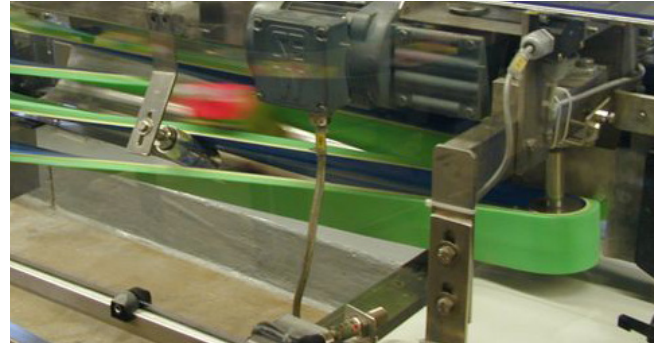
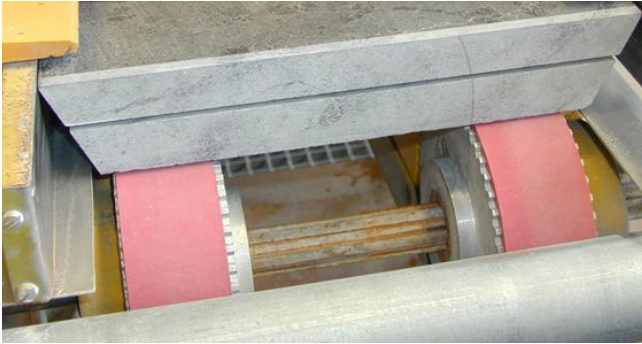


# Covering Materials



# Covering Materials



The range of Ammeraal Beltech covering materials consists of more than 60 different types divided into 4 product segments:

## **rubber, PU & PVC, cellular and special covering materials**

From the range various materials can be selected:

- Materials from very soft to extremely hard.
- Materials with cellular, fabric, felt or solid compositions.
- Materials with extremely high grip or contrary very low grip.
- Materials with antimicrobial and food quality characteristics.
- Materials with high oil, fat and chemical resistance.
- Materials with excellent abrasion, tear and wear resistance.

Outstanding mechanical and chemical properties together with special fabrication techniques lead to high-performance operation and precision, allowing us to customise belts for specific applications.

## **Bonding methods**

- Several methods to bond cover materials on to timing belts depending on combinations.
- Methods from simple glueing to special casting treatment.
- Covers can be bonded with or without any seam or joint depending on material type and construction.
- Please consult Ammeraal Beltech experts for further information.

## **Custom fabrication**

- Surface grinding to get even and exact cover thickness.
- Full range of machining operations like grooves and slots, either longitudinal or crosswise.
- Perforations by water jet cutting, punching or drilling.
- Combinations of covers, e.g. to achieve a soft material topped with a wear resistant outer cover.
- Final slitting to get required belt widths with non-fraying and precise edges.
- Embossing possible with specific cover materials to get e.g. light pattern surface for better grip.
- All above fabrications precisely according to drawings.

## Pulley diameters

- Minimum pulley diameter can be calculated with „pulley factor“ mentioned in the table.
- Material thickness x pulley factor = minimum pulley diameter (approx.) for the finished covered belt.
- In general, the smaller the pulley, the thinner the cover needs to be.
- More flexibility can be achieved by cross slotting.

**Note: the pulley diameter for the covered timing belt must be greater than or equal to the minimum pulley diameter for a basic timing belt. Please consult Ammeraal Beltech experts for further information.**

## Temperature range

- Maximum contact temperature: mentioned in the table (short time +10°C).
- Minimum contact temperature: -10°C for all cover materials. However properties of materials vary highly under low temperatures, therefore please consult Ammeraal Beltech experts for further information when the temperature is below -10°C (special cold resistant covers are available).
- Cover material, base belt and the bonding method all together specify the operation and contact temperature range.

## Coefficient of friction

- Static approximate value against steel mentioned in the table.
- By fabrication methods friction values can be increased or decreased.
- For further information, please contact Ammeraal Beltech.

## Colors

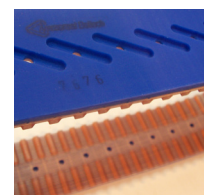
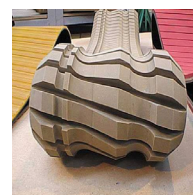
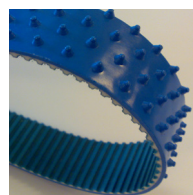
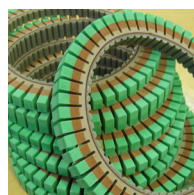
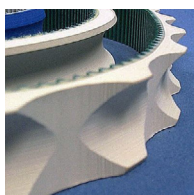
- Subject to change without notice.
- Custom colors are available on request.

## Chemical resistance

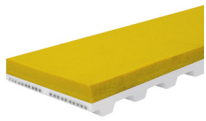
- Indication for "oil and fat resistance" in the table is only normative.
- The concentration and the temperature of the chemical has great influence on material resistance.
- For further information, please contact Ammeraal Beltech.

## Other guidelines

- Some covering materials have excellent good non-stick and release properties.
- Very often high cut, tear and abrasion characteristics are required.
- Antistatic properties should be considered particularly in electronic industry applications.
- Hygienic antimicrobial food quality materials are available for various food industry applications.
- Belts for vacuum applications require specific cover materials and fabrication to get holes, slots and possible vacuum lanes on the tooth side.
- Varying levels of cushioning and durability through material thickness and whardness selection.



# Covering Materials: Rubber



**NRS 035 yellow**  
Natural rubber, excellent grip with good abrasion resistance



**PBS 060 white FG**  
Nitrile rubber, oil and fat resistant synthetic rubber, food quality



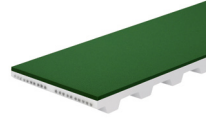
**NRS 040 red**  
Natural rubber, high grip, good wear and abrasion resistance



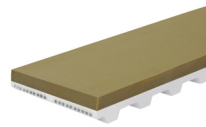
**NTS 060 black**  
Nitrile rubber, very good wear and abrasion resistance under high temperatures, oil and fat resistance



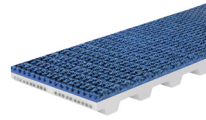
**NRS 040 white FG**  
Natural rubber, high grip, good wear and abrasion resistance, food quality



**NTS 070 green**  
Nitrile rubber, oil and fat resistant, good grip, light fabric texture surface, good wear and abrasion resistance



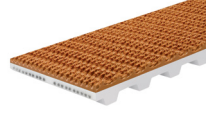
**NRS 040 beige**  
Synthetic rubber, high grip, excellent for profiling and grooving, high tear and abrasion resistance



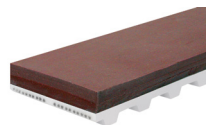
**CXS 065 C37 blue**  
Nitrile rubber, high wear and abrasion resistance, oil and fat resistance, C37 supergrip pattern



**NRS 060 red**  
Natural rubber, high wear and abrasion resistance, good cut and tear resistance



**SRS 040 C37 tan**  
Synthetic rubber, high wear and abrasion resistance, sensitive grip, C37 supergrip pattern



**NRS 070 purple**  
Natural rubber, excellent wear and abrasion resistance, high cut and tear resistance



**SRS 040 P19 white**  
Synthetic rubber, good wear and abrasion resistance, good grip, P19 nipple pattern

Rubber											
Type	Material	Hardness [ ° ShA ]	Density [ kg / m <sup>3</sup> ]	Color	Max. contact temperature [ ° C ]	Oil and fat resistance	Coeff. of friction	Food grade	Pulley factor	Standard thickness [ mm ]	
NRS 035 yellow	natural rubber	35	990	yellow	+65	low	1.2	no	13	3, 4, 5, 6, 8, 10, 12, 15, 20, 25, 30	
NRS 040 red	natural rubber	40	980	red	+70	low	1.0	no	15	1.6, 2.4, 3.2, 5, 6, 8, 10, 12, 15	
NRS 040 white FG	natural rubber	40	1000	white	+70	limited	1.0	yes	15	2, 3, 5, 6, 8, 10	
NRS 040 beige	synthetic rubber	40	1000	beige	+70	low	1.1	no	15	4, 6, 8, 10, 12, 15	
NRS 060 red	natural rubber	60	1100	red	+75	low	0.9	no	17	3, 5, 6, 8, 10, 12, 20, 25	
NRS 070 purple	natural rubber blend	70	1130	purple	+75	limited	0.6	no	20	3, 4, 5, 6, 8, 10, 12, 15, 20, 25	
PBS 060 white FG	nitrile rubber	60	1300	white	+80	good	0.8	yes	18	3, 4, 5, 6, 8, 10	
NTS 060 black	nitrile rubber	60	1300	black	+110	good	0.7	no	18	4, 6, 8, 10, 12	
NTS 070 green	nitrile rubber	70	1200	green	+100	good	0.7	no	25	1, 2	
CXS 065 C37 blue	nitrile rubber	65	750	blue	+120	excellent	0.9	no	20	4.3	
SRS 040 C37 tan	synthetic rubber	40	800	tan	+80	limited	1.0	no	15	4.3	
NTS 050 C37 red	nitrile rubber	50	1200	red	+120	excellent	0.7	no	20	4.3	
SRS 040 P19 white	synthetic rubber	40	1700	white	+80	limited	na	no	20	2	

# Covering Materials: PU & PVC



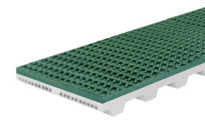
**PUS 060 blue**  
Polyurethane, high grip, flexible, very tough, embossing possible



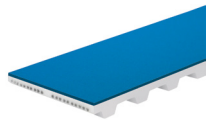
**PUS 080/BS white**  
Polyurethane, excellent cut and wear resistant, good oil and chemical resistance



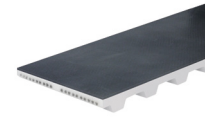
**PUS 080 transparent FG**  
Polyurethane, high grip, high abrasion resistance, cut and tear resistance, embossing possible



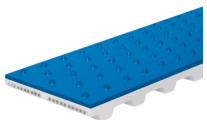
**PVS 030 P6 green**  
PVC, good chemical resistance, high grip, P6 supergrip pattern



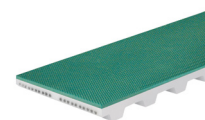
**PUS 085 blue AM FG**  
Polyurethane, good abrasion resistance, excellent oil and fat resistance, antimicrobial, food quality



**PVS 032 black AS FR**  
PVC, high grip, antistatic, flame retardant, embossing possible



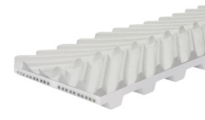
**PUS 085 A16 blue AM FG**  
Polyurethane, good abrasion resistance, excellent oil and fat resistance, antimicrobial, A16 pattern



**PVS 035 blue:**  
PVC, high grip, limited oil and grease resistance, embossing possible



**PUS 085 A5 blue FG**  
Polyurethane, good abrasion resistance, excellent oil and fat resistance, A5 nipple pattern



**PVS 065 P27 white FG**  
PVC, good oil and grease resistance, good chemical resistance, P27 fish bone pattern



**PUS 092 white**  
Polyurethane, excellent abrasion resistance, good oil and fat resistance



**PVS 065 P13 white**  
PVC, good oil and grease resistance, good chemical resistance, P13 sawtooth pattern

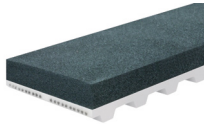
PU & PVC										
Type	Material	Hardness [ ° ShA ]	Density [ kg / m³ ]	Color	Max. contact temperature [ °C ]	Oil and fat resistance	Coeff. of friction	Food grade	Pulley factor	Standard thickness [ mm ]
PUS 060	Polyurethane	60	1150	blue, black	+80	good	0.9	no	25	2.5
PUS 080 transparent FG	Polyurethane	80	1110	transp.	+80	good	0.8	yes	30	1, 2, 3, 4
PUS 085 white FG	TPU Ropanyl	85	1230	white	+90	excellent	0.6	yes	30	2
PUS 085 blue AM FG	TPU Ropanyl	85	1230	blue	+90	excellent	0.6	yes	30	1.5
PUS 085 A16 blue AM FG	TPU Ropanyl	85	860	blue	+90	excellent	na	yes	20	2.5
PUS 085 A5 blue FG	TPU Ropanyl	85	950	blue	+90	excellent	na	yes	20	3.5
PUS 092 white	Polyurethane	92	1300	white	+80	excellent	0.6	no	30	2, 3
PUS 080/BS white	PU Ropan BS	80	1000	white	+80	good	0.4	no	25	2, 3, 4
PVS 030 P6	PVC Flexam	30	780	blue, green	+90	limited	0.9	no	15	4
PVS 032 black AS FR	PVC Flexam	32	1150	black	+90	limited	1.1	no	20	2
PVS 035 blue	PVC Flexam	35	1390	blue	+90	limited	1.1	no	20	1, 2, 3
PVS 065 P27 white FG	PVC Nonex	65	660	white	+90	good	na	yes	18	4
PVS 065 FG	PVC Nonex	65	1330	blue, white	+90	good	0.7	yes	25	2, 3, 4
PVS 065 blue AM FG	PVC Nonex	65	1330	blue	+90	good	0.7	yes	25	1.5
PVS 065 P13 white	PVC Nonex	65	750	white	+90	good	na	yes	18	4

# Covering Materials: Cellular



## NRS 160 grey

Natural rubber, open cellular construction, high resilience, high elasticity and porosity, compressible



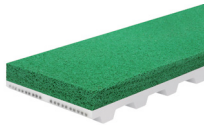
## NRS 200 black

Natural rubber, open cellular construction, high grip, high resilience, high elasticity and porosity, compressible



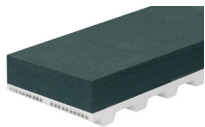
## NRS 250 orange

Natural rubber, open cellular construction, non marking, high resilience, high elasticity and porosity



## NRS 270 green

Natural rubber, open cellular construction, high grip, non marking, high resilience



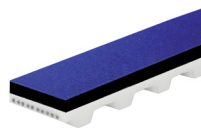
## NES 330 black

Neoprene rubber, closed cellular construction, very high grip, good oil and chemical resistance



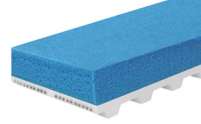
## NES 675 black

Neoprene rubber, closed cellular construction, very high grip, good aging and compression resistance



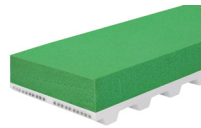
## FBS 160 blue

Closed cellular neoprene rubber covered by premium stretch fabric, low friction surface



## PUS 220 blue

Polyurethane, low density partially closed cellular construction, good oil and fat resistance



## PUS 300 green

Polyurethane, medium density partially closed cellular construction, good abrasion resistance



## PUS 400 brown:

Polyurethane, high density partially closed cellular construction, good abrasion resistance



## PUS 400 beige

Polyurethane, high density closed cellular construction, excellent wear resistance



## PUS 600 yellow

Polyurethane, very high density fully closed cellular construction, good wear and abrasion resistance

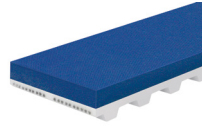
Cellular Type	Material	Hardness [ ° ShA ]	Density [ kg / m <sup>3</sup> ]	Color	Max. contact temperature [ °C ]	Oil and fat resistance	Coeff. of friction	Food grade	Pulley factor	Standard thickness [ mm ]
NRS 160	natural sponge rubber	-	160	orange, grey	+65	low	1.0	no	6	5, 10, 15, 20, 25, 30
NRS 200	natural sponge rubber	-	200	orange, black	+65	low	1.0	no	6	3, 5, 8, 10, 15,
NRS 250 orange	natural sponge rubber	-	250	orange	+65	low	1.0	no	8	5, 10, 15, 20, 25, 30
NRS 270 green	natural sponge rubber	-	270	green	+65	low	1.0	no	8	5, 10, 15
NES 330 black	neoprene sponge rubber	-	330	black	+85	good	1.3	no	10	5.5, 7, 10.5, 13, 30
NES 675 black	neoprene sponge rubber	-	675	black	+100	good	0.9	no	12	5.5, 7, 10.5, 14, 22
FBS 160 blue	fabric covered cellular neoprene	-	160	blue	+70	good	0.3	no	15	3, 6
PUS 220 blue	cellular polyurethane	-	220	blue	+70	good	0.5	no	12	5, 7, 11, 12, 14, 25
PUS 300 green	cellular polyurethane	-	300	green	+70	good	0.5	no	14	4, 5, 7, 10, 11, 12, 14, 25
PUS 400 brown	cellular polyurethane	-	400	brown	+70	good	0.5	no	15	3, 5, 11, 12, 14, 25
PUS 400 beige	cellular polyurethane	-	400	beige	+80	good	0.3	no	16	1, 2, 3, 4, 5, 6
PUS 600 yellow	microcellular polyurethane	50	600	yellow	+70	excellent	0.4	no	20	2, 3, 4, 5, 6, 8, 10

# Covering Materials: Special



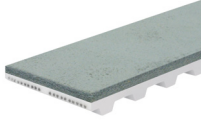
## PRS 060 blue

Technopolymer, high grip, good abrasion resistance, light embossing possible, silicon-free, good flexibility at low temperatures



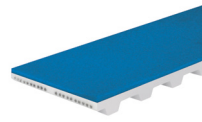
## SLS 060 blue

Silicone rubber, good wear and abrasion resistance, self-releasing surface



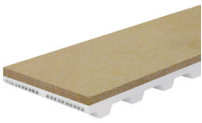
## CLS 999 grey

Chrome leather, high abrasion resistance, medium grip, good for oily and greasy circumstances



## SLC 030 blue FG

Silam silicone rubber, excellent tear strength, high grip, self-releasing surface, food quality



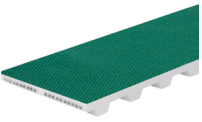
## NPS 055 brown

Needle punched polyester fabric, low grip, high abrasion and wear resistance



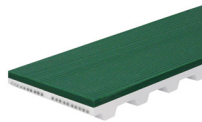
## KFS 999 yellow

Aramid felt, heat resistant, good abrasion resistance, good oil and fat resistance



## PAS 778 green

Low friction and low noise nylon fabric, excellent wear resistance, good oil and chemical resistance



## ELS 060 green

Technopolymer, high grip, good oil and fat resistance, excellent abrasion and tear resistance



## PLS 035 red

Pletex poly blend, high grip, limited oil and grease resistance, embossing possible



## ELS 060 A34 green

Technopolymer, excellent abrasion and tear resistance, A34 supergrip pattern



## AMS 090 A16 ivory

Polyester, good abrasion resistance, excellent oil and fat resistance, A16 nipple pattern

Special											
Type	Material	Hardness [ ° ShA ]	Density [ kg / m³ ]	Color	Max. contact temperature [ °C ]	Oil and fat resistance	Coeff. of friction	Food grade	Pulley factor	Standard thickness [ mm ]	
PRS 060	thermoplastic technopolymer	60	1030	red, blue	+80	good	0.9	no	25	2,3	
CLS 999 grey	chrome leather	-	930	grey	+80	excellent	0.8	no	30	3	
NPS 055 brown	needle punched polyester fabric	-	560	brown	+80	good	0.4	no	25	2,5	
PAS 778 green	nylon fabric	-	220	green	+80	good	0.3	no	-	0,3	
PLS 035 red	Pletex poly blend	35	1385	red	+90	limited	0.9	no	20	2, 3, 4	
AMS 090 A16 ivory	Amtel polyester	90	450	ivory	+100	excellent	na	yes	30	2,5	
SLS 060 blue	silicone rubber	60	1600	blue	+220	good	0.6	no	17	3,2, 4,5, 7,0	
SLC 030 blue FG	silicone rubber Silam	30	1120	blue	+250	excellent	1.3	yes	15	1-10	
KFS 999 yellow	Aramid felt	-	320	yellow	+250	good	0.3	no	na	10	
ELS 060 green	Elastonyl technopolymer	60	1060	green	+80	good	0.9	no	25	2, 3, 4	
ELS 060 A34 green	Elastonyl technopolymer	60	1060	green	+80	good	0.7	no	20	4	

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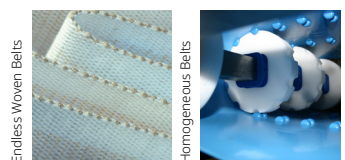
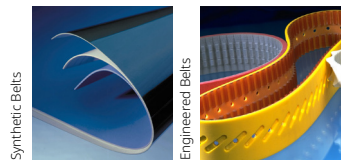
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