

morssinkhof Sustainable Products



A new generation of

rPET based industrial yarns

Discover industrial yarns based on recycled polymer made from post consumer and industrial plastics.

For industries that want to keep up with the increasing demands from customers with a sustainable lifestyle.



High product quality and a better world can go together

At Morssinkhof Sustainable Products we believe industrial progress is important, but the wellbeing of our world is essential. We contribute by converting used plastics into recycled PET based industrial yarns (rPET). High quality and sustainability can go well together. Just use rPET based industrial yarn.

Morssinkhof Sustainable Products is part of the Morssinkhof Rymoplast Group, one of Europe's largest producers of high grade recycled raw materials. Our company serves the European market, ranging from small companies in the plastic processing industry to the world's largest multinational corporations.

About

Various applications for rPET based industrial yarns

PET yarns are used as reinforcement in almost all industrial products. And that's not a coincidence. These yarns have a **high strength** and are **recyclable over and over again**. PET industrial yarn is usually oil based, but at Morssinkhof Sustainable Products we produce PET industrial yarns in a different way. We don't use the scarce oil of our planet, but we make our yarns from recycled polymer.

Because our rPET yarns can have the same properties as industrial yarns made from virgin PET polymer, you can use it in **fabrics, geotextiles, hoses, narrow woven belts, netting, ropes, slings, strapping** and **more**. Morssinkhof Sustainable Products produces clear, light-blue, green and black rPET yarns with properties that are suitable for various (food contact) applications.

Develop your own tailor-made yarn

Would you like to develop tailor-made rPET industrial yarn for a new product, but do you only need a limited quantity of yarn? At Morssinkhof Sustainable Products this is possible. We have our own Pilot Spin facilities and access to the know how of the former AKZO and Diolen Industrial Fibers R&D. Therefore we can develop new high quality rPET yarns that are backed by science. But we also can develop and produce yarns based on other polymers like PLA, PA, PBS, etc.

Are you interested?

Contact us for more information.



Terminology

Physical parameters

(defined according to BISFA)

LD	Linear density - dtex
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The mass per unit length of an essentially linear structure.
(1 dtex = 1g/10,000m)

BF	Breaking force - N
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The maximum force applied to a test specimen carried to rupture during a tensile test under specified conditions
(Synonym: force at break)

BT	Breaking tenacity - mN/tex
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The breaking force divided by linear density
(Synonym: tenacity at break)

€AB	Elongation at break - %
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The elongation of a test specimen produced by the breaking force.

€ASF	Elongation at specified force - %
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The elongation of a test specimen produced by a specified force

HAS	Hot air shrinkage - %
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The decrease in length of a test specimen caused by a treatment in hot air under specified temperature and time, expressed as a percentage of the length of the untreated test specimen. The lengths are measured before (under a specified pretension) and during treatment (under a specified measuring tension).

Abbreviations used in yarn types

N After Oil or Marine Finish

T Tangled

Conversion table for different properties (frequently used SI and other Units)

Property	SI Unit	Other Units	Conversion
Breaking force	Newton N	Pound-force lbf	1 N \approx 0.225 lbf 1 lbf \approx 4.448 N
Linear Density	Decitex dtex	Denier den	1 dtex = 0.909 den 1 den \approx 1.100 dtex
Tenacity	Millinewton per tex mN/tex	Grams per denier g/d	1 mN/tex \approx 0.011 g/d 1 g/d \approx 88.261 mN/tex
Dimension	Millimeter mm	Inches inch	1 mm \approx 0.039 mm 1 inch = 25.4 mm
Twist	Twist per meter tpm	Twist per inch tpi	1 tpm = 0.025 tpi 1 tpi \approx 39.370 tpm



MOPET-r Yarn 4855T

Clear

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“rPET based yarn contributes to a lower carbon footprint of your products, making them more sustainable and environmentally friendly compared to virgin PET yarn.”

Properties

Linear density (nominal)	Filaments	Linear density	Breaking force	Breaking tenacity	Elongation at break	EASF	HAS 2 min. 180° C
dtex	#	dtex	N	mN/tex	%	% (xN)	%
1100	210	1115	90.5	812	11.0	5.0 (45N)	8.0
1670	210	1685	132.3	785	11.7	5.8 (68N)	7.5
2200	210	2220	172.7	778	11.9	5.8 (90N)	8.1
3300	420	3310	260.2	786	12.4	6.6 (135N)	7.7

Clear rPET industrial yarn properties

**Would you like to develop an industrial yarn with properties that are not mentioned in this brochure?
Contact us.**

Main applications

Broad fabrics	Narrow woven belts	Slings
Geotextiles	Netting	Strapping
Hoses	Ropes	

Twisting and Make-up

Package type: cylindrical bobbins

Pallet dimension: 105 / 100 / 120 cm (H/L/W)

Linear density (nominal)	Filaments	Twist	Package weight	Tube dimension	Bobbin dimension	Bobbins per pallet	Pallet weight
dtex	#	t/m	kg	L / Ø (mm)	Ø (mm)	#	kg
1100	210	0	10.1	293 / 94	250	48	485
1670	210	0	10.1	293 / 94	250	48	485
2200	210	0	10.1	293 / 94	250	48	485
2200	210	0	16.2	293 / 94	320	33	535
3300	420	0	16.2	293 / 94	320	33	535

Special feature

This yarn is approved for food contact applications



MOPET-r Yarn 4835T

Clear

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“By using clear rPET industrial yarn
you automatically contribute to
sustainable entrepreneurship.
Join the new standard.”

Properties

Linear density (nominal)	Filaments	Linear density	Breaking force	Breaking tenacity	Elongation at break	EASF	HAS 2 min. 180° C
dtex	#	dtex	N	mN/tex	%	% (xN)	%
1100	210	1118	84.3	754	13.8	6.6 (45N)	5.3
1670	210	1688	124.1	735	14.9	7.1 (68N)	4.4
2200	210	2238	164.7	736	15.1	7.2 (90N)	5.1
3300	420	3324	244.1	734	15.5	8.0 (135N)	5.0

Clear rPET industrial yarn properties

**Would you like to develop an industrial yarn with properties that are not mentioned in this brochure?
Contact us.**

Main applications

Broad fabrics	Narrow woven belts	Slings
Geotextiles	Netting	Strapping
Hoses	Ropes	

Twisting and Make-up

Package type: cylindrical bobbins

Pallet dimension: 105 / 100 / 120 cm (H/L/W)

Linear density (nominal)	Filaments	Twist	Package weight	Tube dimension	Bobbin dimension	Bobbins per pallet	Pallet weight
dtex	#	t/m	kg	L / Ø (mm)	Ø (mm)	#	kg
1100	210	0	10.1	293 / 94	250	48	485
1670	210	0	10.1	293 / 94	250	48	485
2200	210	0	10.1	293 / 94	250	48	485
2200	210	0	16.2	293 / 94	320	33	535
3300	420	0	16.2	293 / 94	320	33	535

Special feature

This yarn is approved for food contact applications



MOPET-r Yarn 4735T

Light-blue

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“Give your light-blue PET bottle a new life. Morssinkhof Sustainable Products will turn it into rPET yarns that can be recycled over and over again. This is our contribution to a circular economy.”

Properties

Linear density (nominal)	Filaments	Linear density	Breaking force	Breaking tenacity	Elongation at break	EASF	HAS 2 min. 180° C
dtex	#	dtex	N	mN/tex	%	% (xN)	%
1100	210	1116	87.3	782	12.9	6.3 (45N)	5.9
1670	210	1691	129.9	768	13.7	6.8 (68N)	5.2
2200	210	2231	172.2	772	14.1	6.7 (90N)	5.6
3300	420	3328	254.9	766	14.3	7.4 (135N)	5.5

Light-blue rPET industrial yarn properties

**Would you like to develop an industrial yarn with properties that are not mentioned in this brochure?
Contact us.**

Main applications

Broad fabrics
Geotextiles
Hoses

Narrow woven belts
Netting
Ropes

Slings
Strapping

Twisting and Make-up

Package type: cylindrical bobbins

Pallet dimension: 105 / 100 / 120 cm (H/L/W)

Linear density (nominal)	Filaments	Twist	Package weight	Tube dimension	Bobbin dimension	Bobbins per pallet	Pallet weight
dtex	#	t/m	kg	L / Ø (mm)	Ø (mm)	#	kg
1100	210	0	10.1	293 / 94	250	48	485
1670	210	0	10.1	293 / 94	250	48	485
2200	210	0	10.1	293 / 94	250	48	485
2200	210	0	16.2	293 / 94	320	33	535
3300	420	0	16.2	293 / 94	320	33	535

Special feature

This yarn is approved for food contact applications



MOPET-r Yarn 4635T

Green

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“Today’s consumers like products that are made in a sustainable way and are friendly to the environment. rPET fits the lifestyle of the next generation.”

Properties

Linear density (nominal)	Filaments	Linear density	Breaking force	Breaking tenacity	Elongation at break	EASF	HAS 2 min. 180° C
dtex	#	dtex	N	mN/tex	%	% (xN)	%
1100	210	1128	82.5	731	13.9	6.9 (45N)	5.0
1670	210	1698	122.1	719	14.7	7.5 (68N)	4.4
2200	210	2234	161.7	724	14.9	7.6 (90N)	5.1
3300	420	3318	236.9	714	15.2	8.2 (135N)	5.0

Green rPET industrial yarn properties

**Would you like to develop an industrial yarn with properties that are not mentioned in this brochure?
Contact us.**

Main applications

Broad fabrics
Geotextiles
Hoses

Narrow woven belts
Netting
Ropes

Slings
Strapping

Twisting and Make-up

Package type: cylindrical bobbins

Pallet dimension: 105 / 100 / 120 cm (H/L/W)

Linear density (nominal)	Filaments	Twist	Package weight	Tube dimension	Bobbin dimension	Bobbins per pallet	Pallet weight
dtex	#	t/m	kg	L / Ø (mm)	Ø (mm)	#	kg
1100	210	0	10.1	293 / 94	250	48	485
1670	210	0	10.1	293 / 94	250	48	485
2200	210	0	10.1	293 / 94	250	48	485
2200	210	0	16.2	293 / 94	320	33	535
3300	420	0	16.2	293 / 94	320	33	535

Special feature

This yarn is approved for food contact applications



MOPET-r Yarn 4535T

Black

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“Black rPET industrial yarn is made from recycled PET polymer. This polymer originates from several post consumer and industrial sources.”

Properties

Linear density (nominal)	Filaments	Linear density	Breaking force	Breaking tenacity	Elongation at break	EASF	HAS 2 min. 180° C
dtex	#	dtex	N	mN/tex	%	% (xN)	%
1100	210	1129	78.6	696	12.8	7.0 (45N)	5.1
1670	210	1692	114.2	675	13.7	7.6 (68N)	4.5
2200	210	2228	149.4	670	13.4	7.5 (90N)	5.6
3300	420	3326	222.2	668	14.1	8.5 (135N)	5.2

Black rPET industrial yarn properties

Would you like to develop an industrial yarn with properties that are not mentioned in this brochure?
Contact us.

Main applications

Broad fabrics
Geotextiles
Hoses

Narrow woven belts
Netting
Ropes

Slings
Strapping

Twisting and Make-up

Package type: cylindrical bobbins

Pallet dimension: 105 / 100 / 120 cm (H/L/W)

Linear density (nominal)	Filaments	Twist	Package weight	Tube dimension	Bobbin dimension	Bobbins per pallet	Pallet weight
dtex	#	t/m	kg	L / Ø (mm)	Ø (mm)	#	kg
1100	210	0	10.1	293 / 94	250	48	485
1670	210	0	10.1	293 / 94	250	48	485
2200	210	0	10.1	293 / 94	250	48	485
2200	210	0	16.2	293 / 94	320	33	535
3300	420	0	16.2	293 / 94	320	33	535


Special feature

This yarn is approved for food contact applications

Morssinkhof Sustainable Products

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