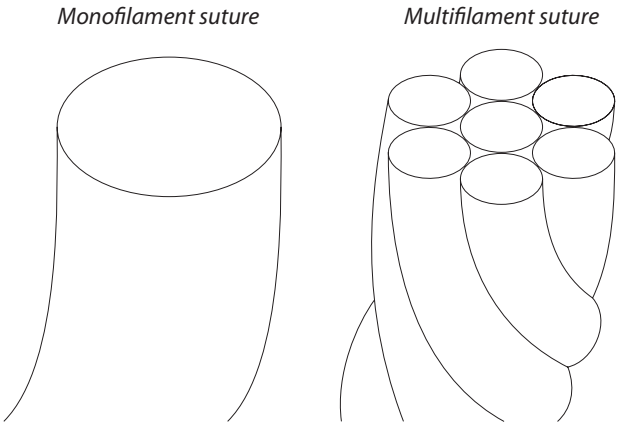
The operators choice of suture is most often based on their many years of experience or recommendations from colleagues or universities. It is advisable to critically evaluate the contents of one's surgical inventory, particularly the available sutures. This is not only due to the continuous development of suture types over the years, but also because a streamlined selection of products can offer significant economic benefits.

The list of our sutures provides an overview of their properties and indications. Here, you can also benefit from our guidance on suture selection and knotting techniques. These recommendations are based on textbooks in small animal surgery as well as the clinical experience of Dr. med. vet. ECVS Daniel Koch, specialist in small animal referral surgery, and Dr. med. vet. Dipl. ECVO Marianne Richter, veterinary surgeon specialized in ophthalmology.

Surgical Sutures by fiber structure

Surgical sutures are divided into two main categories based on the structure of the fibers: monofilament and multifilament. Monofilament fibers are made of a single continuous strand. The single-strand structure provides a smooth surface, which minimizes tissue drag and trauma during insertion and removal. Monofilament sutures are less prone to harbor bacteria. Multifilament sutures consist of several strands twisted or braided together. It provides greater flexibility and pliability. The flexibility and knot security allow for more effective tissue approximation. All mono- or multifilament sutures can be used with many tissues. When using monofilament suture material, two additional loops have to be made on the knots to secure them.

Fig. 1:
Suture structure



Thread diameter

All suture packagings show two measuring units for the thread diameter. The American measurement USP (United States Pharmacopeia) and the European metric unit EP (European Pharmacopeia). An EP unit corresponds to 0.1 mm.

EP metric	USP	Effective diameter in mm
0.7	6/0	0.07-0.09
1	5/0	0.10-0.14
1.5	4/0	0.15-0.19
2	3/0	0.20-0.29
2,5	–	–
3	2/0	0.30-0.34
3.5	0	0.35-0.39
4	1	0.40-0.49
5	2	0.50-0.59
6	3+4	0.60-0.69
7	5	0.70-0.79
8	6	0.80-0.89

Absorption and healing time

In principle, tissue should only be supported by a suture until it has healed. However, the suture often remains in place slightly longer as a precaution. This does not apply to skin closure, where a non-absorbable suture is typically used instead. As these sutures can be easily removed, thEYdo not leave visible tissue reactions.

Tissue healing time varies depending on the animal's age and overall health status. The development of wound strength is particularly adversely affected by corticosteroids, cytostatic drugs, certain non-steroidal anti-inflammatories (during the first five days), disinfectants, liver disease, malnutrition or infections.

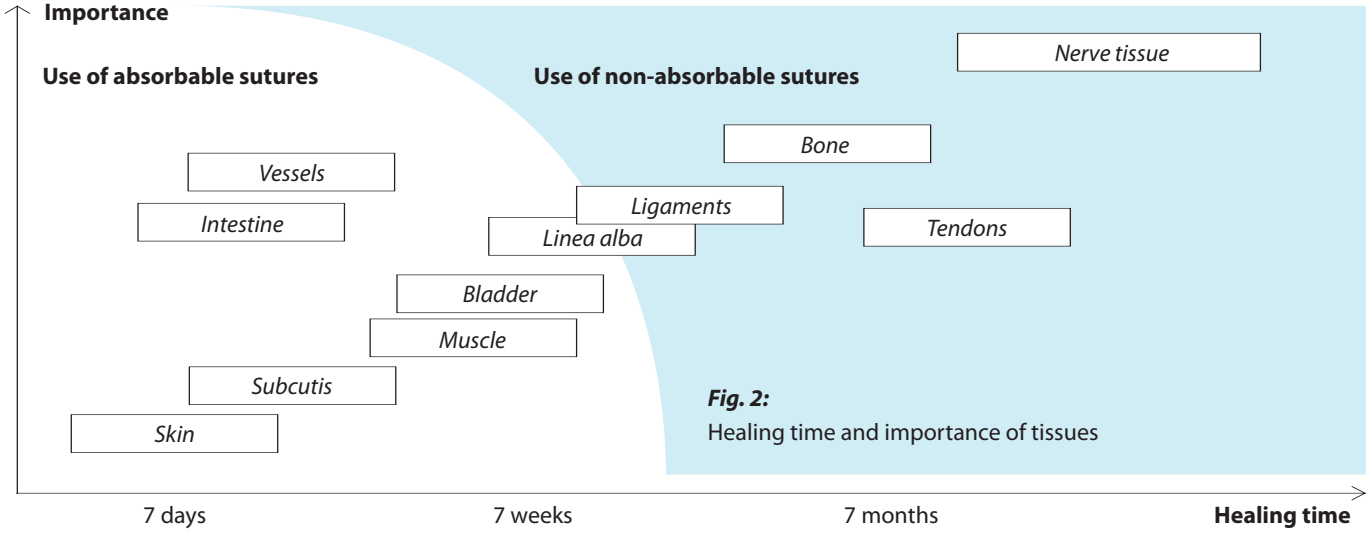


Fig. 2:
Healing time and importance of tissues

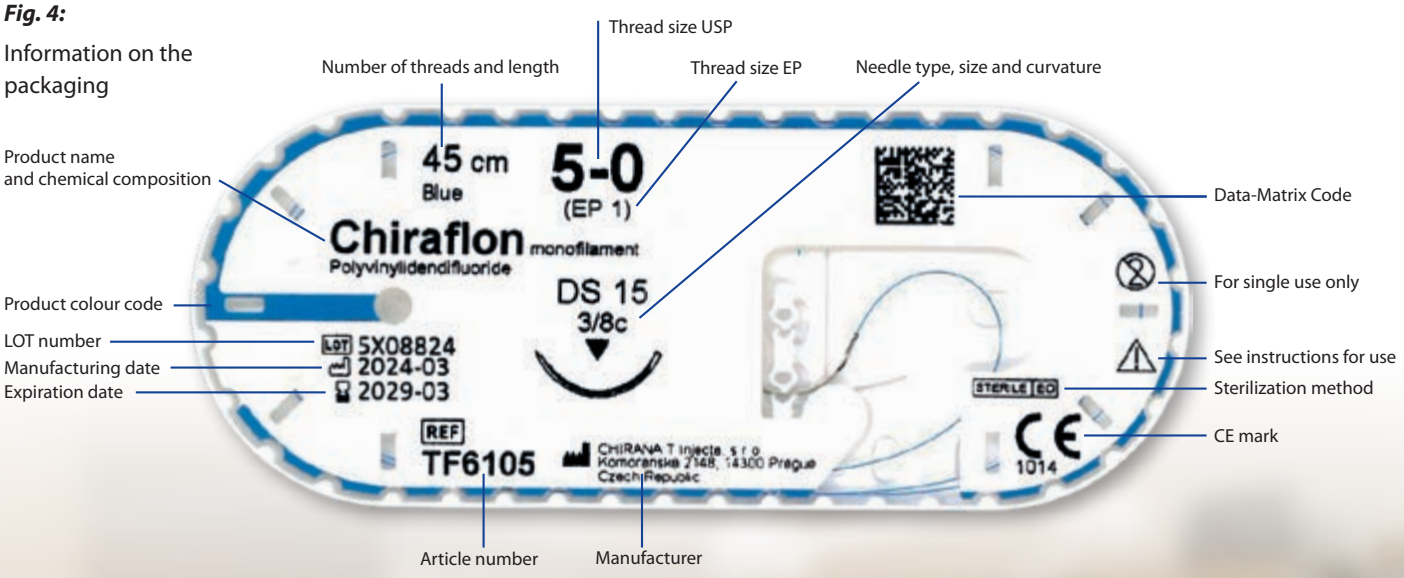
Fig. 3:
Chirmax Surgical Sutures absorption and tensile strength

SUTURES	Strength Retention profile	Tensile Strength	Absorption time
CHIRASORB RAPID BRAIDED	SHORT-TERM HEALING 1 day 100% 5 days 50% 10 - 14 days 0%	12 days	42 days
CHIRLAC RAPID BRAIDED	SHORT-TERM HEALING 1 day 100% 5 days 60% 10 - 14 days 0%	12 days	42 days
MONOLAC MONOFILAMENT	MID-TERM HEALING 1 day 100% 7 days 60% (violet) 50% (natural) 14 days 30% (violet) 20% (natural) 28 days 0%	30 days	90 - 120 days
CHIRASORB BRAIDED	MID-TERM HEALING 1 day 100% 14 days 75% 21 days 50% 30 days 25% 56 - 70 days 0%	35 days	56 - 70 days
CHIRASORB PLUS BRAIDED	MID-TERM HEALING 1 day 100% 14 days 75% 21 days 50% 56 - 70 days 0%	35 days	56 - 70 days
CHIRLAC BRAIDED	MID-TERM HEALING 1 day 100% 14 days 65% - 75% 21 days 45% - 50% 80 - 90 days 0%	28 - 35 days	80 - 90 days
POLYDOX MONOFILAMENT	LONG-TERM HEALING 1 day 100% 45 days 50% 180 - 240 days 0%	90 - 98 days	180 - 240 days

Suture packaging

Fig. 4:

Information on the packaging



We offer high quality Japanese needles made from 300 series stainless steel. Cutting needles feature a cutting needle body and a sharp point, making them ideal for penetrating thick and tough tissues, such as skin, fascia, or the linea alba. Needles with a tapered, non-cutting point (round needles) are particularly suitable for the intestine and bladder, where the trauma caused by suturing must be minimal. In comparison to cutting needles, which create a rounded puncture hole, there is no predetermined direction for tissue tearing with round needles.

The following criteria are likewise important when selecting the right needle: Distance between point of the needle and swage, cross-section of the needle body (round, conventional or reverse cutting, spatulated) and the curvature of the needle. The size of the needle is defined by the animal undergoing surgery and the space available in each case. Standard needle lengths are between 15 and 30 mm. The half-circle needle is a good choice for most indications. The needle is shown in its actual size on all conventional packagings, which also include all the above data characterising the suture.

Fig. 5:
Needle curvatures

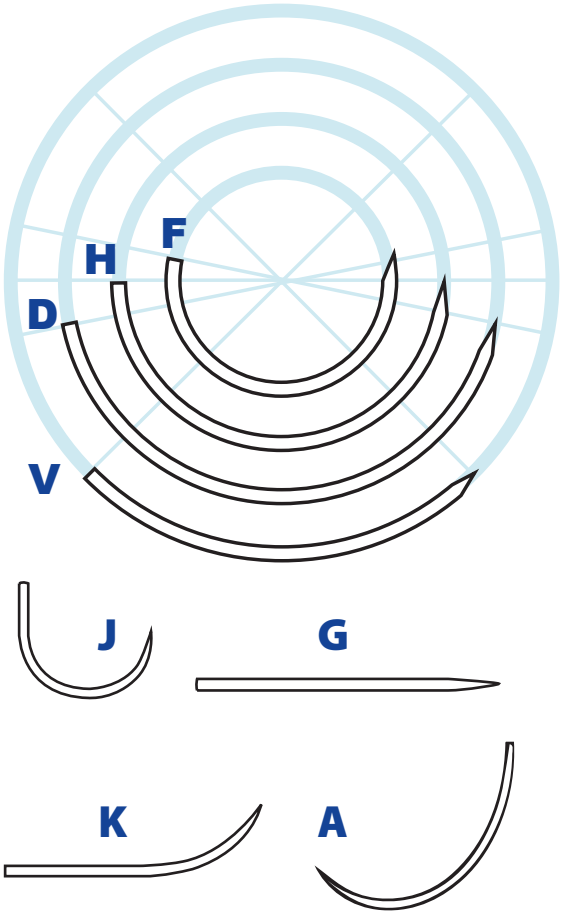
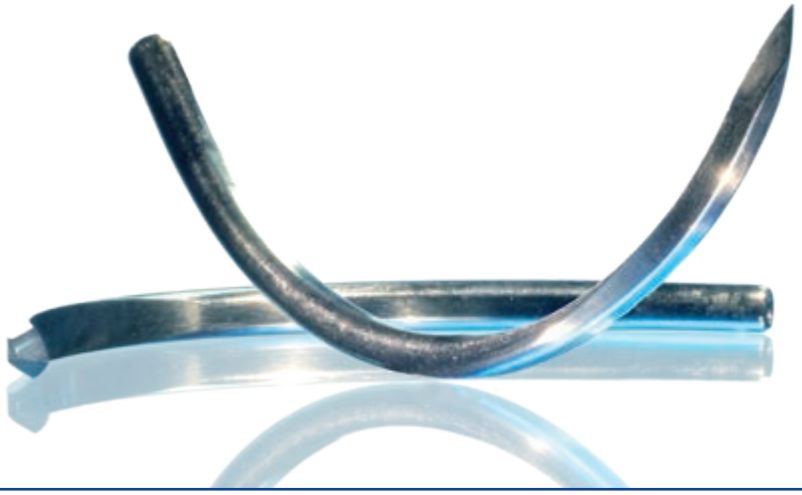


Fig. 6:
Needle types

Needle Curvature	Needle Body	Needle Point	Speciality
V - 1/4	**R** - Round body	**T** - Tapercut	**S** - Slim, rectangular body
H - ½	**S** - Reverse cutting	**N** - Blunt	**A** - Take-off needle
D - 3/8	**SC** - Conventional cutting	**M** - Micropoint	**X** - Extra strong needle
F - 5/8	**LZ** - Spatula	**D** - Diamond	**Black** - Black needle
J - Hook	**RF** - Round, flattened body		
A - Asymmetric			
K - Ski			
G - Straight			



Surgical Sutures Product Range

Absorbable threads

Chirasorb rapid braided

Composition	Colour	Range	Characteristics	Tensile Strength retention
Braided and coated suture made from 90% glycolide and 10% L-lactide. Coated with Copolymer of 30 % glycolide and 70 % lactide, and calcium stearate.	Violet and Natural	6/0 to 2 USP	Absorbable, multifilament, coated, synthetic, high tensile strength, reduced capillary effect	Short-term healing (12 days), 1 Day 100%, 5 Days 50%, 10-14 Days 0%

Chirlac rapid braided

Composition	Colour	Range	Characteristics	Tensile Strength retention
Braided and coated suture made of Polyglycolic acid (PGA). Coated with polycaprolactone and calcium stearate.	Violet and Natural	6/0 to 4 USP	Absorbable, multifilament, coated, synthetic, high tensile strength, reduced capillary effect	Short-term healing (12 days), 1 Day 100%, 5 Days 60%, 10-14 Days 0%

Monolac monofilament

Composition	Colour	Range	Characteristics	Tensile Strength retention
Monofilament suture made of Glycolide and ε–caprolactone.	Violet and Natural	6/0 to 2 USP	Absorbable, monofilament, synthetic, high tensile strength, excellent handling properties	Mid-term healing (30 days), 1 Day 100%, 7 Days 50-60%, 14 Days 20-30%

Chirasorb braided

Composition	Colour	Range	Characteristics	Tensile Strength retention
Braided and coated suture made from 90% glycolide and 10% L-lactide.	Violet and Natural	10/0 to 6 USP	Absorbable, multifilament, coated, synthetic, high tensile strength, reduced capillary effect	Mid-term healing (35 days), 1 Day 100%, 14 Days 75%, 21 Days 50%

Chirasorb Plus braided
Antibacterial

Composition	Colour	Range	Characteristics	Tensile Strength retention
Antibacterial, braided and coated suture made from 90% glycolide, 10% L-lactide and chlorhexidine diacetate. Covered with antibacterial coating. Copolymer glycolide and lactide, calcium stearate and chlorhexidine diacetate.	Violet and Natural	5/0 to 4 USP	Absorbable, multifilament, antibacterial coating, synthetic, high tensile strength, reduced capillary effect,	Mid-term healing (35 days). 1 Day 100%, 14 Days 75%, 21 Days 50%

Chirlac braided

Composition	Colour	Range	Characteristics	Tensile Strength retention
Braided and coated suture made of Polyglycolic acid (PGA). Coated with polycaprolactone and calcium stearate.	Violet and Natural	9/0 to 6 USP	Absorbable, multifilament, coated, synthetic, high tensile strength, reduced capillary effect	Mid-term healing (28 - 35 days). 1 Day 100%, 14 Days 65-75%, 21 Days 45-50%

Polydox monofilament

Composition	Colour	Range	Characteristics	Tensile Strength retention
Monofilament suture made of Poly-p-dioxanone.	Violet	7/0 to 4 USP	Absorbable, monofilament, synthetic, high tensile strength, excellent knotting properties	Long-term healing (90 - 98 days). 1 Day 100%, 45 Days 50%

New

Absorbable threads

Catgut Plain

Composition	Colour	Range	Characteristics
Twisted multifilament sutures made of strands of purified collagen taken from the serosal layer of selected bovines.	Light natural, no Colour added	4/0 to 6 USP	Absorbable, multifilament, twisted structure, excellent handling and knotting properties, high tensile strength. Complete mass absorption in approximately 63 days. Approximately 50% of tensile strength remain after 7 days.

Catgut Chrom

Composition	Colour	Range	Characteristics
Twisted multifilament sutures made of strands of purified collagen taken from the serosal layer of selected bovines.	Dark natural, no Colour added	4/0 to 6 USP	Absorbable, multifilament, twisted structure, excellent handling and knotting properties, high tensile strength. Complete mass absorption in approximately 70 days. Approximately 50% of tensile strength remain after 14 days.

Non-absorbable threads

Chiralen monofilament

Composition	Colour	Range	Characteristics
Monofilament suture made of Polypropylene	Blue and Black	10/0 to 2 USP	Non-absorbable, monofilament, synthetic, no capillary effect, smooth, non-porous surface, suitable for stitches in infected wounds

Silon monofilament

Composition	Colour	Range	Characteristics
Monofilament suture made of Polyamide 6	Blue and Black	10/0 to 2 USP	Non-absorbable, monofilament, synthetic, very smooth, excellent knotting properties, easy to handle, loss of tensile strength after long-term implantation

Tervalon braided

Composition	Colour	Range	Characteristics
Braided and coated suture made of Polyester coated with Filodell (Ethyl Cellulose and pure bees wax)	Green and White	6/0 to 6 USP	Non-absorbable, multifilament, synthetic, high tensile strength, no capillary effect, well tolerated by the tissue, low friction

Silon braided

Composition	Colour	Range	Characteristics
Braided suture made of Polyamide	White and Black	5/0 to 5 USP	Non-absorbable, multifilament, synthetic, high tensile strength, excellent knotting properties, loss of tensile strength after long-term implantation

Silk braided

Composition	Colour	Range	Characteristics
Braided and coated suture made of Silk coated with silicone	Black	9/0 to 5 USP	Non-absorbable, multifilament, synthetic, no capillary effect, loss of tensile strength after long-term implantation

Chirasorb rapid braided

Chirasorb rapid braided is a short-term absorbable, coated, synthetic, multifilament suture made of 90% glycolide and 10% L-lactide. The substances contained in the coating and suture are nonantigenic and noncollagenous. Sterile Chirasorb rapid braided is available in violet and natural. Absorption begins as a loss of tensile strength without appreciable loss of mass. The product elicits a minimal acute inflammatory reaction in tissues. Progressive loss of tensile strength and absorption of Chirasorb rapid braided occurs by hydrolysis, when the polymer is degraded to glycolic and lactic acids, which are subsequently absorbed and metabolised by the body.

Indication: Skin closure (e.g. intracutaneous, subcutaneous), Paediatric surgery, Episiotomies, Circumcision, Closure of oral mucosa and Ophthalmic surgery for conjunctival sutures.

Contraindication: Chirasorb rapid braided should not be used in tissues subject to expansion, stretching or distension, or which might require long-term mechanical support.

Sizes: 6/0 to 2 USP

Structure: Multifilament

Absorption method: Hydrolysis

Strength Retention Profile: SHORT-TERM HEALING (12 days)

1 Day	100%
5 Days	50%
10-14 Days	0%

Mass Absorption profile: 42 days

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
HR 22	1.5	4/0	1 x 75 cm	Violet	LR0261	24
HR 27	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	LR0266 LR0267	24 24
DS: 3/8 circle, reverse cutting needle						
DS 12	1	5/0	1 x 45 cm	Violet	LR0202	24
DS 15	1.5	4/0	1 x 45 cm	Violet	LR0206	24

Chirlac rapid braided

Chirlac rapid braided is a short-term absorbable, coated, synthetic, multifilament suture made of low molecular weight polyglycolic acid. The substances contained in the coating and suture are nonantigenic and noncollagenous. Chirlac rapid braided is available in violet and natural. Progressive loss of tensile strength and absorption of Chirlac rapid braided occurs by hydrolysis, where the polymer degrades to glycolic acid, which is subsequently absorbed and metabolised by the body. Absorption begins as a loss of tensile strength without appreciable loss of mass. The product elicits a minimal acute inflammatory reaction in tissues.

Indication: Gynaecology, Ophthalmic (e.g. conjunctiva), Odontology (e.g. oral mucosa), Paediatric and Skin Closure (e.g. intracutaneous, subcutaneous).

Contraindication: Chirlac rapid braided should not be used in tissues subject to expansion, stretching or distension, or which might require long-term mechanical support longer than seven days. The suture is not for use in cardiovascular or neurological tissues.

Sizes: 6/0 to 4 USP

Structure: Multifilament

Absorption method: Hydrolysis

Strength Retention Profile: SHORT-TERM HEALING (12 days)

1 Day	100%
5 Days	60%
10-14 Days	0%

Mass Absorption profile: 42 days

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
HR 18	1	5/0	1 x 75 cm	Natural	PQ0255	24
DS: 3/8 circle, reverse cutting needle						
DS 12	1	5/0	1 x 45 cm	Violet	PR0202	24
DS 15	1.5	4/0	1 x 45 cm	Violet	PR0206	24
DS 19	1.5 1.5 2	4/0 4/0 3/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Natural Violet	PR0211 PQ1226 PR0212	24 24 24
DS 25	2 2 3	3/0 3/0 2/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Natural Natural	PR0224 PQ0224 PQ0225	24 24 24
DSM: 3/8 circle, reverse cutting needle - micropoint						
DSM19	2	3/0	1 x 75 cm	Natural	PQ0213	24

Monolac monofilament

Monolac monofilament is a mid-term absorbable, synthetic suture made of glycolide and ε-Caprolactone, available in natural colour for the closure of superficial wounds and in violet for all other indications, when a mid-term monofilament is needed. During absorption the material elicited only a very slight inflammation. The material is degraded into adipic acid, which is completely metabolised in the body. The process begins with a loss of tensile strength, followed by a loss of mass at a later stage.

Indication: General soft tissue approximation and/or ligation in all specialties, where an absorbable material is indicated.

Contraindication: Monolac monofilament should not be used in tissues subject to expansion, stretching or distension, or which might require long-term mechanical support.

Sizes: 6/0 to 2 USP

Structure: Monofilament

Absorption method: Hydrolysis

Strength Retention Profile:

MID-TERM HEALING (30 days)

1 Day	100%
7 Days	60% violet/50% natural
14 Days	30% violet/20% natural

Mass Absorption profile: 90 - 120 days

Pre-cut threads

EP	USP	Length	Colour	Article No.	Pcs./Box
4	1	1 x 150 cm	Violet	MV0087	24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
HR 13	1 1.5	5/0 4/0	1 x 75 cm 1 x 75 cm	Violet Violet	MV0252 MV0253	24 24
HR 17	1.5	4/0	1 x 75 cm	Violet	MV0254	24
HR 18	1 1 1.5 1.5 2	5/0 5/0 4/0 4/0 3/0	1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Natural Violet Natural Violet	MV0256 MN0256 MV0257 MN0257 MV0258	24 24 24 24 24
HR 22	1.5 1.5 2	4/0 4/0 3/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Natural Violet	MV0261 MN0261 MV0262	24 24 24
HR 26	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	MV0166 MV0167	24 24
HR 27	1.5 2 3	4/0 3/0 2/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Violet	MV0265 MV0266 MV0267	24 24 24
HR 30	2 2 3 3 3.5	3/0 3/0 2/0 2/0 0	1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Natural Violet Natural Violet	MV0269 MN0272 MV0273 MN0273 MV0274	24 24 24 24 24
HR 40	3.5	0	1 x 75 cm	Violet	MV0276	24
HRT: ½ circle, round body needle - tapercut						
HRT 25	2	3/0	1 x 75 cm	Violet	MV0581	24
HRF: ½ circle, flattened body needle, taper point						
HRF 22	1.5	4/0	1 x 75 cm	Violet	MV9261	24
DR: 3/8 circle, round body needle						
1 x DR 6.5 / 150 µm	0.4	8/0	1 x 15 cm	Violet	MI1240	12

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HS: ½ circle, reverse cutting needle						
HS 18	1.5	4/0	1 x 75 cm	Violet	MV0313	24
HS 25	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	MV0324 MV0325	24 24
HS 36	5	2	1 x 75 cm	Natural	MN0343	24
DS: 3/8 circle, reverse cutting needle						
DS 12	0.7 1 1	6/0 5/0 5/0	1 x 45 cm 1 x 45 cm 1 x 45 cm	Violet Violet Natural	MV0201 MV0202 MN0202	24 24 24
	0.7 1 1	6/0 5/0 5/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Natural	MV0200 MV0203 MN0203	24 24 24
DS 15	1 1.5	5/0 4/0	1 x 45 cm 1 x 45 cm	Violet Violet	MV0205 MV0206	24 24
	1.5	4/0	1 x 75 cm	Natural	MN0209	24
DS 19	1.5 2 2	4/0 3/0 3/0	1 x 45 cm 1 x 45 cm 1 x 45 cm	Violet Violet Violet	MV0215 MV0216 MN0216	24 24 24
	1 1.5 1.5 2 2	5/0 4/0 4/0 3/0 3/0	1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Natural Violet Natural	MV0210 MV0211 MN0211 MV0212 MN0212	24 24 24 24 24
DS 25	2 2 3 3	3/0 3/0 2/0 2/0	1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Natural Violet Natural	MV0223 MN0223 MV0224 MN0224	24 24 24 24
DS 30	2 2 3 3.5	3/0 3/0 2/0 0	1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Natural Violet Violet	MV0227 MN0227 MV0228 MV0229	24 24 24 24
DSM: 3/8 circle, reverse cutting needle - micropoint						
DSM12	0.7 1 1 1.5	6/0 5/0 5/0 4/0	1 x 45 cm 1 x 45 cm 1 x 45 cm 1 x 45 cm	Violet Violet Natural Natural	MV0230 MV0231 MN0231 MN0232	24 24 24 24
DSM15	1.5	4/0	1 x 45 cm	Violet	MV0235	24
DSM25	2	3/0	1 x 75 cm	Violet	MV0242	24

Chirasorb braided

Chirasorb braided is a mid-term absorbable, coated, synthetic, multifilament suture made of 90% glycolide and 10% L-lactide. The substances contained in the coating and suture are nonantigenic and noncollagenous. Sterile Chirasorb braided is available in violet or natural. The product elicits a minimal acute inflammatory reaction in tissues. Progressive loss of tensile strength and absorption of Chirasorb braided occurs by hydrolysis, when the polymer is degraded to glycolic and lactic acids, which are subsequently absorbed and metabolised by the body.

Indication: General soft tissue approximation and/or ligation in all specialties, including use in Ophthalmic surgery.

Contraindication: Chirasorb braided should not be used in tissues subject to expansion, stretching or distension, or which might require long-term mechanical support.

Sizes: 10/0 to 6 USP

Structure: Multifilament

Absorption method: Hydrolysis

Strength Retention Profile: MID-TERM HEALING (35 days)

1 Day	100%
14 Days	75%
21 Days	50%

Mass Absorption profile: 56 - 70 days

Pre-cut threads

EP	USP	Length	Colour	Article No.	Pcs./Box
3	2/0	3 x 45 cm	Violet	LV0015	24
3.5	0	3 x 45 cm	Violet	LV0016	24
4	1	3 x 45 cm	Violet	LV0017	24
3	2/0	2 x 75 cm	Violet	LV0025	24
3	2/0	1 x 150 cm	Violet	LV0085	24
3.5	0	1 x 150 cm	Violet	LV0089	24
5	2	1 x 150 cm	Violet	LV0090	24

Chirapack

EP	USP	Length	Colour	Article No.	Pcs./Box
3	2/0	1 x 250 cm	Violet	LV1005	20
3.5	0	1 x 250 cm	Violet	LV1006	20
4	1	1 x 250 cm	Violet	LV1007	20

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
HR 13	1	5/0	1 x 75 cm	Violet	LV0254	24
HR 16	1	5/0	1 x 75 cm	Violet	LV3265	24
HR 18	1.5	4/0	1 x 45 cm	Violet	LV0258	24
	1.5	4/0	1 x 75 cm	Violet	LV0256	24
HR 20	1.5	4/0	1 x 75 cm	Violet	LV1261	24
HR 22	1.5	4/0	1 x 75 cm	Violet	LV0261	24
	2	3/0	1 x 75 cm	Violet	LV0262	24
HR 26	2	3/0	1 x 75 cm	Violet	LV0535	24
	3	2/0	1 x 75 cm	Violet	LV0536	24
	3.5	0	1 x 75 cm	Violet	LV0540	24
	4	1	1 x 75 cm	Violet	LV0541	24
HR 27	1.5	4/0	1 x 75 cm	Violet	LV0265	24
	2	3/0	1 x 75 cm	Violet	LV0266	24
	3	2/0	1 x 75 cm	Violet	LV0267	24
	3	2/0	1 x 90 cm	Violet	LV0367	24
HR 30	2	3/0	1 x 75 cm	Violet	LV0269	24
	3	2/0	1 x 75 cm	Violet	LV0273	24
	3.5	0	1 x 75 cm	Violet	LV0274	24
	4	1	1 x 75 cm	Violet	LV1275	24
	2	3/0	1 x 90 cm	Violet	LV0369	24
	3	2/0	1 x 90 cm	Violet	LV0364	24
	3.5	0	1 x 90 cm	Violet	LV0371	24
	4	1	1 x 90 cm	Violet	LV0372	24
HR 35	4	1	1 x 75 cm	Violet	LV1273	24
	5	2	1 x 75 cm	Violet	LV1272	24
	3.5	0	1 x 90 cm	Violet	LV0375	24
	4	1	1 x 90 cm	Violet	LV0376	24
HR 37	4	1	1 x 75 cm	Violet	LV0379	24
	3.5	0	1 x 90 cm	Violet	LV0378	24
HR 40	4	1	1 x 90 cm	Violet	LV1477	24
HR 48	4	1	1 x 90 cm	Violet	LV1401	24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HRX: ½ circle, round body needle - extra strong						
HRX 26	2	3/0	1 x 75 cm	Violet	LV0419	24
HRX 27	3	2/0	1 x 75 cm	Violet	LV0430	24
HRX 50	5	2	1 x 90 cm	Violet	LV0396	24
HRT: ½ circle, round body needle - tapercut						
HRT 22	2	3/0	1 x 75 cm	Natural	LN0572	24
HRT 37	3	2/0	1 x 75 cm	Violet	LV0592	24
HS: ½ circle, reverse cutting needle						
HS 25	2 3 3.5	3/0 2/0 0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Violet	LV0441 LV0442 LV0443	24 24 24
HS 37	5	2	1 x 90 cm	Violet	LV0453	24
HS 40	3.5	0	1 x 90 cm	Violet	LV0460	24
HS 48	4 5	1 2	1 x 90 cm 1 x 90 cm	Violet Violet	LV0469 LV0470	24 24
HSX: ½ circle, reverse cutting needle - extra strong						
HSX 26	4	1	1 x 75 cm	Violet	LV1456	24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
DS: 3/8 circle, reverse cutting needle						
DS 12	1	5/0	1 x 45 cm	Violet	LV0202	24
DS 15	0.7	6/0	1 x 45 cm	Violet	LV0200	24
	1	5/0	1 x 45 cm	Violet	LV0205	24
	1.5	4/0	1 x 75 cm	Violet	LV0209	24
DS 19	1.5	4/0	1 x 45 cm	Violet	LV0215	24
	2	3/0	1 x 45 cm	Violet	LV0216	24
	1.5	4/0	1 x 75 cm	Violet	LV0211	24
	2	3/0	1 x 75 cm	Violet	LV0212	24
	3	2/0	1 x 75 cm	Violet	LV0213	24
DS 24	2	3/0	1 x 75 cm	Violet	LV1225	24
DS 25	1.5	4/0	1 x 75 cm	Violet	LV0222	24
	2	3/0	1 x 75 cm	Violet	LV0223	24
	3	2/0	1 x 75 cm	Violet	LV0224	24
	3.5	0	1 x 75 cm	Violet	LV0225	24
	4	1	1 x 75 cm	Violet	LV0226	24
	2	3/0	1 x 90 cm	Violet	LV2223	24
	3	2/0	1 x 90 cm	Violet	LV2224	24
DS 30	2	3/0	1 x 75 cm	Violet	LV0233	24
	3	2/0	1 x 75 cm	Violet	LV0234	24
	3	2/0	1 x 75 cm	Natural	LN1243	24
	3.5	0	1 x 75 cm	Violet	LV0235	24
	3.5	0	1 x 75 cm	Natural	LN1244	24
	3	2/0	1 x 90 cm	Violet	LV1239	24
	3.5	0	1 x 90 cm	Violet	LV1235	24
	4	1	1 x 90 cm	Violet	LV1236	24
DS 37	5	2	1 x 75 cm	Violet	LV1237	24
DS 38	3	2/0	1 x 75 cm	Violet	LV0244	24
	4	1	1 x 75 cm	Violet	LV1246	24

Chirasorb Plus braided

Antibacterial

Chirasorb Plus braided is a mid-term absorbable, antibacterial coated, synthetic, multifilament suture made of 90% glycolide and 10% L-lactide. The braided suture is covered with antibacterial coating, which consists of copolymer glycolide and lactide, calcium stearate and chlorhexidine diacetate. Chlorhexidine is a cationic antiseptic with a wide range of antimicrobial effects. It is effective on both Gram-positive and Gram- negative bacteria; the mechaniSMof action is cytoplasmic membrane disruption. Sterile Chirasorb Plus braided is available in violet or natural. The product elicits a minimal acute inflammatory reaction in tissues. Progressive loss of tensile strength and absorption of Chirasorb Plus braided occurs by hydrolysis, when the polymer is degraded to glycolic and lactic acids, which are subsequently absorbed and metabolised by the body.

Indication: General soft tissue approximation and/or ligation in all specialties.

Contraindication: Chirasorb Plus braided should not be used in tissues subject to expansion, stretching or distension, or which might require long-term mechanical support. Chirasorb Plus braided should not be used in patients with known allergic reactions to Chlorhexidine.

Sizes: 5/0 to 4 USP

Structure: Multifilament

Absorption method: Hydrolysis

Strength Retention Profile: MID-TERM HEALING (35 days)

1 Day	100%
14 Days	75%
21 Days	50%

Mass Absorption profile: 56 - 70 days

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
DS: 3/8 circle, reverse cutting needle						
DS 19	2	3/0	1 x 45 cm	Violet	CV0216	24
	1.5	4/0	1 x 75 cm	Violet	CV0211	24
DS 25	2	3/0	1 x 75 cm	Violet	CV0223	24
	3	2/0	1 x 75 cm	Violet	CV0224	24

Chirlac braided

Chirlac braided is a mid-term absorbable, synthetic, multifilament suture material of extremely high tensile strength made of the homopolymer of hydroacetic acid (glycolic acid). The thread has a homogeneous structure and surface, which gives it low frictional properties and holds firmly without slipping when knotted. Chirlac braided is coated with an absorbable substance, which reduces the capillary effect, provides excellent holding properties and diminishes the tendency to cut into the flesh, while ensuring that the knots hold firmly. Chirlac braided is degraded in the body by a simple hydrolytic process. The degraded products are metabolised completely in the body. Absorption begins as a loss of tensile strength without appreciable loss of mass.

Indication: General soft tissue approximation and/or ligation, for the surgical adaptation of Muscles and Fascia, for suturing of Parenchymal organs, Peripheral nerves, for ligatures of small vessels and for Intradermal suturing.

Contraindication: Chirlac braided should not be used in tissues subject to expansion, stretching or distension, or which might require long-term mechanical support.

Sizes: 9/0 to 6 USP

Structure: Multifilament

Absorption method: Hydrolysis

Strength Retention Profile: MID-TERM HEALING (28 - 35 days)

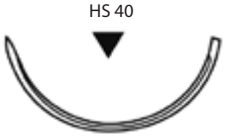
1 Day	100%
14 Days	65% - 75%
21 Days	45% - 50%

Mass Absorption profile: 80 - 90 days

Pre-cut threads

EP	USP	Length	Colour	Article No.	Pcs./Box
2	3/0	1 x 150 cm	Violet	PG0084	24
3	2/0	1 x 150 cm	Violet	PG0085	24
3.5	0	1 x 150 cm	Violet	PG0089	24
4	1	1 x 150 cm	Violet	PG0087	24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
HR 13	0.7	6/0	1 x 45 cm	Violet	PG0251	24
HR 18	1 1.5	5/0 4/0	1 x 75 cm 1 x 75 cm	Violet Violet	PG0242 PG0256	24 24
HR 20	1.5	4/0	1 x 75 cm	Violet	PG1261	24
HR 22	1.5 2 3	4/0 3/0 2/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Violet	PG0261 PG0262 PG0263	24 24 24
2 x HR 22	2	3/0	1 x 90 cm	Violet	PG0533	24
HR 26	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	PG0535 PG0536	24 24
HR 27	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	PG0266 PG0267	24 24
HR 30	3 3.5 4	2/0 0 1	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Violet	PG0273 PG0274 PG1275	24 24 24
HR 35	3	2/0	1 x 75 cm	Violet	PG0271	24
	3 3.5 4	2/0 0 1	1 x 90 cm 1 x 90 cm 1 x 90 cm	Violet Violet Violet	PG0374 PG0375 PG0376	24 24 24
HR 40	3	2/0	1 x 75 cm	Violet	PG0275	24
	3.5	0	1 x 90 cm	Violet	PG1476	24
HR 48	3.5	0	1 x 75 cm	Violet	PG1402	24
	5	2	1 x 90 cm	Violet	PG1399	24
HR 50	3 3.5 4	2/0 0 1	1 x 90 cm 1 x 90 cm 1 x 90 cm	Violet Violet Violet	PG1391 PG1392 PG1393	24 24 24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HRT: ½ circle, round body needle - tapercut						
HRT 25	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	PG0581 PG0582	24 24
HRT 30	3.5	0	1 x 75 cm	Violet	PG0586	24
HRT 37	3	2/0	1 x 75 cm	Violet	PG0592	24
DR: 3/8 circle, round body needle						
DR 30	2	3/0	1 x 75 cm	Violet	PG0746	24
HS: ½ circle, reverse cutting needle						
HS 30	3	2/0	1 x 75 cm	Violet	PG0445	24
HS 36	3	2/0	1 x 75 cm	Violet	PG0350	24
HS 37	3.5	0	1 x 90 cm	Violet	PG0451	24
 HS 40	3.5	0	1 x 75 cm	Violet	PG0456	24
	4	1	1 x 90 cm	Violet	PG0461	24
DS: 3/8 circle, reverse cutting needle						
DS 12	0.7 1.5	6/0 4/0	1 x 45 cm 1 x 45 cm	Violet Violet	PG0201 PG0203	24 24
DS 15	1 2	5/0 3/0	1 x 45 cm 1 x 45 cm	Violet Violet	PG0205 PG0207	24 24
DS 19	1 1.5 2	5/0 4/0 3/0	1 x 45 cm 1 x 45 cm 1 x 45 cm	Violet Violet Violet	PG0214 PG0215 PG0216	24 24 24
	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	PG0212 PG0213	24 24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
DS: 3/8 circle, reverse cutting needle						
DS 24	2	3/0	1 x 75 cm	Violet	PG1225	24
	3	2/0	1 x 75 cm	Violet	PG0228	24
DS 25	1.5	4/0	1 x 75 cm	Violet	PG0222	24
	2	3/0	1 x 75 cm	Violet	PG0223	24
	3	2/0	1 x 75 cm	Violet	PG0224	24
	3	2/0	1 x 75 cm	Natural	PN1233	24
	3.5	0	1 x 75 cm	Violet	PG0225	24
	3	2/0	1 x 90 cm	Violet	PG2224	24
	3.5	0	1 x 90 cm	Violet	PG2225	24
DS 26	2	3/0	1 x 45 cm	Violet	PG1221	24
DS 30	3	2/0	1 x 75 cm	Violet	PG0234	24
	3.5	0	1 x 75 cm	Violet	PG0235	24
	4	1	1 x 75 cm	Violet	PG0229	24
DS 37	5	2	1 x 75 cm	Violet	PG1237	24
DS 38	3	2/0	1 x 75 cm	Violet	PG0244	24
	4	1	1 x 75 cm	Violet	PG1246	24
	4	1	1 x 90 cm	Violet	PG2246	24
DSC: 3/8 circle, conventional cutting needle						
DSC 16	2	3/0	1 x 75 cm	Violet	PG8053	24
DSC 20	2	3/0	1 x 75 cm	Violet	PG8225	24
DSC 25	3	2/0	1 x 75 cm	Violet	PG8055	24
DSC 26	2	3/0	1 x 75 cm	Violet	PG8223	24

Polydox monofilament

Polydox monofilament is a long-term absorbable, synthetic suture made of polydioxanone. The suture offers good handling combined with great strength due to its slow degradation profile. Polydox monofilament is ideal for all indications, where an extended wound support of more than 4 weeks is desirable. The threads are available in violet and natural. The suture is very flexible, pliable and easy to knot. In tissue, the thread can cause a slight initial inflammatory reaction.

Indication: General soft tissue approximation, Orthopaedics (e.g. Joint capsule, Tendons), Fascia Closure, Urology, Gynaecology and Plastic surgery.

Contraindication: Polydox monofilament should not be used where prolonged approximation of tissues under stress is required.

Sizes: 7/0 to 4 USP

Structure: Monofilament

Absorption method: Hydrolysis

Strength Retention Profile: LONG-TERM HEALING (90 - 98 days)

1 Day 100%

45 Days 50%

Mass Absorption profile: 180 - 240 days

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
2 x HR 13	1	5/0	1 x 75 cm	Violet	DX5245	24
HR 18	1 1.5 2	5/0 4/0 3/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Violet	DX0257 DX0258 DX0259	24 24 24
HR 20	1.5 2	4/0 3/0	1 x 75 cm 1 x 75 cm	Violet Violet	DX0256 DX0362	24 24
HR 22	1.5 2	4/0 3/0	1 x 75 cm 1 x 75 cm	Violet Violet	DX0261 DX0262	24 24
HR 26	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	DX0366 DX0365	24 24
HR 27	1.5 2 3 3.5 4	4/0 3/0 2/0 0 1	1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Violet Violet Violet	DX0265 DX0266 DX0267 DX0268 DX0369	24 24 24 24 24
HR 30	2 3 3.5 4	3/0 2/0 0 1	1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm	Violet Violet Violet Violet	DX0270 DX0271 DX0272 DX0273	24 24 24 24
HR 37	3.5 4	0 1	1 x 75 cm 1 x 75 cm	Violet Violet	DX0356 DX0354	24 24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
HR 40	4	1	1 x 75 cm	Violet	DX0277	24
	3	2/0	1 x 90 cm	Violet	DX0375	24
HRX: ½ circle, round body needle - extra strong						
HRX 35	3.5	0	1 x 75 cm	Violet	DX0281	24
HRX 48 Loop	4	1	1 x 150 cm	Violet	DX4140	12
HRT: ½ circle, round body needle - tapercut						
HRT 17	3	2/0	1 x 75 cm	Violet	DX0561	24
HRT 25	2	3/0	1 x 75 cm	Violet	DX0581	24
HRT 26	3	2/0	1 x 75 cm	Violet	DX0572	24
DR: 3/8 circle, round body needle						
2 x DR 13	1	5/0	1 x 75 cm	Violet	DX1117	24
DR 20	1.5	4/0	1 x 75 cm	Violet	DX0141	24
HS: ½ circle, reverse cutting needle						
HS 18	1.5	4/0	1 x 75 cm	Violet	DX0155	24
HS 21	2	3/0	1 x 75 cm	Violet	DX0166	24
HS 27	3	2/0	1 x 75 cm	Violet	DX0168	24
HS 30	2 3	3/0 2/0	1 x 75 cm 1 x 75 cm	Violet Violet	DX0171 DX0172	24 24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HS: ½ circle, reverse cutting needle						
HS 36	4	1	1 x 90 cm	Violet	DX0175	24
HS 37	3	2/0	1 x 75 cm	Violet	DX0177	24
	3.5	0	1 x 75 cm	Violet	DX0178	24
HS 40	4	1	1 x 90 cm	Violet	DX0458	24
DS: 3/8 circle, reverse cutting needle						
DS 19	1	5/0	1 x 45 cm	Violet	DX0210	24
	1.5	4/0	1 x 45 cm	Violet	DX0211	24
	1.5	4/0	1 x 75 cm	Violet	DX0215	24
	2	3/0	1 x 75 cm	Violet	DX0216	24
	3.5	0	1 x 75 cm	Violet	DX0218	24
DS 25	3	2/0	1 x 45 cm	Violet	DX0223	24
	1.5	4/0	1 x 75 cm	Violet	DX0226	24
	2	3/0	1 x 75 cm	Violet	DX0227	24
	3	2/0	1 x 75 cm	Violet	DX0228	24
	3.5	0	1 x 75 cm	Violet	DX0229	24
DS 30	3	2/0	1 x 75 cm	Violet	DX0232	24
	3.5	0	1 x 75 cm	Violet	DX0234	24
	4	1	1 x 75 cm	Violet	DX0235	24
DS 38	2	3/0	1 x 75 cm	Violet	DX0239	24
	3	2/0	1 x 75 cm	Violet	DX0238	24

Chiralen monofilament

Chiralen monofilament is a non-absorbable suture made of polypropylene. The thread is hydrophobic and is not subject to degradation by tissue enzymes. Chiralen monofilament has a smooth, non-porous surface, that guarantees a clean and smooth passage through the tissue, optimal elasticity, good elongation properties and high visibility. In tissues, it can cause a minimal acute inflammatory reaction.

Indication: All surgical specialities, especially Cardiovascular, Plastic, Reconstructive, Ophthalmic, Orthopaedic and Traumatology (e.g. tendons).

Contraindication: Chiralen monofilament must not penetrate into the inner parts of the digestive and urinary tracts.

Chemical Composition: Polypropylene

Sizes: 10/0 to 2 USP

Structure: Monofilament

Absorption method: Non-absorbable

Colour: Blue and Black

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
HR 22	2	3/0	1 x 75 cm	Blue	PP5156	24
HR 27	2	3/0	1 x 75 cm	Blue	PP5163	24
HR 30	3 3.5	2/0 0	1 x 75 cm 1 x 75 cm	Blue Blue	PP5165 PP5166	24 24
	3	2/0	1 x 90 cm	Blue	PP5261	24
DS: 3/8 circle, reverse cutting needle						
DS 19	1.5 2	4/0 3/0	1 x 45 cm 1 x 45 cm	Blue Blue	PP5510 PP5511	24 24
	2	3/0	1 x 75 cm	Blue	PP5111	24
DS 25	1.5 2 3	4/0 3/0 2/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Blue Blue Blue	PP5115 PP5116 PP5117	24 24 24
DS 30	3 3.5	2/0 0	1 x 75 cm 1 x 75 cm	Blue Blue	PP5121 PP5122	24 24
DS 38	4	1	1 x 75 cm	Blue	PP5133	24

Silon monofilament

Silon monofilament is a non-absorbable, synthetic suture made of polyamide, which has a smooth non-porous surface. The thread is extremely useful for skin sutures and has a high tensile strength in knots, and knots tie down easily. The thread is available in blue and black. Silon monofilament can cause a slight initial inflammatory tissue reaction.

Indication: Plastic and General surgery and wherever suturing the skin.

Contraindication: Silon monofilament should not be used when long-term mechanical support is required.

Chemical Composition: Polyamide 6

Sizes: 10/0 to 2 USP

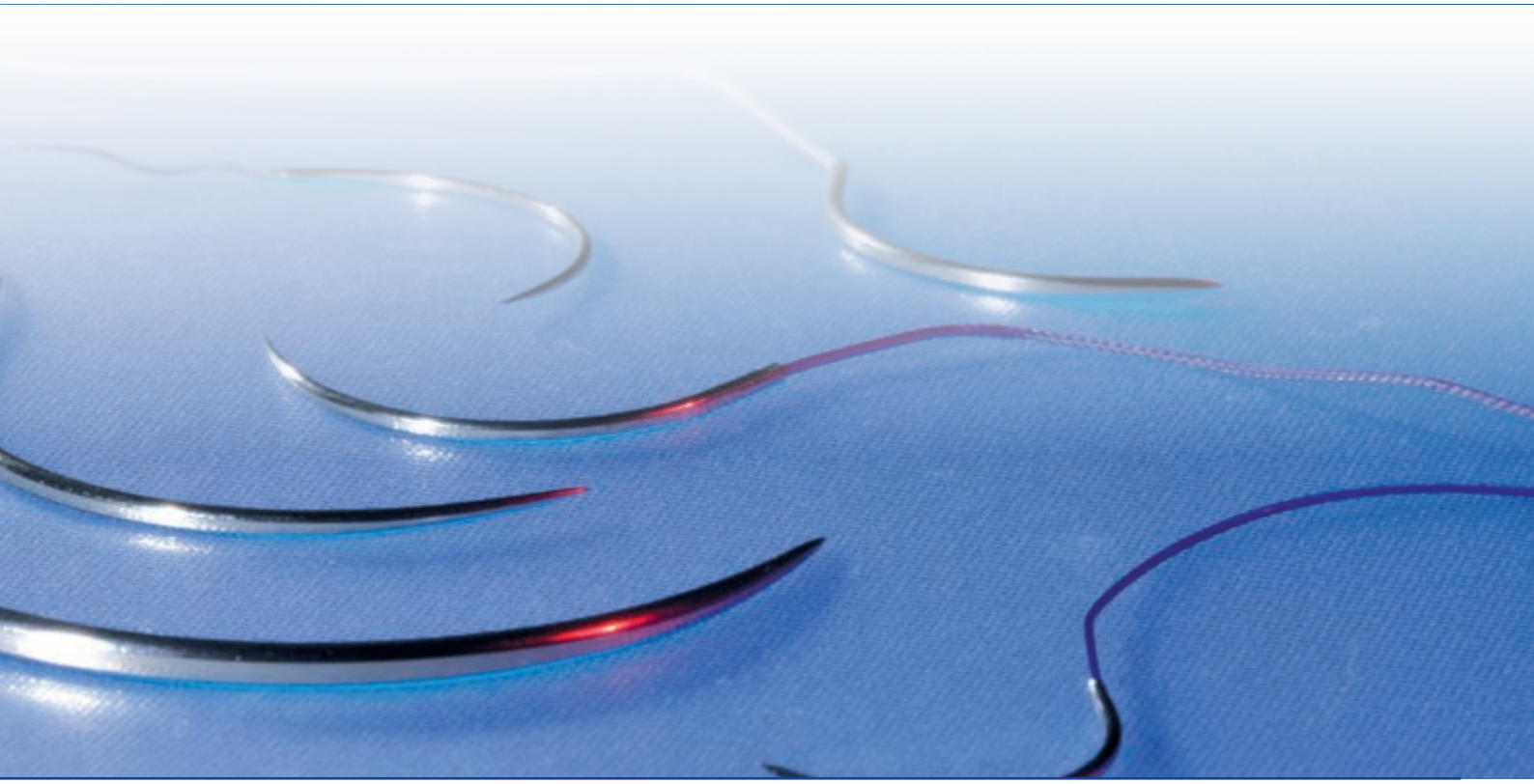
Structure: Monofilament

Absorption method: Non-absorbable

Colour: Blue and Black

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HS: ½ circle, reverse cutting needle						
HS 40	3 4	2/0 1	1 x 75 cm 1 x 75 cm	Blue Blue	SM2409 SM2413	24 24
DS: 3/8 circle, reverse cutting needle						
DS 12	1.5	4/0	1 x 45 cm	Blue	SM2257	24
DS 15	1	5/0	1 x 45 cm	Blue	SM2261	24
DS 19	1.5 2	4/0 3/0	1 x 45 cm 1 x 45 cm	Blue Blue	SM2367 SM2368	24 24
	1 1.5 2	5/0 4/0 3/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Blue Blue Blue	SM2366 SM2267 SM2268	24 24 24
DS 24	1.5 2 3	4/0 3/0 2/0	1 x 75 cm 1 x 75 cm 1 x 75 cm	Blue Blue Blue	SM3277 SM3276 SM3275	24 24 24
DS 25	2 3	3/0 2/0	1 x 45 cm 1 x 45 cm	Blue Blue	SM2373 SM2374	24 24
	1.5 2 3 3.5	4/0 3/0 2/0 0	1 x 75 cm 1 x 75 cm 1 x 75 cm 1 x 75 cm	Blue Blue Blue Blue	SM2273 SM2270 SM2271 SM2272	24 24 24 24

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
DS: 3/8 circle, reverse cutting needle						
DS 30	3	2/0	1 x 45 cm	Blue	SM2384	24
	2	3/0	1 x 75 cm	Blue	4325	24
	3	2/0	1 x 75 cm	Blue	SM2284	24
	3.5	0	1 x 75 cm	Blue	SM2285	24
	4	1	1 x 90 cm	Blue	SM4327	24
DS 37	3.5	0	1 x 75 cm	Blue	SM2386	24
DS 38	2	3/0	1 x 75 cm	Blue	SM2290	24
	4	1	1 x 75 cm	Blue	SM2293	24
DS 45	3	2/0	1 x 100 cm	Blue	SM2499	24
DS 50	4	1	1 x 100 cm	Blue	SM2693	24
GS: Straight, reverse cutting needle						
GS 50	3	2/0	1 x 90 cm	Blue	SM3295	24



Tervalon braided

Tervalon braided is a polyester suture material with a special coating, which guarantees effortless tissue passage and excellent knot–tying characteristics. The extreme tensile strength and tissue compatibility are further positive characteristics of Tervalon braided, which is used in all areas of surgery due to its favourable features. Tervalon braided is applicable wherever non-absorbability and low-friction passage through tissues are needed.
The suture elicits a minimal inflammatory reaction in tissues, which is followed by gradual encapsulation of the suture by fibrous connective tissue.

Indication: Whenever non-absorbability and low friction passage through tissues are needed. It is especially useful in suturing Tendons, Schwann sheaths and skin in Plastic and Reconstructive surgery.

Contraindication: Tervalon braided must not penetrate into the inner parts of the digestive and urinary tracts.

Chemical Composition: Polyester

Sizes: 6/0 to 6 USP

Structure: Multifilament

Absorption method: Non-absorbable

Colour: Green and White

Needle	EP	USP	Length	Colour	Article No.	Pcs./Box
HR: ½ circle, round body needle						
HR 22	3	2/0	1 x 75 cm	Green	TG4467	24
HRX: ½ circle, round body needle - extra strong						
	5	2	1 x 75 cm	Green	TG4365	24
DS: 3/8 circle, reverse cutting needle						
DS 25	3	2/0	1 x 75 cm	Green	TG4565	24

We offer following materials also in Bottles

New

We are offering comprehensive selection of bottles specially designed for veterinary usage. The bottles are available in lengths between 15 meter and 300 meter.

Catgut plain

Bottles

EP	USP	Length	Article No.
2	4/0	100 m	GP4010
3	3/0	100 m	GP3010
3.5	2/0	100 m	GP2010
4	0	50 m	GP0050
5	1	50 m	GP0150
6	2	50 m	GP0250
7	3	25 m	GP0325
8	4	25 m	GP0425

Catgut chrom

Bottles

EP	USP	Length	Article No.
2	4/0	100 m	GC4010
3	3/0	100 m	GC3010
3.5	2/0	100 m	GC2010
4	0	100 m	GC0010
4	0	50 m	GC0050
4	0	75 m	GC0075
5	1	50 m	GC0150
5	1	75 m	GC0175
6	2	50 m	GC0250
7	3	25 m	GC0325
7	3	50 m	GC0350
8	4	25 m	GC0425
9	5	25 m	GC0525
10	6	25 m	GC0625

Chirasorb braided violet

Bottles

EP	USP	Length	Article No.
2	3/0	50 m	LV1013
3	2/0	50 m	LV1014
3.5	0	50 m	LV1015
4	1	50 m	LV1016
5	2	50 m	LV1017
6	3 + 4	50 m	LV1018
2	3/0	25 m	LV1043
3	2/0	25 m	LV1044
3.5	0	25 m	LV1045
2	3/0	15 m	LV1023
3	2/0	15 m	LV1024
3.5	0	15 m	LV1025
4	1	15 m	LV1026
5	2	15 m	LV1027
6	3 + 4	15 m	LV1028
5	2	15 m	LV1027
6	3 + 4	15 m	LV1028

Chirlac braided violet

Bottles

EP	USP	Length	Article No.
2	3/0	50 m	PG1013
3	2/0	50 m	PG1014
3.5	0	50 m	PG1015
4	1	50 m	PG1016
5	2	50 m	PG1017
6	3 + 4	50 m	PG1018
2	3/0	25 m	PG1043
3	2/0	25 m	PG1044
3.5	0	25 m	PG1045
4	1	25 m	PG1046
5	2	25 m	PG1047
2	3/0	15 m	PG1023
3	2/0	15 m	PG1024
3.5	0	15 m	PG1025
4	1	15 m	PG1026
5	2	15 m	PG1027
6	3 + 4	15 m	PG1028

Polydox monofilament violet

Bottles

EP	USP	Length	Article No.
2	3/0	50 m	DX1013
4	1	50 m	DX1016
2	3/0	25 m	DX1043
3	2/0	25 m	DX1044
3.5	0	25 m	DX1045
4	1	25 m	DX1046
5	2	25 m	DX1047

Silon monofilament blue

Bottles

EP	USP	Length	Article No.
1	5/0	50 m	SM0702
1.5	4/0	50 m	SM0703
2	3/0	50 m	SM0704
3	2/0	50 m	SM0705
3.5	0	50 m	SM0706
4	1	50 m	SM0707
5	2	50 m	SM0708
3	2/0	100 m	SM0725

Silon braided white

Bottles

EP	USP	Length	Article No.
1	5/0	100 m	501 N
1.5	4/0	100 m	502 N
2	3/0	100 m	503 N
2.5	-	100 m	504 N
3	2/0	100 m	505 N
3.5	0	100 m	506 N
4	1	50 m	507 N
5	2	50 m	508 N
6	3 + 4	50 m	509 N
7	5	50 m	510 N

Silk braided black

Bottles

EP	USP	Length	Article No.
1	5/0	100 m	302 N
1.5	4/0	100 m	303 N
2	3/0	100 m	304 N
3	2/0	100 m	306 N
3.5	0	100 m	307 N
4	1	50 m	308 N
5	2	50 m	309 N
6	3 + 4	50 m	310 N
7	5	25 m	311 N

Eye needles

Surgical Eye needles are made of high-quality stainless steel. Different types of needles are available to meet a full range of requirements. The needles are always packed in foil pouches with 12 pieces. The surgical Eye needle range consists of Eye needles with a double spring eye and with a regular eye.

Eye needles
Double spring

Eye needles
Regular

Eye needles

Double spring

Needle	Needle no.	Wire diameter (mm)	Article No.
PB HR: ½ circle, round body needle			
HR 52	1	0.65	EY8003
HR 36	3	0.55	EY8005
HR 30	4	0.55	EY8006
HR 24	5	0.55	EY8007
HR 20	7	0.55	EY8009
E HRX: ½ circle, round body needle - extra strong			
HRX 100	000	1.10	EY8700
HRX 72	000	1.10	EY8701
HRX 63	00	1.10	EY8703
HRX 54	0	1.00	EY8705
HRX 46	1	1.00	EY8707
HRX 38	2	0.85	EY8709
HRX 30	3	0.75	EY8711
HRX 24	4	0.65	EY8713
HRX 22	5	0.55	EY8715

	Needle	Needle no.	Wire diameter (mm)	Article No.
GA HS: ½ circle, reverse cutting needle				
	HS 72	0	1.80	EY8623
	HS 60	2	1.60	EY8625
	HS 54	3	1.40	EY8626
GE HS: ½ circle, reverse cutting needle				
	HS 80	1	1.30	EY8601
	HS 34	14	0.75	EY8614
	HS 28	17	0.65	EY8617
	HS 24.5	19	0.65	EY8619
	HS 20	21	0.55	EY8621
BE DS: 3/8 circle, reverse cutting needle				
	DS 58	5	1.10	EY8405
	DS 36	13	0.75	EY8413
	DS 32	15	0.75	EY8415
	DS 28	17	0.65	EY8417
	DS 24.5	19	0.65	EY8419
	DS 20	21	0.55	EY8421
	DS 12	24	0.55	EY8424

Eye needles

Regular

	Needle	Needle no.	Wire diameter (mm)	Article No.
PB HR: ½ circle, round body needle				
	HR 24	5	0.55	EY9007
BE DS: 3/8 circle, reverse cutting needle				
	DS 58	5	1.10	EY9405
	DS 44	10	0.85	EY9410
	DS 24.5	19	0.65	EY9419
	DS 20	21	0.55	EY9421

Most commonly used sutures

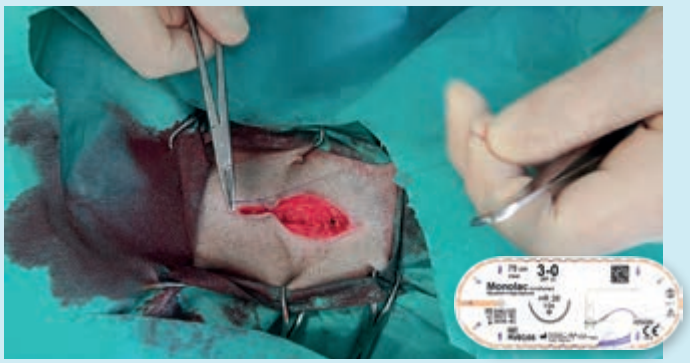
Suture material	Product name	Structure	Knot security	Tensile strength	Absorption time	Typical indications
Glycolide/L-lactide	Chirasorb rapid braided	Multifilament	Very good	12 days	42 days	Oral cavity, subcutis, skin closure, ligation
Glycolide/L-lactide	Chirasorb braided	Multifilament	Very good	35 days	56-70 days	Subcutis, gynaecology, ligatures
Glycolide/caprolactone	Monolac monofilament	Monofilament	Good	30 days	90-120 days	Subcutis, gastrointestinal tract, bladder, skin closure
Polydioxanone	Polydox monofilament	Monofilament	Good	90 days	180-240 days	Gastrointestinal tract, joints, fascia, linea alba
Polypropylene	Chiralen monofilament	Monofilament	Good	Non-absorbable		Tendons, ligaments, vascular surgery, skin
Polyamide	Silon monofilament	Monofilament	Good	Non-absorbable		Skin closure
Polyester	Tervalon braided	Multifilament	Very good	Non-absorbable		Ligament replacement, cardiac and vascular surgery, orthopedy

Example A:

Sterilisation of a female dog

This dog weighed 23 kg and had no underlying health conditions. The vascular stumps cranially to the ovaries were ligated with a thick, braided thread (glycolide/L-lactide, Chirasorb, USP 2, without using a needle, LV0028) and severed. The same thread was used for the ligature at the body of the uterus. For the linea alba a long-term absorbable suture was used (polydioxanone, Polydox, USP 1, cutting needle, DX0179), with continuous suturing. The subcutis was closed with interrupted sutures and a mid-term absorbable thread (glycolide/caprolactone, Monolac, USP 3-0, cutting needle, MV0212). For the skin a nylon thread was used (Silon, USP 3-0, cutting needle, SM2268). Whenever tissue is tough, we recommend using cutting needles as round body needles become blunt after being passed through multiple times and bend.

Fig. 7: Closing the subcutis, single button suture with Monolac.



Example B:

Closure of the knee joint on a male dog

Surgery on a mixed-breed dog weighing 15 kg to repair a torn cruciate ligament via ligament replacement was followed by multi-layer closure of the knee joint (polyester, braided, USP 5 Tervalon, TG4438). The joint capsule and fascia were sutured with a polydioxanone thread and a cutting needle (Polydox, USP 3-0, DX0216), using the cross-mattress technique for the first layer and continuous suturing for the second one. The subcutis was stitched using a single button suture with a braided, mid-term absorbable thread (glycolide/L-lactide, Chirasorb, USP 3-0, cutting needle, LV0212), while the skin was closed with interrupted sutures and nylon (Silon, USP 4-0, cutting needle, SM2267).

Fig. 8: Closing the medial knee fascia, start of a continuous suture with Polydox

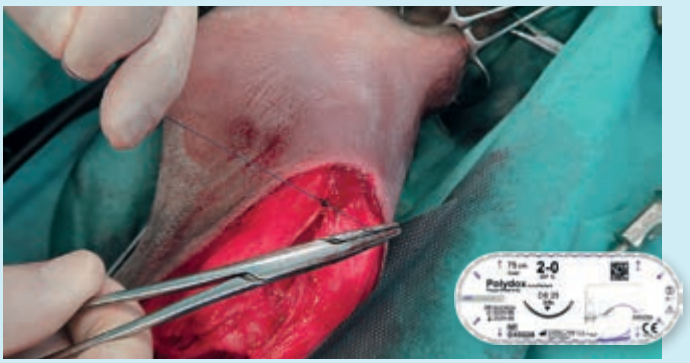


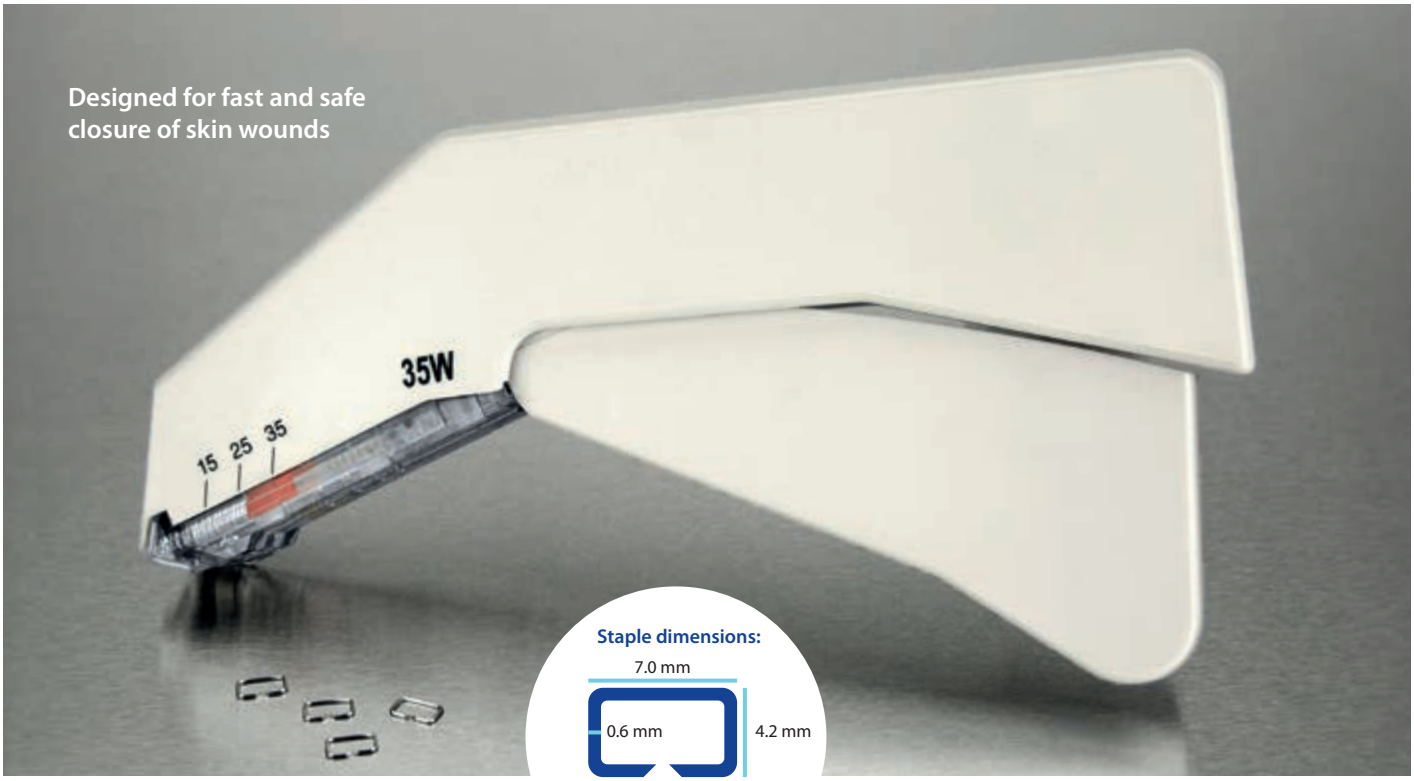
Table of indications

(SBS = single button suture, CNS = continuous suture)

Tissue type	Product name	Needle type	Recommended knotting pattern	Suggested suture for cat, small dog (USP, Art. No., Needle length)			Suggested suture for large dog (USP, Art. No., Needle length)		
Skin	Silon monofilament	3/8 Reverse cutting needle, DS	SBS or CNS	4/0	SM2267	19 mm	3/0	SM2268	19 mm
	Chiralen monofilament	3/8 Reverse cutting needle, DS	SBS or CNS	4/0	PP5110	19 mm	3/0	PP5111	19 mm
Subcutis	Chirasorb braided	3/8 Reverse cutting needle, DS	SBS or CNS	4/0	LV0211	19 mm	3/0	LV0212	19 mm
	Monolac monofilament	3/8 Reverse cutting needle, DS		4/0	MV0211	19 mm	3/0	MV0212	19 mm
Intestine	Monolac monofilament	1/2 Taper point, HR	Small bowel: SBS or CNS Colon: SBS	4/0	MV0257	18 mm	3/0	MV0258	18 mm
	Polydox monofilament	1/2 Taper point, HR		4/0	DX0258	18 mm	3/0	DX0259	18 mm
Stomach	Polydox monofilament	1/2 Reverse cutting needle, HS	Everting, then inverting, continuous	2/0	DX0172	30 mm	0	DX0178	37 mm
Bladder	Monolac monofilament	1/2 Taper point, HR	Adapting, then inverting, continuous	3/0	MV0258	18 mm	2/0	MV0267	27 mm
Vascular ligature	Chirasorb braided	-	SBS	3/0	LV0212	-	3/0	LV0212	-
Ovariectomy	Chirasorb braided	-	SBS	2	LV0028	-	2	LV0028	-
Linea alba	Polydox monofilament	1/2 Reverse cutting needle, HS	CNS	2/0	DX0172	30 mm	1	DX0179	37 mm
Vascular suture	Chiralen monofilament	1/2 Taper point, HR	SBS	5/0	PP5152	18 mm	4/0	PP5153	18 mm
Oral surgery	Chirasorb rapid braided	3/8 Reverse cutting needle, DS	SBS	4/0	LQ1216	15 mm	3/0	LQ1217	15 mm
	Monolac monofilament	3/8 Reverse cutting needle, DS	SBS	4/0	MV0211	19 mm	3/0	MV0212	19 mm
Joint capsule	Polydox monofilament	3/8 Reverse cutting needle, DS	SBS or cross mattress	3/0	DX0216	19 mm	2/0	DX0228	25 mm
Muscle fascia	Polydox monofilament	3/8 Reverse cutting needle, DS	CNS	3/0	DX0216	19 mm	2/0	DX0228	25 mm
Ligament suture	Polydox monofilament	3/8 Reverse cutting needle, DS	Tension suture, e.g. locking loop or Bunnell suture	3/0	DX0216	19 mm	2/0	DX0228	25 mm
	Chiralen monofilament	3/8 Reverse cutting needle, DS		3/0	PP5111	19 mm	2/0	PP5117	25 mm
Cruciate ligament replacement, extracapsular	Tervalon braided	1/2 Taper point, HR	SBS	1	TG4464	27 mm	5	TG4438	50 mm
Tendon suture	Chiralen monofilament	3/8 Reverse cutting needle, DS	Tension suture, e.g. locking loop or Bunnell suture	2/0	PP5117	25 mm	0	PP5122	30 mm
Skin of eyelid	Silon monofilament	3/8 Reverse cutting needle, DS	SBS	4/0	SM2267	19 mm	4/0	SM2367	19 mm
Conjunctiva	Chirasorb braided	1/2 Taper point, HR	CNS	6/0	LV0200	15 mm	5/0	LV0254	13 mm

Sterile Skin Stapler and Staples Remover

The Sterile Skin Stapler is designed for fast and safe closure of skin wounds. The device is highly suitable for application in surgical procedures, emergency medicine, and various other medical disciplines.



The Sterile Skin Stapler may be used for:

- Wound closure in general surgery for a variety of surgical procedures
- Closure of uninfected post traumatic wounds
- Primary, delayed primary and secondary closure of surgical incisions and wounds

This device should be used only by a doctor or veterinary assistant.

Article No.	Description	Units per box
WS35W0	Skin Stapler with 35 regular staples	10
WSDEX0	Skin Staples Remover	6

Shelf life 5 years

KEYFeatures:

Quick closure
Allows efficient and quick wound closure, reducing operation time.

Sterile packaging

Single use product

Ergonomic design

The Sterile Skin Staples Remover is designed to remove skin staples quickly, safely and painlessly. It is ideal to use in surgery, emergency medicine and other medical fields.

The Sterile Skin Staples Remover may be used for:

- Surgical procedures
- Emergency medicine
- Outpatient care

KEYFeatures:

Safe removal
Allows quick and painless removal of staples without damaging the skin.

Disposable
Minimizes the risk of infection and ensures sterility.

Sterile packaging

Ergonomic design

Diagnostics and medical devices

Chiravac® Blood Collection needles

Chiravac® Blood Collection needles are made of polypropylene hub and stainless steel tube. ThEYare pyrogen-free, latex-free, DEHP-free, PVC-free and non-toxic. The needles are intended for blood collection with vacuum tubes. ThEYare individually packed in boxes of 100 pcs, cartons of 1000 pcs. Upon request the needles are also available as safety or invisible version.

USER CONVENIENCE: Colour-coded needle hub, screw-on needle hub compatible with all available holders, easy-to-open packaging and thin wall tube material.

COMFORT: Grinded, precision lancet point and silicone treated tip for smooth penetration. Comfortable collection experience.

PATIENT SAFETY: Single-use only. Sterilised by ETO.

FDA CLEARED

Colour Code	Size Metric	Size G/"	Article No.
Blue	0.60 x 38 mm	23G x 1 1/2"	CHBCN23112
Green	0.80 x 38 mm	21G x 1 1/2"	CHBCN21112
Pink	1.20 x 38 mm	18G x 1 1/2"	CHBCN18112

Shelf life 5 years

ACCESSORIES

Blood Collection Needle Holders with and without safety function are compatible with our Chiravac Blood Collection Needles and our different Blood Collection Tubes. The holders are packed in PE bags of 50 or 100 pcs.

Description	Pcs./Box	Pcs./Carton	Article No.
Blood Collection Needle Holder	100	1,000	CHBCNH01
Blood Collection Needle Safety Holder	50	800	CHBCNHS01

Shelf life 5 years

Serum Clot Activator Tubes

The interior of the tube wall is coated with a dry clot activator to accelerate blood clotting.

Range of application: Clinical chemistry, immunology, protein electrophoresis, serology, icrobiology, toxicology.

Description	Draw Vol. (ml)	Size (mm)	Additive	Label	Article No.
Serum CAT/Clot Activator	2	13 x 75	Serum Clot Activator	Paper	102202+ *
Serum CAT/Clot Activator	4	13 x 75	Serum Clot Activator	Paper	104204+ *
Serum CAT/Clot Activator	4	13 x 100	Serum Clot Activator	Paper	108204+ **
Serum CAT/Clot Activator	5	13 x 75	Serum Clot Activator	Paper	109205+ *
Serum CAT/Clot Activator	9	16 x 100	Serum Clot Activator	Paper	106209+ ***
Serum CAT/Clot Activator	10	16 x 100	Serum Clot Activator	Paper	107200+ ***

Transit packaging Pallet

Packaging:

Primary packaging:	50/100 pcs.
Transit packaging:	800/1,000 pcs.
* Pallet:	54,000 pcs.
** Pallet:	48,000 pcs.
*** Pallet:	38,400 pcs.

EDTA Tubes

Vacuum blood collection tubes for K2EDTA and K3EDTA hematologic testing. These tubes are used for whole blood analysis. Gel is a special material designed to form a resistant barrier between the cellular components of blood and serum during centrifugation.

Range of application for K2EDTA: Hematology, PCR analysis, blood typing.
Range of application for K2EDTA + gel: Preparation of undiluted plasma for virologic testing and molecular diagnostics.
Range of application for K3EDTA: Hematology, PCR analysis, blood typing.
Range of application for K3EDTA + gel: Preparation of undiluted plasma for virologic testing and molecular diagnostics.

K2EDTA

Description	Draw Vol. (ml)	Size (mm)	Additive	Label	Plain Article No.	+ Gel Article No.
K2E/K2EDTA	2	13 x 75	K2EDTA	Paper	102902+ *	112202+ *
K2E/K2EDTA	5	13 x 75	K2EDTA	Paper	105905+ *	
K2E/K2EDTA	9	16 x 100	K2EDTA	Paper	107909+ ***	113290+ ***

Shelf life 18 months

K3EDTA

Description	Draw Vol. (ml)	Size (mm)	Additive	Label	Plain Article No.	+ Gel Article No.
K3E/K3EDTA	3	13 x 75	K3EDTA	Paper	113103+ *	123103+ *

Shelf life 18 months

Transit packaging Pallet

Packaging:

Primary packaging:	50/100 pcs.
Transit packaging:	800/1,000 pcs.
* Pallet:	54,000 pcs.
** Pallet:	48,000 pcs.
*** Pallet:	38,400 pcs.

Heparin Tubes

Vacuum blood collection tubes with lithium heparin are used to produce plasma for biochemical testing. Gel is a special material designed to form a resistant barrier between the cellular components of blood and serum during centrifugation.

Range of application for lithium heparin: Clinical chemistry, trace mineral testing.
Range of application for lithium heparin + gel: Plasma biochemical analysis.

Lithium Heparin

Description	Draw Vol. (ml)	Size (mm)	Additive	Label	Plain Article No.	+ Gel Article No.
LH/Lithium Heparin	2	13 x 75	Lithium Heparin	Paper	101402+ *	102702+ *
LH/Lithium Heparin	4	13 x 75	Lithium Heparin	Paper	105404+ *	
LH/Lithium Heparin	5	13 x 75	Lithium Heparin	Paper	105450+ *	
LH/Lithium Heparin	9	16 x 100	Lithium Heparin	Paper	104409+ ***	102709+ ***

Shelf life 18 months

Transit packaging Pallet

Packaging:

Primary packaging:	50/100 pcs.
Transit packaging:	800/1,000 pcs.
* Pallet:	54,000 pcs.
** Pallet:	48,000 pcs.
*** Pallet:	38,400 pcs.

Micro Haematocrit Capillary Tubes

Micro Haematocrit Capillary Tubes are quality products, that conform to international standard ISO 12772. The tubes are firepolished at the colour-coded end to reduce wear on the centrifuge seals. We recommend the colour-coded end to be sealed with our Wax plate. The colour-coding on the tubes and packaging indicates the impregnation of the tube: plain (blue colour), sodium heparin (red colour), ammonium heparin (green colour) and lithium heparin (orange colour). Each heparinised tube contains at least 4-7 IU heparin as prescribed by the standard. The Micro Haematocrit Tubes are also available in plastic with plain, sodium, or ammonium heparin in a volume of ~50 µl. The plastic tubes offer an alternative to glass and can be selected where a plastic option is preferred for handling and safety considerations, without compromising compliance with the standard.

The tubes are available in two types of packaging: Dispenser vials of 100 tubes each for hygienic and easy handling; and economy cardboard boxes of 1000 tubes, which reduce transport and handling costs. Special requirements regarding marking, dimensions or impregnation are possible.

Standard Micro Haematocrit Tubes

Colour Code	Impregnation	d (mm) +/- 0.05 mm	D (mm) +/- 0.05 mm	L (mm) +/- 0.5 mm	Vol. (µl)	Article No. 10 x 100	Article No. 1 x1000
	Plain	1.15	1.55	75	~75	160213	163213
	Sodium Hep.	1.15	1.55	75	~75	161313	163613
	Ammon. Hep.	1.15	1.55	75	~75	160813	164013
	Lithium Hep.	1.15	1.55	75	~75	161813	*
	EDTA	1.15	1.55	75	~75	167313	*

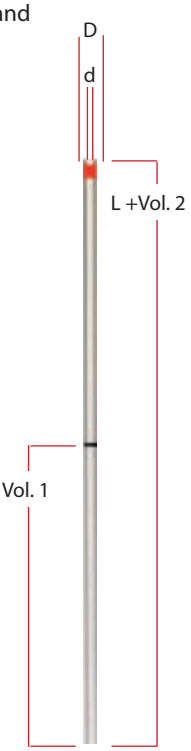
Shelf life 4 years

Plastic Micro Haematocrit Tubes

Colour Code	Impregnation	d (mm) +/- 0.08 mm	D (mm) +/- 0.08 mm	L (mm) ± 1.0mm	Vol. (µl)	Article No. 10 x 100
	Plain	0.85	1.55	75	~50	260213
	Sodium Hep	0.85	1.55	75	~50	261313
	Ammon. Hep.	0.85	1.55	75	~50	260813

* Available upon request
For special tubes contact us

Shelf life 2 years



Accessories

Vitrex Wax plate has 2x24 numbered positions per pair, which makes it easy to seal and transport samples. Each pair can be forced apart and used separately.

Product	Article no.
Wax plate 2 x 5 pcs.	140013

End-to-End Pipettes

End-to-End Pipettes are intended for applications where accurate capillary tube volume is required. The pipettes are in conformity with ISO 7550.

The pipettes are packed in glass vials with a dispenser top, that makes it easy to shake out one tube at a time and thereby ensuring hygienic handling.

The dispenser tops are colour-coded to indicate the tube volume in conformity with ISO 1769. Ten vials are packaged in a sturdy carton in order to protect the tubes from damage during handling or transport.

Technical Specifications

Colour Code	Vol. (µl)	L (mm) +/- 1mm	Pcs./box	Plain	Natrium Hep.	Ammon. Hep.	K2EDTA
●	4	29	10x100	165313	167813 *	169313 *	*
●	10	29	10x100	174313	177113 *	179213 *	174113 *
○	25	29	10x100	174613	177313 *	179413 *	178213 *
●	50	29	10x50	174913	177513 *	179613 *	171113 *

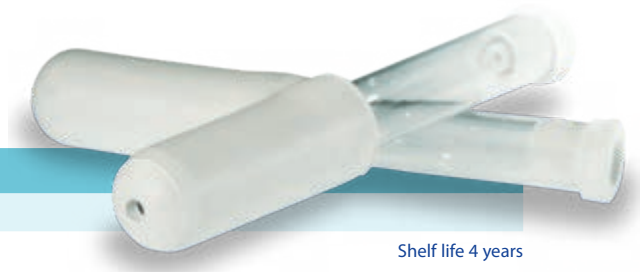
* Available upon request
For lithium hep. please contact us

Shelf life 4 years

Vol.

Accessories

Product	Article No.
Pipette holder - white siphon	140413



Shelf life 4 years

Ultrasafe

Sterile Safety lancet

Ultrasafe lancet is intended for blood glucose and other in vitro diagnostic tests. Healthcare workers worldwide face the risk of accidental needle-stick injuries, exposing them to bloodborne illnesses including HIV and Hepatitis. Ultrasafe lancet helps reduce these risks while supporting patient comfort and precise, reliable blood collection.

PRESSURE ACTIVATED

UNIQUE DESIGN:
Ergonomically optimized for better handling

SILICONE COATED NEEDLE:
Less pain and smooth penetration

EASY TARGETING OF PUNCTURE SITE

Technical Specifications

Colour Code		Specification	Penetration Depth	Article No.
Green		17G blade	2.0 mm	393413
Blue		21G needle	1.8 mm	397413
Orange		21G needle	2.2 mm	395413
Pink		21G needle	2.8 mm	396413
Yellow		26G needle	1.8 mm	394413

Shelf life 5 years

Transit packaging Pallet

Packaging:

Primary packaging:	100 pcs.
Transit packaging:	1,000 pcs.
Pallet:	98,000 pcs.

Lite3

Sterile Safety lancet

Lite3 lancet is intended for blood glucose and other in vitro diagnostic tests. Healthcare professionals worldwide face the risk of accidental needle-stick injuries, exposing them to bloodborne illnesses including HIV and Hepatitis. Lite3 lancet supports safer, more comfortable blood collection, providing a reliable and precise tool for a variety of capillary blood sampling needs.

Technical Specifications

Colour Code	Specification	Penetration Depth	Article No.
Green	18G blade	1.8 mm	373213
Orange	21G needle	1.8 mm	377213
Pink	21G needle	2.4 mm	378213
Dark Blue	23G needle	1.8 mm	379213
Yellow	26G needle	1.8 mm	375213
Blue	26G needle	2.4 mm	376213

Shelf life 5 years

BUTTON ACTIVATION

USER SAFETY:

Needle is fully shielded before and after use.

PATIENT COMFORT:

High quality, ultra sharp tri-bevel needle or bi-bevel blade, high speed penetration.

EFFICACY:

Variety of point configurations and penetration depths to suit most capillary blood requirements.

Transit packaging

Pallet

Packaging:

Primary packaging:	100 pcs.
Transit packaging:	1,000 pcs.
Pallet:	90,000 pcs.

Allergy

For skin sensitivity testing

Allergy lancets are traditional handheld, flat and stainless steel lancet for skin sensitivity testing.

LOW COST: Simple, flat, steel lancet.

HIGH QUALITY: Hardened surgical steel.

MINIMUM DISCOMFORT: Modern asymmetric design.

STERILE: Single-use only. Sterilised by gamma irridiation.

Steel

General Purpose Capillary Blood lancet

Steel lancets are traditional handheld, flat and stainless steel blood lancet for general purpose use.

LOW COST: Simple, flat, steel lancet.

SAMPLE VOLUME: Excellent blood flow.

HIGH QUALITY: Hardened surgical steel.

MINIMUM DISCOMFORT: Modern asymmetric design.

STERILE: Single-use only. Sterilised by gamma irridiation.

Technical Specifications

Product	Description	Article No.
Steel	Flat blade sterile lancet	350213
Allergy	Flat blade sterile lancet	365213

Shelf life 5 years

Transit packaging

Pallet

Packaging:

Primary packaging:	200 pcs.
Transit packaging:	20,000 pcs.
Pallet:	720,000 pcs.

Chirana® Insulin and Tuberculin Syringes

Chirana® Insulin and Tuberculin syringes are with intgrated needle for single use. The needle cap is made of latex-free rubber gasket. The syringes are individually packed in boxes of 100 pcs. ThEYare pyrogen-free and non-toxic.

USER CONVENIENCE: Needle permanently fixed to syringe body.

USER SAFETY: Integrated needle cap.

COMFORT: Grinded, precision lancet point and silicone treated tip for smooth penetration.

PATIENT SAFETY:
ingle-use only. Sterilised by ETO. Dead space is minimized to reduce waste and transmission of infectious agents. The dead space does not exceed the limits (EN ISO 8537:2016, art. 5.11.1).

FDA CLEARED *

Technical Specifications

Type	Vol. ml.	Needle	Size Metric	Article No:
Tuberculin	1	Luer		CHTUB01
Insulin U 40	0.3	29G x 1/2″	12.7 mm	CHINS40329
Insulin U 40	0.5	29G x 1/2″	12.7 mm	CHINS40529
Insulin U 40	1	29G x 1/2″	12.7 mm	CHINS4129
Insulin U 100	1	27G x 1/2″	12.7 mm	CHINS0127
Insulin U 100	1	29G x 1/2″	12.7 mm	CHINS0129
Insulin U 100	1	30G x 1/2″	12.7 mm	CHINS0130
Insulin U 100	1	Luer		CHINS01
Insulin U 100	0.5	29G x 1/2″	12.7 mm	CHINS00529
Insulin U 100	0.3	29G x 1/2″	12.7 mm	CHINS00329
Insulin U 100	0.3	30G x 1/2″	12.7 mm	CHINS00330
Insulin U 100	0.3	31G x 5/16″	8 mm	CHINS003318
Insulin U 100	0.3	31G x 4/16″	6 mm	CHINS003316

Shelf life 5 years

Chirana Syringes are available in many sizes.
For more information Contact Sales Department.

Transit packaging

Pallet

Packaging:
Primary packaging: 100 pcs.
Secondary packaging: 2,000 pcs.
Pallet: 48,000 pcs.

* FDA clearance for Insulin syringes.

Chirana® 2-part disposable syringes and Chirana® 2-part disposable syringes with needles

Chirana® 2-part disposable syringes without and with needle are made of polypropylene/polyethylene. ThEYare pyrogen-free, latex-free, DEHP-free, PVC-free and non-toxic. The syringes are available with Luer tip. The syringe with needle is available in other needle combinations.

USER CONVENIENCE:

Ergonomic design, smooth flow, highly transparent barrel, tight, black extended graduation, easy to read, double stop lines and guaranteed 0 ml position.

USER SAFETY:

Individually blister packed and the needle is side-packed in a single blister package.

COMFORT:

Designed tip for best connection, double stop lines and scratch-free for glove manipulation.

PATIENT SAFETY:

Single-use only. Sterilised by ETO.

Chirana® 2-part disposable syringes

Vol. (ml)	Pcs./Box	Pcs./Carton	Article No.
2	100	2800	CH002L
5	100	1900	CH005L
10	100	1200	CH010L
20	80	960	CH020L

Shelf life 5 years

Chirana® 2-part disposable syringes with needles

Specification	Pcs./Box	Pcs./Carton	Article No.
2 ml with needle 0.60 x 30 mm (23G x 1 1/4")	100	2800	CH002L0630
5 ml with needle 0.70 x 35 mm (22G x 1 2/5")	100	1900	CH005L0735
10 ml with needle 0.80 x 40 mm (21G x 1 1/2")	100	1200	CH010L0840
20 ml with needle 0.80 x 40 mm (21G x 1 1/2")	80	960	CH020L0840

Shelf life 5 years

Chirana® 3-part disposable syringes and Chirana® 3-part disposable syringes with needles

Chirana® 3-part disposable syringes without and with needle are made of polypropylene, polyethylene and lubricated synthetic rubber. ThEYare pyrogen-free, latex-free, DEHP-free, PVC-free and non-toxic. The syringes are available with Luer and Luer lock. The syringe with needle is available in other needle combinations.

USER CONVENIENCE:

Ergonomic design, smooth flow, highly transparent barrel, tight, black extended graduation and easy to read.

USER SAFETY:

Individually blister packed and the needle is side-packed in a single blister package.

COMFORT:

Designed tip for best connection, scratch-free for glove manipulation and centrically positioned Luer lock tip.

PATIENT SAFETY:

Single-use only. Sterilised by ETO. Low dead space volume for 1 ml.

Chirana® 3-part disposable syringes

Vol. (ml)	Pcs./Box	Pcs./Carton	Article No. LUER	Article No. LUER LOCK
1	100	2000	CH03001L	CH03001LL
2	100	3000	CH03002L	CH03002LL
3	100	3000	CH03003L	CH03003LL
5	100	2400	CH03005L	CH03005LL
10	100	1600	CH03010L	CH03010LL
20	50	800	CH03020L	CH03020LL
30	50	400	CH03030L	CH03030LL
60		100	CH03050L	CH03050LL

Shelf life 5 years

Chirana® 3-part disposable syringes with needles

Specification	Pcs./Box	Pcs./Carton	Article No.
2 ml with needle 0.60 x 30 mm (23G x 1 1/4")	100	3000	CH03002L0630
5 ml with needle 0.70 x 30 mm (22G x 1 1/4")	100	2400	CH03005L0730
10 ml with needle 0.80 x 40 mm (21G x 1 1/2")	100	1600	CH03010L0840
20 ml with needle 0.80 x 40 mm (21G x 1 1/2")	50	800	CH03020L0840

Shelf life 5 years

Chirana® Perfusion 3-part syringes

Chirana® Perfusion 3-part syringes are made of polypropylene and lubricated synthetic rubber. They are pyrogen-free, latex-free, DEHP-free, PVC-free and non-toxic. They are intended for perfusion applications and available in transparent, opaque and black and with aspiration needle and filter needle.

USER CONVENIENCE: Black graduation, easy to read and double graduation on barrel and piston. Compatible with perfusion pumps and dialysis units of world leader manufacturers.

PATIENT SAFETY: Single-use only. Sterilised by ETO.

Specification	Pcs/Carton	Article No.
20 ml transparent for dialysis machine use	100	CH03020PT
30 ml transparent for dialysis machine use	100	CH03030PT
50 ml transparent	100	CH03050PT
50 ml opaque	100	CH03050PO
50 ml transparent BB	100	CH03050PTB
50 ml opaque BB	100	CH03050POB
50 ml transparent with needle 2 x 30 mm	100	CH030502030PT
50 ml transparent BB with needle 2 x 30 mm	100	CH030502030PTB
50 ml opaque BB with needle 2 x 30 mm	100	CH030502030POB
50 ml black BB with needle 2 x 30 mm	100	CH030502030PBB

Shelf life 5 years

Chirana® 3-part disposable Catheter syringes

Chirana® 3-part disposable Catheter syringes are made of polypropylene and lubricated synthetic rubber. They are pyrogen-free, latex-free, DEHP-free, PVC-free and non-toxic. The syringes are intended for irrigation application and available in Catheter tip and with Luer adapter for wider application range.

USER CONVENIENCE:

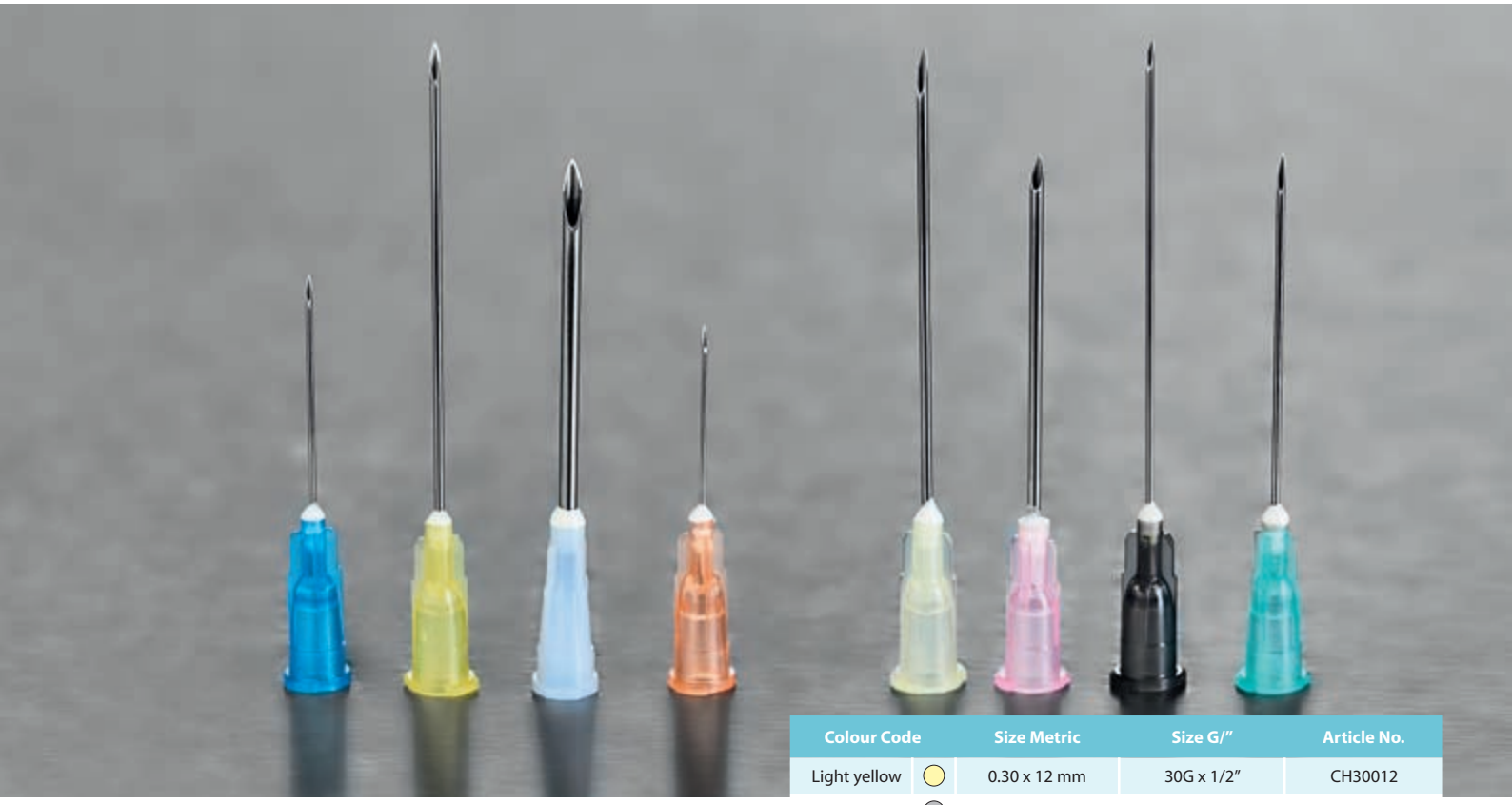
Ergonomic design, smooth flow, highly transparent barrel, tight, black extended graduation and easy to read.

COMFORT: Designed tip for best connection and scratch-free for glove manipulation.

PATIENT SAFETY: Single-use only. Sterilised by ETO.

Specification	Pcs/Box	Pcs/Carton	Article No.
50 ml Catheter		100	CH03050C
50 ml Catheter with Luer adapter		100	CH03050CLA
100 ml Catheter with Luer adapter	25	100	CH03100C
150 ml Catheter Janette®		50	CH03150CS

Shelf life 5 years



Medoject® needles

Medoject® needles are made of polypropylene hub and stainless steel tube. ThEYare pyrogen-free, latex-free, DEHP-free, PVC-free and non-toxic. The needles are intended for intramuscular, subcutaneous, intravenous and intra-arterial application. ThEYare individually packed in boxes of 100 pcs, cartons of 4000 pcs.

USER CONVENIENCE:

Colour-coded transparent hub for flow visual control, metric and gauge measurements on packaging and mainly thin wall tube material.

USER SAFETY:

Safety needle is available.

COMFORT:

Grinded, precision lancet point and silicone treated for smooth penetration.

PATIENT SAFETY:

Single-use only. Sterilised by ETO.

Medojec® Hypodermic needles

Medoject® Hypodermic needles are intended for intramuscular, subcutaneous, intravenous and intra-arterial application. There is possibility of short bevel lancet point grinding.

Colour Code	Size Metric	Size G/"	Article No.
Light yellow	0.30 x 12 mm	30G x 1/2"	CH30012
Grey	0.40 x 12 mm	27G x 1/2"	CH27012
Grey	0.40 x 20 mm	27G x 4/5"	CH27045
Grey	0.40 x 40 mm	27G x 1 1/2"	CH27112
Brown	0.45 x 16 mm	26G x 5/8"	CH26058
Brown	0.45 x 25 mm	26G x 1"	CH26100
Orange	0.50 x 16 mm	25G x 5/8"	CH25058
Orange	0.50 x 20 mm	25G x 4/5"	CH25045
Orange	0.50 x 25 mm	25G x 1"	CH25100
Purple	0.55 x 25 mm	24G x 1"	CH24100
Blue	0.60 x 16 mm	23G x 5/8"	CH23058
Blue	0.60 x 25 mm	23G x 1"	CH23100
Blue	0.60 x 30 mm	23G x 1 1/4"	CH23114
Black	0.70 x 25 mm	22G x 1"	CH22100
Black	0.70 x 30 mm	22G x 1 1/4"	CH22114
Black	0.70 x 40 mm	22G x 1 1/2"	CH22112
Green	0.80 x 16 mm	21G x 5/8"	CH21058
Green	0.80 x 25 mm	21G x 1"	CH21100
Green	0.80 x 30 mm	21G x 1 1/4"	CH21114
Green	0.80 x 40 mm	21G x 1 1/2"	CH21112
Yellow	0.90 x 25 mm	20G x 1"	CH20100
Yellow	0.90 x 30 mm	20G x 1 1/4"	CH20114
Yellow	0.90 x 40 mm	20G x 1 1/2"	CH20112
Ivory	1.10 x 25 mm	19G x 1"	CH19100
Ivory	1.10 x 40 mm	19G x 1 1/2"	CH19112
Pink	1.20 x 25 mm	18G x 1"	CH18100
Pink	1.20 x 40 mm	18G x 1 1/2"	CH18112
Red purple	1.50 x 50 mm	17G x 2"	CH17200
White	1.60 x 25 mm	16G x 1"	CH16100
White	1.60 x 40 mm	16G x 1 1/2"	CH16112
Blue grey	1.80 x 40 mm	15G x 1 1/2"	CH15112

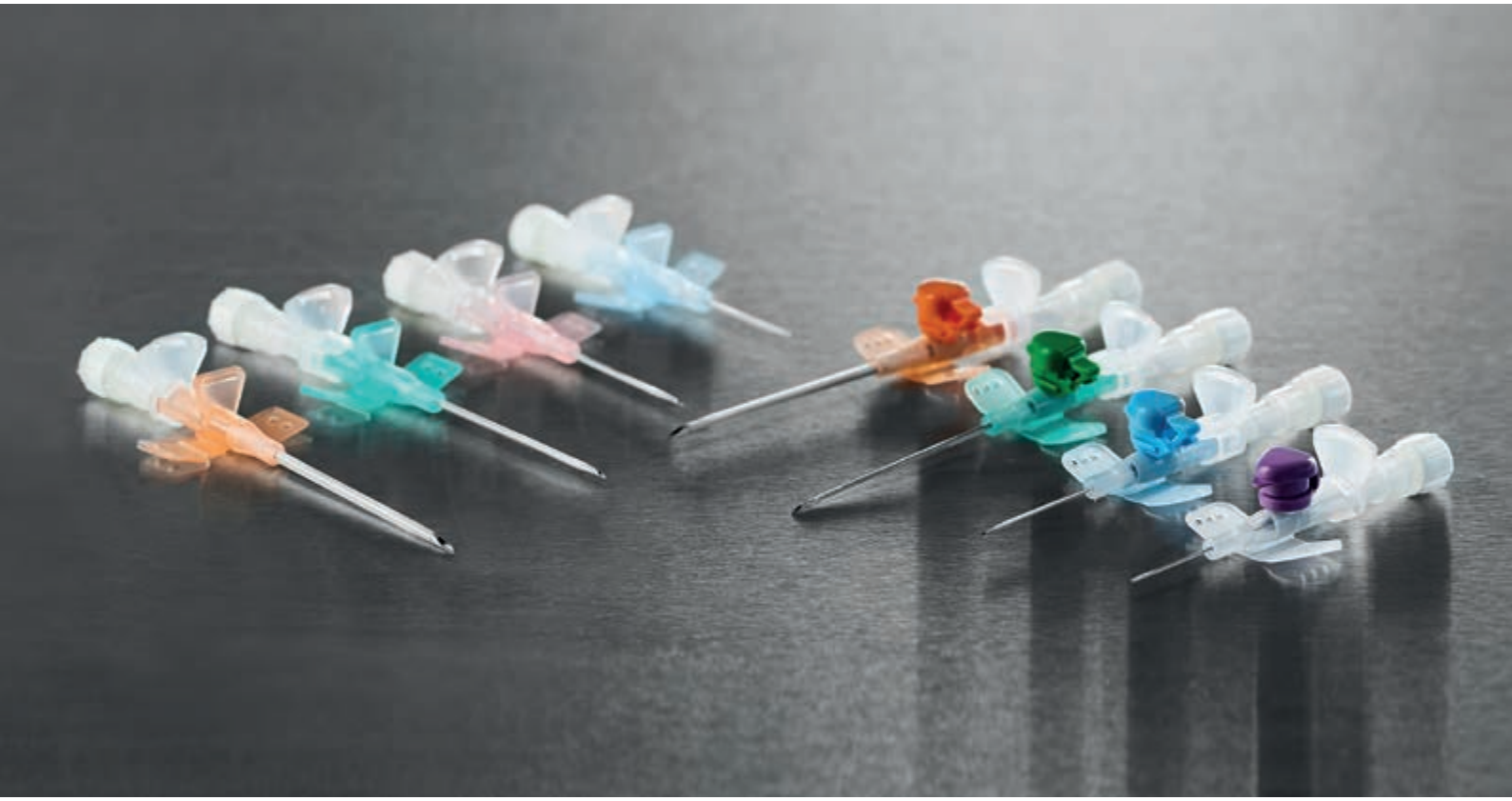
Shelf life 5 years

Chiraflex® Scalp vein sets

Chiraflex® Scalp vein sets are intended for shorter time infusion. The set includes a stainless steel needle with a length of 20 mm and a 30 cm plastic tube.

Colour Code		Size	Diameter (mm)	Pcs./ Box	Pcs./ Carton	Article No.
Blue		23G x 3/4"	0.60	100	2000	CH260001123
Green		21G x 3/4"	0.80	100	2000	CH260001121
Ivory		19G x 3/4"	1.10	100	2000	CH260001119

Shelf life 5 years



Chiraflex® IV Cannulas and Chiraflex® Safety IV Cannulas

Chiraflex® IV Cannulas and Chiraflex® Safety IV Cannulas are intended for peripheral vascular application. The catheter is made from Teflon material and available in Safety. ThEYare pyrogen-free, latex-free, DEHP-free, PVC-free and non-toxic. ThEYare packed in boxes of 50 pcs, cartons of 1000 pcs.

USER CONVENIENCE:

Ompatible with all standard medical devices for wide application.

USER SAFETY: Safety cannula is available.

PATIENT SAFETY: Single-use only. Sterilised by ETO.

Colour Code	Size G/″	Size Metric	Article No. With Port With Wings	Article No. Without Port With Wings	Article No. Without Port Without Wings	Article No. SAFETY With Port With Wings
Purple	26G	0.60 x 19mm	CHFX0102619	CHFX0202619	CHFX0302619	CHFXS0102619
Yellow	24G	0.70 x 19mm	CHFX0102419	CHFX0202419	CHFX0302419	CHFXS0102419
Blue	22G	0.90 x 25mm	CHFX0102225	CHFX0202225	CHFX0302225	CHFXS0102225
Pink	20G	1.10 x 32mm	CHFX0102032	CHFX0202032	CHFX0302032	CHFXS0102032
Green	18G	1.30 x 45mm	CHFX0101845	CHFX0201845	CHFX0301845	CHFXS0101845
White	17G	1.50 x 45mm	CHFX0101745	CHFX0201745	CHFX0301745	CHFXS0101745
Grey	16G	1.70 x 45mm	CHFX0101645	CHFX0201645	CHFX0301645	CHFXS0101645
Orange	14G	2.10 x 45mm	CHFX0101445	CHFX0201445	CHFX0301445	CHFXS0101445

Shelf life 5 years

Chiraplus® Infusion set

Chirapluso® Infusion sets include 15 µm filter, ventilation port and Luer lock adapter. Chiraplus® P is intended for pressure infusion and does not include flash ball. Chiraplus® G is intended for gravity infusion and includes flash ball.

Product	Chamber Vol. (ml)	Tube length (mm)	Packaging Type	Pcs./Carton	Article No.
Chiraplus® P	10.5	1500	Blister	100	CHP336
Chiraplus® G	8.5	1500	Poly bag	500	CHG318
Chiraplus® G with needle	8.5	1500	Poly bag	500	CHG319
Chiraplus® G with metal spike	8.5	1500	Poly bag	500	CHG316

Shelf life 5 years

Chirahem® Transfusion set

Chirahem® Transfusion set is intended for blood transfusion administration. The set has a 200 µm blood filter.

Product	Chamber Vol. (ml)	Tube length (mm)	Packaging Type	Pcs./Carton	Article No.
Chirahem®	17	1500	Poly bag	300	CHT320
Chirahem® with needle	17	1500	Poly bag	300	CHT321
Chirahem® latex free	17	1500	Blister	100	CHT518

Shelf life 5 years

Accessories IV Administration

Within IV Administration for Chiraplus® Infusion set and Chirahem® Transfusion set we offer following accessories:

CHIRAPLUS® SPIKES:
Intended for comfortable and safe drug manipulation.

CHIRAPLUS® INJECTION PORTS:
Offer additional drug admi-nistration when applied with other devices.

CHIRAPLUS® STOPPERS:
Give a short-term option for storage or transfer of solution.

CHIRALINE® EXTENSION LINES:
Extension tubing in 45 cm or 180 cm, where Luer lock ends are available.

CHIRAWAY® 3-WAY STOPCOCK:
Available in standard or lipid resistant material with colour-coding differentiation.

Product	Pcs./Box	Pcs./Carton	Article No.
Infusion spike Red air 0.1 µm + 5 µm solution filter	100	1000	CHIS01
Infusion spike Blue air 0.1 µm + 5 µm solution filter	100	1000	CHIS02
Infusion spike Green air 0.1 µm filter	100	1000	CHIS03
Injection port	100	5000	CHIP01
Combistopper Red	100	5000	CHCS01
Combistopper Blue	100	5000	CHCS02
Combistopper White	100	5000	CHCS03
Stopper Luer lock	100	5000	CHLL01
Chiraline® 450	120	960	CHL318045
Chiraline® 1800	85	680	CHL318180
Chiraway® Standard	50	1000	CHW001
Chiraway® Lipid resistant	50	1000	CHW002

Shelf life 5 years

Safety Containers

Safety Containers are designed for hospitals and healthcare institutions for clinical disposal of lancets, needles, scalpels, syringes and other types of sharps. Each type of lid is specially designed to help the user dispose needles, syringes, etc. lid with reversible closure can be safely fixed.

Technical Specifications

Description	Size	Content	Article No.
Safety container	4.7 cm x 12.9 cm	0.2 l.	193800
Safety container	9 cm x 10.8 cm	0.5 l.	194000
Safety container	13.7 cm x 12.5 cm	1.5 l.	194200
Safety container	13.7 cm x 18 cm	2 l.	194300
Safety container	21.1 cm x 19.5 cm	5 l.	194700

Notes

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