



INTERNATIONAL TEXTILE MANUFACTURERS FEDERATION
FÉDÉRATION INTERNATIONALE DES INDUSTRIES TEXTILES
INTERNATIONALE VEREINIGUNG DER TEXTILINDUSTRIE

Spinners Committee

Travel Report

Türkiye 2026

From June 3-5, 2026, the ITMF Spinners Committee visited Türkiye on behalf of ITMF, as part of the on-going program of the Committee to visit countries around the world in an effort to strengthen the understanding of the fibre industry including recycled fibres.

The Committee would like to express its appreciation for the warm welcome and the interesting discussions and informative exchange of opinions with all the people the Committee visited and met on the different occasions. The hospitality of all hosts was outstanding and made the whole visit not only very informative, but also very pleasant.

The Committee is very grateful to TTEA (Turkish Textile Employers' Association), especially Mr. Mustafa Denizer, ITMF Vice President and TTEA Board Member, who oversaw the preparation, and Ms. Tuba Kobas Huvaj and her team, who had assisted the Committee with their in-depth expertise and experience of the Turkish textile industry in the detailed planning, preparation and execution of the visit, thus helping to make the visit an outstanding success.

Participants

Mr. Anad Dadashev	Azeripek	Azerbaijan
Ms. Farida Akhundova	Azerbaijan Textile Association	Azerbaijan
Mr. Tural Alizada	Prime Cotton	Azerbaijan
Mr. Vusal Nametov	Prime Cotton	Azerbaijan
Ms. Tathiane Perego da Silveira	ABIT	Brazil
Mr. Gurpreet Singh	Vardhman Textile	India
Ms. Adele Abdoos	Mesdan	Italy
Mr. Asad Khursheed	Gul Ahmed Textile Mills	Pakistan
Mr. Khwaja Rahman	Gul Ahmed Textile Mills	Pakistan
Mr. Amir Sawja	Gul Ahmed Textile Mills	Pakistan
Ms. Anum Zahid	Mahmood Group MG Apparel	Pakistan
Mr. Vineet Pandey	Gherzi Textil Organisation	India
Mr. Amir Sheikh	Gherzi Textile Organisation	Switzerland
Ms. Pia Terasa	Saurer Intelligent Technology	Switzerland
Ms. Tatiana Bondar	S&P Global Inc.	United Kingdom
Mr. Musa Karatas	Kipas fibR-e	Türkiye
Mr. Fatih Yenice	Kipas fibR-e	Türkiye
Mr. Gökhan Tandogan	Kipas	Türkiye

ITMF Secretariat

Mr. Christian Schindler

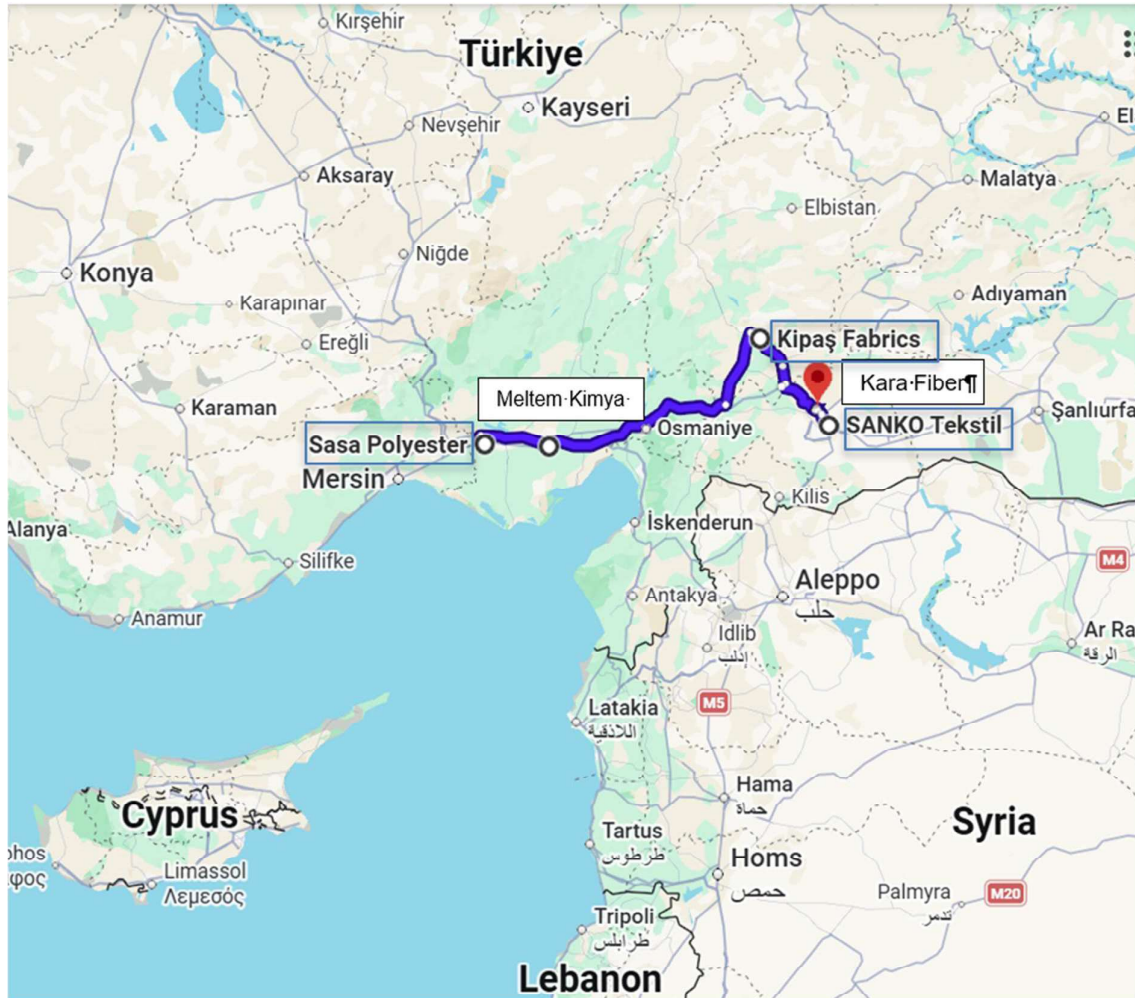
TTEA Secretariat

Ms. Tuba Kobas Huvaj

Mr. Güray Kilinc



From SASA → Meltem Kimya → Kipas Textiles → Sanko Textile → Kara Fiber



Objectives of the visit

- To review the situation of man-made fibre production in Türkiye
- To understand the petrochemical influence on synthetic fibres
- To understand the different recycling technologies applied by companies
- To understand the differences in spinning virgin and recycled fibres
- To understand the downstream demand for yarns made of virgin and recycled fibres

Program

Day 1 in Adana

From June 3-5, 2026, the ITMF Spinners Committee conducted a comprehensive three-day tour of one of Türkiye's central textile and apparel clusters. The visit began with the participants' arrival at Adana Airport on June 3rd, from where the group visited **SASA Polyester Sanayi** (www.sasa.com.tr), one of the world's leading manufacturers of POY, FDY, DTY filament yarns and polyester staple fibres (PSF), PET bottle and textile grade resin and PTA (Purified Terephthalic Acid), with vertically integrated operations extending upstream into raw-material production.

SASA Polyester Sanayi A.Ş. is one of the world's largest integrated polyester producers, with 700 kMT of PSF and 52.5 kMT of bico-PSF, 350 kMT of POY and 175 kMT of DTY, 315 kMT of PET resin, 1750 kMT of PTA production capacity located in Adana site.

New lines for PSF and bico-PSF has strengthen SASA's positions in fibrefill, nonwoven and textile type staple fibre market. Whereas part of the filament yarn capacities operation levels remained challenged by soft demand and overall textile market conditions. PET resin capacity is getting increasingly balanced between bottle-grade and textile-grade products. While historically around 60–65% of PET sales were domestic, exports are becoming more important and are expected to account for about half of sales in 2026. New PET resin unit start up is expected later this year in Gaziantep site.

Recent investments have focused on PTA, strengthening vertical integration. Reliable long-term sourcing of paraxylene (PX) from Middle East and monoethylene glycol (MEG) from the United States ensures stable raw material supply and allows full-capacity operation. Until a new PET plant in Gaziantep starts up, surplus PTA production is sold on the domestic market.

Internal PTA production provides several advantages, including improved polymer quality, lower logistics-related carbon emissions, and an energy-efficient production process. The new facility is now producing more energy than it requires and is also supplying energy to the existing facilities. Looking ahead, SASA is developing the Yumurtalik project, which includes enhanced logistic infrastructure, refinery with PX extraction unit and additional PTA capacity as part of a major long-term expansion.

The DMT line, which dates back to the 1980s, was decommissioned and dismantled upon reaching the end of its economic life, while the associated polymerisation unit was retained in operation. This could support future chemical recycling via methanolysis.

From there the group continued to visit **Meltem Kimya** (www.meltemkimya.com.tr/en/home/), a pioneer in molecular recycling.

After the most recent investment completed in 2024 Meltem Kimya reached 158 kMT of nameplate capacity for rPET production. Meltem Kimya uses a glycolysis process capable of converting packaging or polyester-containing textile waste into monomers

and oligomers, which are then repolymerized into recycled PET chips. The textile waste treatment unit has 400 ton/day nameplate capacity and allows to obtain polyester chunks, which then undergo 2nd stage glycolysis reaction in excess MEG. Repolymerised PET chips are supplied to downstream fiber producers, creating a closed material loop. Materials that cannot be chemically recycled are redirected to lower-value applications such as floor resin materials thus minimizing waste generation.

From Meltem Kimya the group travelled from the Adana region approx. 210 km by bus to Kahramanmaras where the group stayed overnight.

Day 2 in Kahramanmaras

The morning of day 2 featured an intensive visit of **Kipas Textiles** (<https://kipastextiles.com/>). Kipas Textiles is a subsidiary of the Kipas Group, a leading Turkish conglomerate with businesses in energy, retail, paper, cement alongside with textiles. Kipas Textiles is a fully integrated facility with production from yarn to fabric, denim, technical textiles, and fashion. Kipas has been heavily investing into sustainability and is running numerous collaborations to this end, including its advanced recycling operations and its leading role in Sustainability Talks Istanbul. Kipas Textiles and Meltem Kimya have a strategic partnership aimed at modernising textile-to-textile recycling processes and making polyester fully circular at a commercial scale.

Kipas Textiles demonstrated both mechanical recycling (by tearing) and thermo-mechanical recycling. The most recently launched thermo-mechanical unit can deliver the output up to 100 tons/day of recycled staple fibers – either from rPET bottle flakes, or from textile waste-based polyester chunks supply from Meltem Kimya. The company produces recycled staple fibers mainly for European textile brands, combining textile-to-textile and bottle-to-textile recycled materials depending on customer requirements.

The mechanical recycling facility processes denim and cotton-textile waste to produce recycled fibres for cotton yarn spinning. During the visit, it became evident that producing high-quality recycled fibres requires careful control of raw material composition and blending ratios to maintain consistent yarn performance.

They use a Laroche line with six openers for cotton fabrics (post-industrial), and the obtained recycled fibres are used in blends containing 10% recycled and 90% virgin cotton. The recycled fibre length ranges from 18 to 22 mm. They use a Saentis-Temsan line with 16 openers only for opening yarn ends and fabric selvages. They usually use 20–25% textile-to-textile fibres in blends, while bottle-to-textile fibres can reach up to 80%. The cost of recycled cotton fibres is about 2–2.5 USD/kg, while virgin cotton fibres cost about 1.6 USD/kg. For this reason, they mainly sell to European brands that have obligations to use recycled fibres.

At the end of the visit the group travelled from Kahramanmaras by bus approx. 70 km to Gaziantep. The afternoon provided time for some cultural immersion in Gaziantep. The group visited the world's largest mosaic museum (Zeugma Mosaic Museum), that is also home of the famous "Gypsy Girl", as well as the centuries-old historical coppersmith bazaar, a living Ottoman-era trade quarter.

DAY 3 in Gaziantep

In the morning of day 3 the group visited **Sanko Textile** (www.sankotextile.com/en/), a subsidiary of the Sanko Group, a leading Turkish conglomerate spanning construction, energy, cement and packaging, with textiles as its flagship industry. Sanko's operations are fully integrated, including spinning, knitting, dyeing and printing. The company is firmly committed to textile-to-textile circularity, with pre- and post-consumer recycling as a core process.

Sanko Textile operates one of the largest textile recycling facilities visited during the mission. The company processes approximately 80,000 tonnes of textile waste annually, using both pre-consumer and post-consumer waste.

, Sanko Textile has developed an alternative process to recover cotton from blended textile waste while separating polyester and elastane. Approximate proportion of material recovery is 50,000 tonnes of cotton fibre in Gaziantep and 30,000 tonnes of rPET chips in Bursa area. The remaining polymer fractions are further utilized in automotive applications, contributing to improved material recovery. They use a mixture of 15 chemical solutions with RE&UP technology during a six-hour process.

Particular attention was given to the company's quality laboratory, where advanced testing equipment is used to monitor fibre length, neps, short fibre content, yarn contamination, strength, friction, and colour consistency. They stated that the recycled cotton has the same quality as virgin cotton.

In the afternoon of day 3 the group visited **Kara Fiber** (<https://karafibertekstil.com/>). Established in 2019, Kara Fiber is Türkiye's first Lyocell fibre producer. Equipped with 200tons/day spun yarn spinning capacity (as well as twisting, dyeing) since 2021 Kara Fiber also specialised in man-made cellulosic fibres, the company is an important supplier of sustainable products under its Ecocell and Lyocell TOW brands. With commissioning of the second production line in 2024 Kara Fiber has reached a total capacity of 50,000 tons of lyocell.

The company presented its Lyocell production technology, emphasizing its closed-loop manufacturing process, in which approximately 99.7% of the solvent (NMMO) is recovered and reused.

The presentation included a comparison between cotton, viscose, modal, and Lyocell fibres, highlighting Lyocell's excellent mechanical properties, moisture management, and reduced environmental impact. The company supplies regenerated cellulose fibres to both the hygiene sector and textile brands, supported by FSC-certified raw materials and strict traceability requirements.

Conclusions

The technical mission provided valuable insights into the rapid evolution of textile recycling technologies – both mechanical and chemical – in Türkiye. The combination of integrated production, advanced recycling processes, and comprehensive quality control demonstrates that Turkish manufacturers are positioning themselves as important players in the transition towards a circular textile industry.

The visit also highlighted that future competitiveness will depend not only on recycling technologies but also on the availability of high-quality textile waste, efficient sorting systems, and reliable traceability throughout the value chain. The knowledge gained during this mission will be useful for evaluating future sustainability strategies and identifying potential opportunities for collaboration and technology transfer.

The tour offered a unique opportunity to engage with industry leaders, technology providers, recyclers, and textile manufacturers shaping the future of circular textiles. Over three intensive days, travelling through Türkiye's industrial heartland in the Adana-Kahramanmaras-Gaziantep region, the group visited leading fiber producers, textile mills and innovators to witness the scale of Türkiye's circularity ambitions.

The study tour was a testimony to the maturity acquired by Türkiye's textile capability and its transition to a circular future. Equally impressive was the collaborative spirit among key actors including fibre producers, technology providers, industry associations, and global brands. The visit provided valuable learnings, meaningful exchanges, new bonds, and fresh perspectives on how the textile industry can accelerate its transition towards a more circular and sustainable future.

August 2026

Annexes

Presentation by **SASA**

Presentation by **Meltem Kimya**

Presentation by **Kara Fibre**

SASA



ERDEMOGLU
HOLDING



Vision

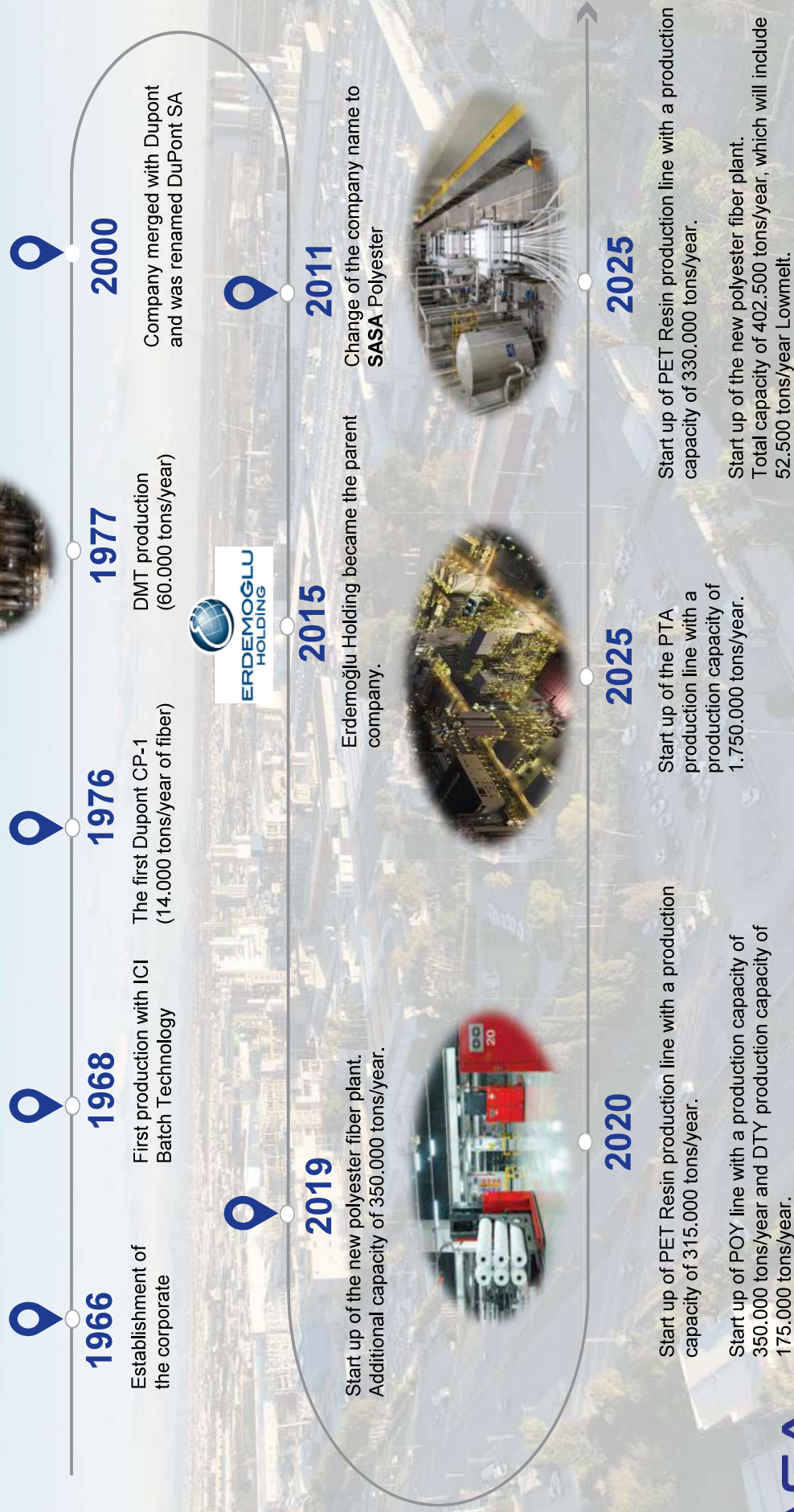
SASA aims to make Türkiye one of the top three polyester manufacturers in the world and to become one of the leading players on a global scale, together with its petrochemical investments.

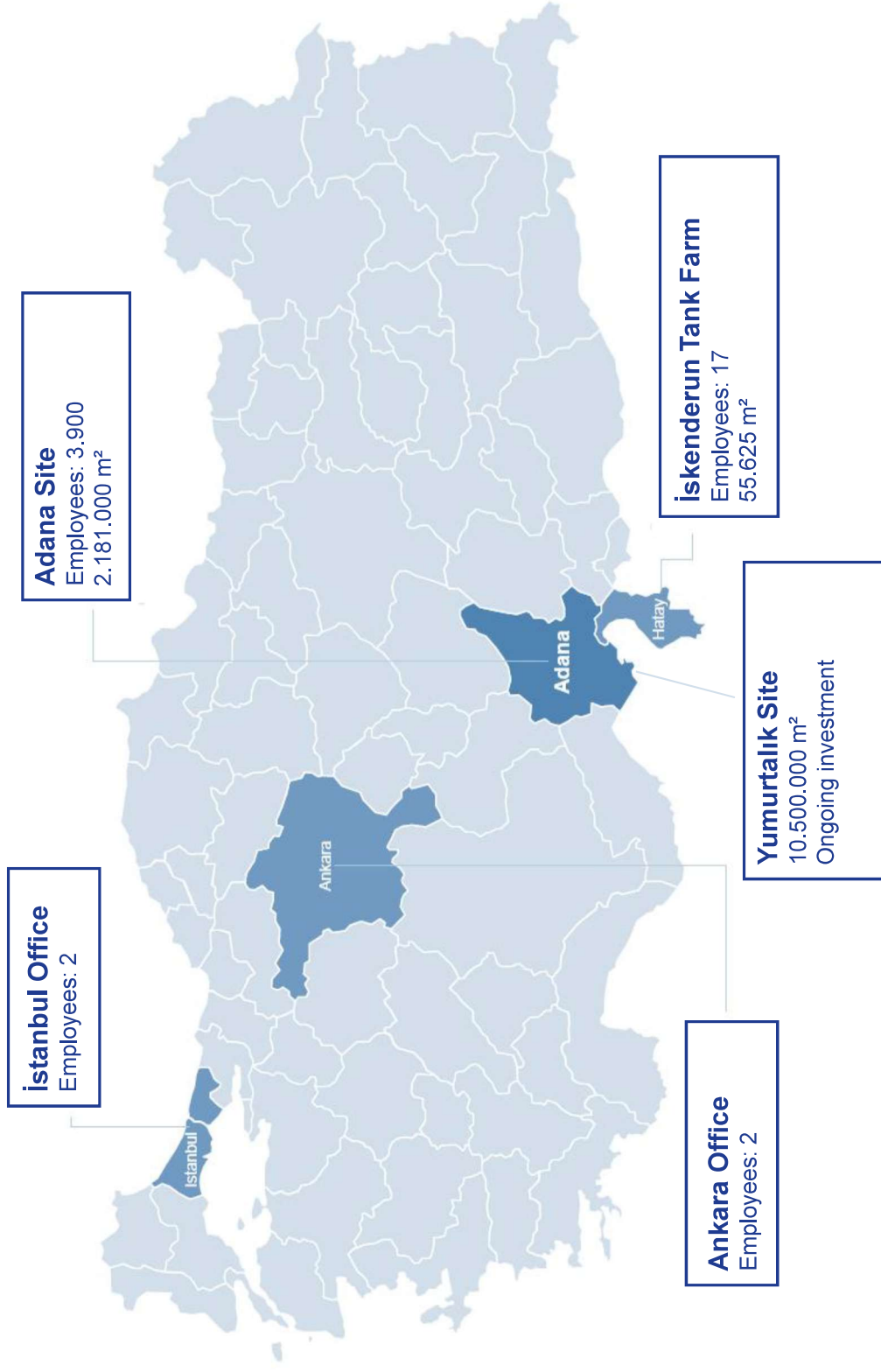


Mission

- To ensure sustainable growth
- To create value for all our stakeholders, especially our employees, suppliers, customers, shareholders and society
- To share this value fairly with all our stakeholders in line with corporate and social responsibility principles
- To develop ourselves continuously by maintaining the spirit of innovation.

Essentials – Brief History of SASA





Essentials – Certificates and Documents



ISO 9001:2015
Quality Management System



ISO 50001:2018
Energy Management System



ISO 14064-1:2018
Greenhouse Gases Verification
Statement



Turquality



ISO 14001:2015
Environmental Management System



ISO 27001:2022
Information Security Management System



ISO 14046:2014
Water Footprint Verification
Statement



INDA Membership



ISO 45001:2015
Occupational Health and Safety
Management System



FSSC 22000
Food Safety System Certificate



Reach Certificate



OEKO TEX Certificate

SASA by numbers- Polymerization Capacity

2.500

2.000

1.500

KT

1.000

500

0

1.950

1.365

700

350

2018

2019

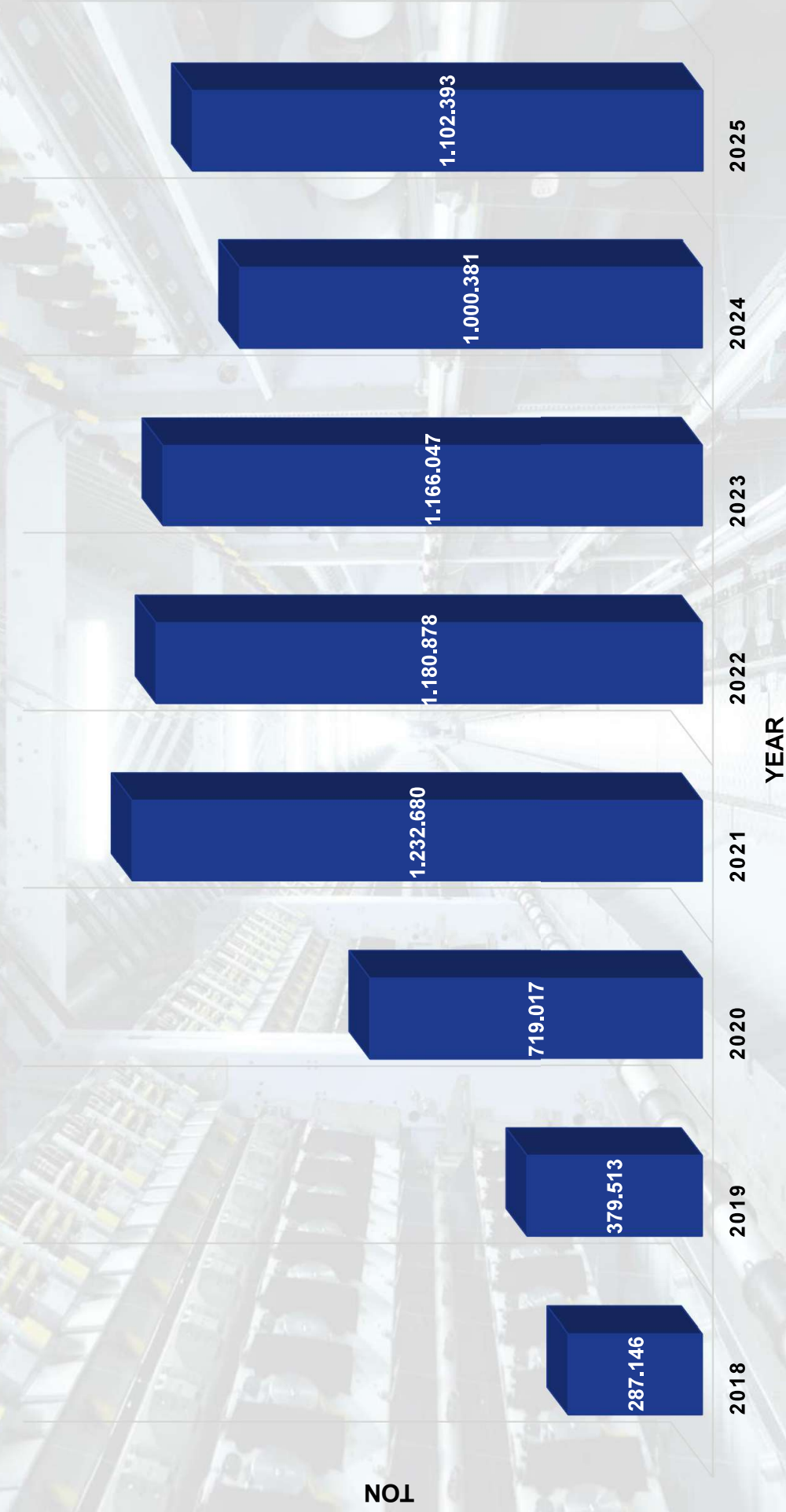
2020

2025 and onwards

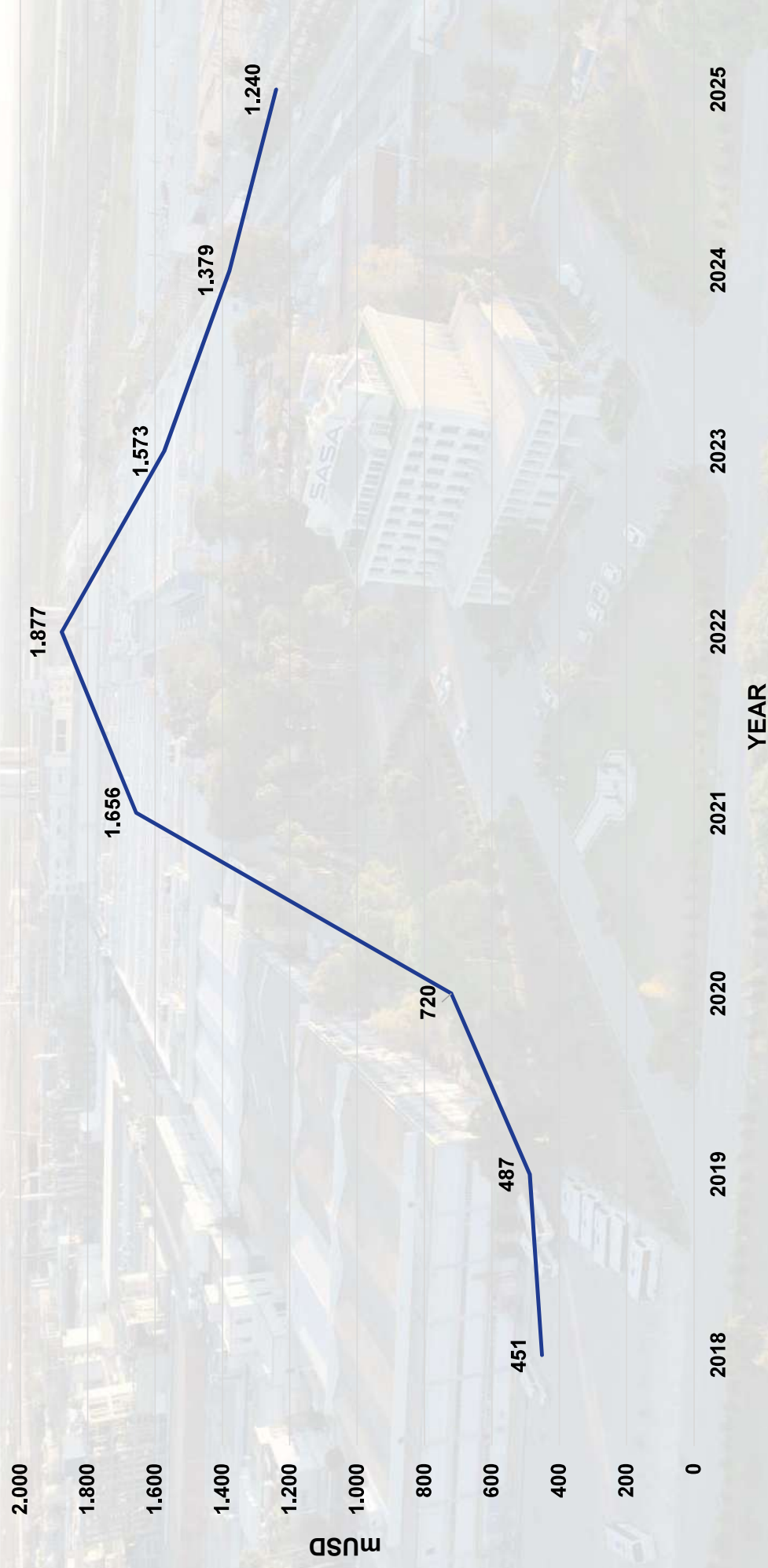
YEAR

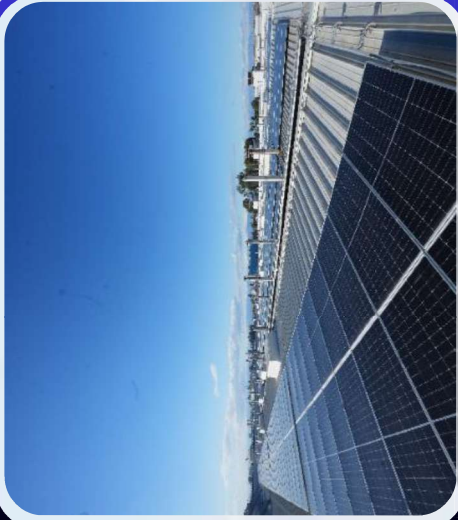
SASA

SASA by numbers- Sales Amount



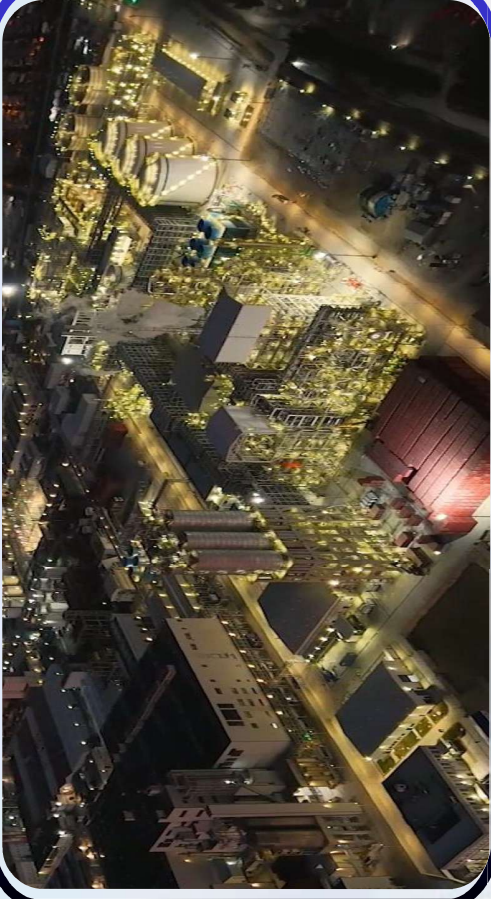
SASA by numbers - Turnover





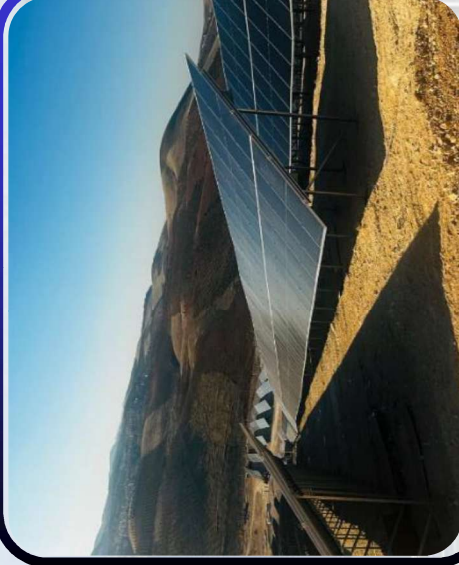
ROOFTOP SOLAR POWER PLANTS

- Installed capacity of 16.4 MW
- 20% of the electrical energy need of our facilities is supplied from renewable energy sources through the Rooftop Solar Power and Land Solar Power Plant.



LAND SOLAR INVESTMENT (ONGOING)

- A total capacity of 200 MW
- 45.7 MW power plant is located in Gaziantep and became operational in 2025.
- Our goal is to increase the share of renewable energy we will use in our facilities to 50% by 2030.

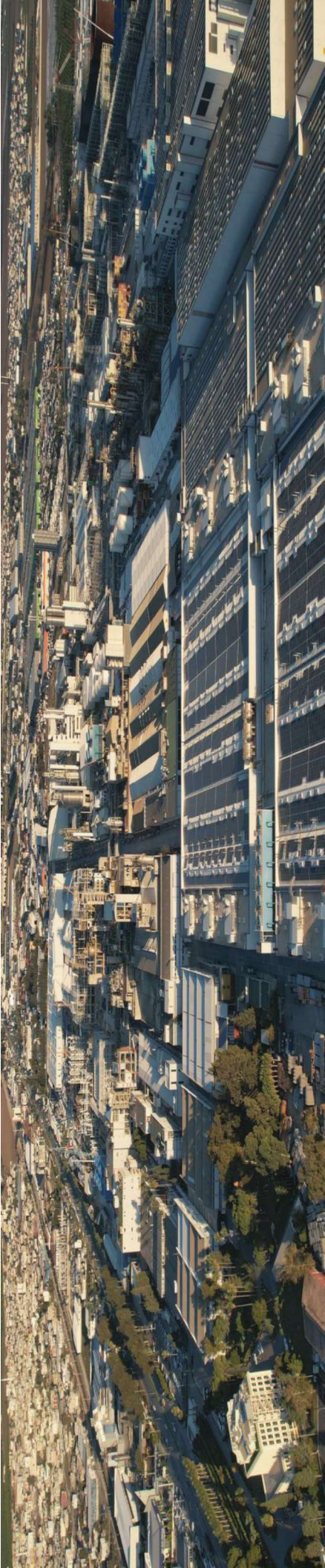


New Advanced Biological Wastewater Treatment And Recovery Facilities

- 55-60% water recovery will be achieved.
- Hubgrade AI technology will be used in the facility.
- Approximately 2,300 MWh/year will be saved in the amount of electricity consumption to be used for oxygen supply.

PTA PRODUCTION FACILITY (INVISTA P8)

- The new facility is now producing more energy than it requires and is also supplying energy to the existing facilities.
- 1.36 MGJ of electricity production.



Assets & Completed Investments (Phase 1)

2019

STAPLE FIBER

- Capacity: 350 ktons/year
- Start-up: June 2019
- Fully automated warehouse system
- Fiberfill Type, Nonwoven, Textile Type

2020

DTY & POY

- POY Capacity: 350 ktons/year
- DTY Capacity: 175 ktons/year
- Start-up: June 2020
- Fully automated warehouse system

2020

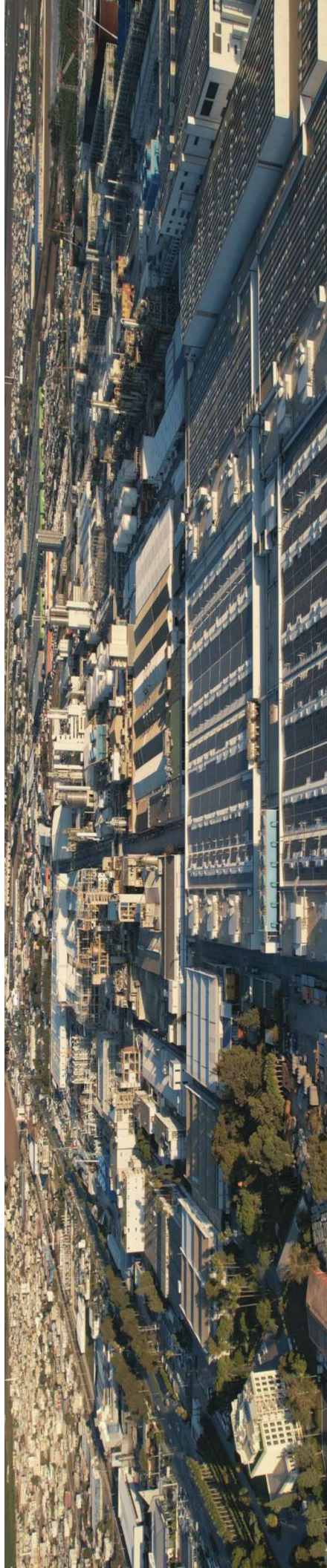
PET RESIN

- Capacity: 315 ktons/year
- Start-up: September 2020
- Bottle, Textile ve Film Grade Chips
- Melt to Resin technology (MTR)

2025

PTA

- Capacity: 1.750 ktons/year
- Start-up : December 2025



Assets & Completed Investments (Phase 2)

2025

PET RESIN

- Capacity: 330 ktons/year
- Bottle, Textile ve Film Grade Chips
- Melt to Resin technology (MTR)
- Start-up: March 2025

2025

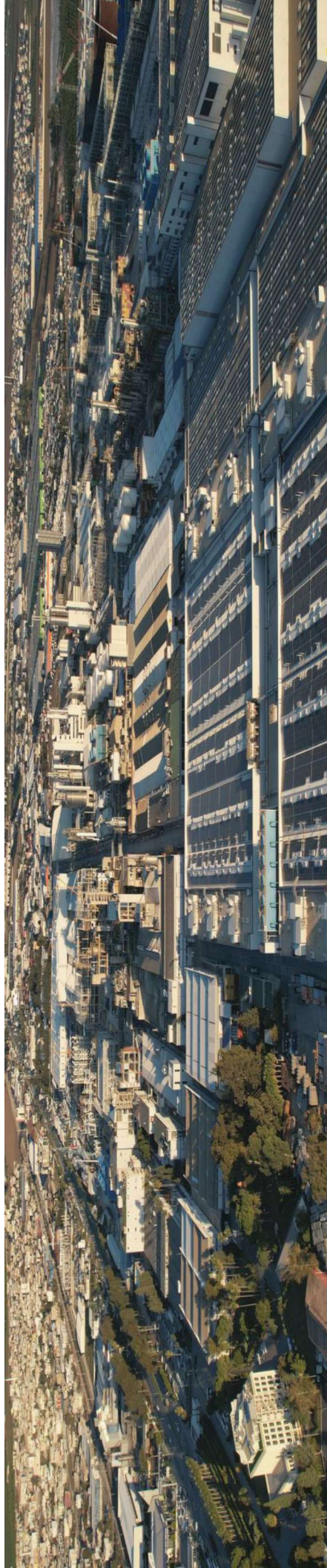
STAPLE FIBER

- Capacity: 350 ktons/year
- Fiberfill, Nonwoven, Textile Type
- Start-up: 2025

2025

STAPLE FIBER

- Capacity: 52.5 ktons/year
- Low melt fiber
- Start-up: 2025

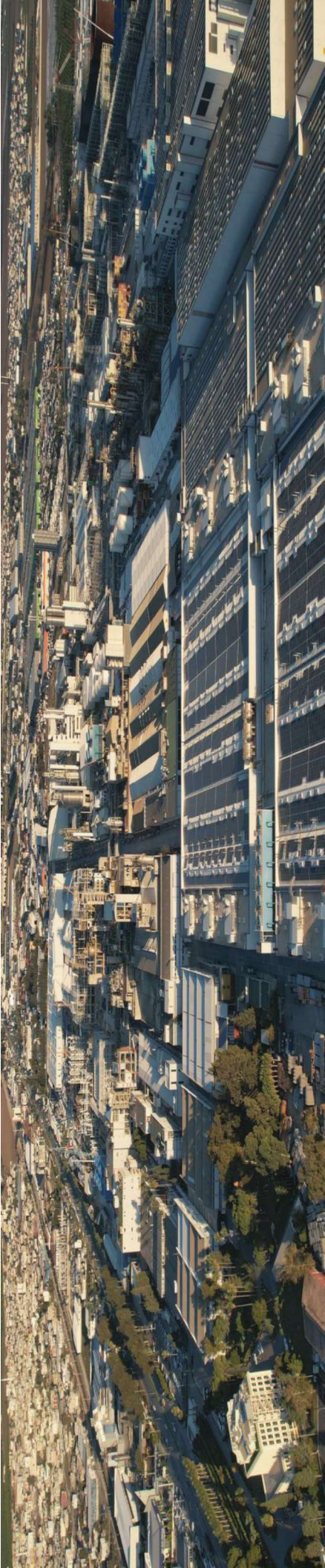


Future Investments (Phase 3)



Yumurtalık Project

- Investment Cost: 25 Billion Dollars
- Total Production Capacity: 20 Million Tons
- Total Estimated Turnover: 25 Billion Dollars
- Employment of more than 20 thousand people



OUR PRODUCTS



STAPLE FIBER
LOW MELT FIBER



PET CHIPS



POY



DTY

Business Units - PTA Production Facility

As Türkiye's foremost and largest polyester and polymer manufacturer, and a leader in the Europe, Middle East, and Africa region, **SASA** has commenced the production of PTA, the primary raw material for polyester.

Total Investment Area: 375.000 m²

Total Capacity: 1.750.000 tons/year PTA production

Total Investment Cost: 1,75 Billion USD



Our PTA Wastewater Treatment Plant is Türkiye's largest industrial Wastewater Treatment Facility and the first to use industry 4.0 artificial intelligence technology for energy and chemical savings. Additionally, with a capacity of 45.600 m³/day, it is the largest Anaerobic Treatment Plant, producing process water of drinking water quality from treated wastewater.

**HIGH
PURITY**

**MINIMUM
WASTE**

**MINIMUM
CONVERSION
COST**

**ELECTRICITY
PRODUCTION**

Business Units - PET Chips

Textile Grade Chips

Both semi-dull and super-bright chips with IV values ranging from 0.420 to 0.900 (dI/g), are produced as textile grade chips.

Film Grade Chips

PET chips used in BOPET and cast film processes are produced for the packaging industry. **SASA** also produces Sb-free products suitable for all kinds of end-uses.

PET Resin

With the help of MTR technology, desired high viscosity of bottle-grade chips can be achieved through one-step process unlike the conventional two-step method.

Applications:

Textile

POY Production, BCF Production, Colored DTY Production, Staple/filament fibers, monofilaments, nonwovens

Industrial

Industrial applications requiring high tenacity, such as tire cord or seat belt production

Medical

Parts of various medical equipment and medical materials

Film

Various kinds of film applications, especially packaging

Injection

Production of various plastic materials



- Water bottle
- Mineral water bottle
- Carbonated soft drinks bottle
- PET sheet
- Oil bottle
- Detergent bottle
- Blood collection tubes

Spherical Chips



Cylindrical Chips



Textile

Features:

- Deep black
- Color stability
- High tenacity
- Easy to blend with natural fiber
- Color stability

Nonwoven

Features:

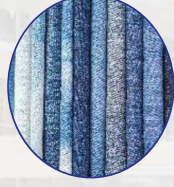
- High carding performance
- Easy to blend with natural fiber
- Food contact
- High thermal resistance

Fiberfill

Features:

- Soft touch
- Light weight products
- Long-lasting resilience
- Functional end product feature

Applications:



Denim



Home Textile



Garment



Hygiene and personal care



Automotive



Filtration



Medical Textile



Construction and infrastructure



Padding



Fiberfill:
Bedding,
Pillows,
Cushions,
Chairs



Carpets



Furniture,
Toys
Sleeping Bags,
Coats

Business Units - Filament

SASA POY

Luster	Cross Section	Denier
Raw White Semidull	Round	50-450
Dope Dyed Black Semidull	Round	50-300
Semidull Trilobal	Trilobal	150-300



SASA DTY

Luster	Cross Section	Denier	Ply	Type
Raw White Semidull	Round	50-450	1-2-3-4	NIM-SIM-HIM
Dope Dyed Black Semidull	Round	50-300		NIM-SIM-HIM
Semidull Trilobal	Trilobal	150-300		NIM-SIM-HIM

Applications:



Upholstery



Home Textile



Outerwear



Underwear



Socks



Denim



Packaging

SASA



ERDEMOĞLU
HOLDİNG

NK MELTEM KİMYA

www.meltemkimya.com.tr

Plasticizer and Integrated Facilities

**Hot Fill
PET Packaging Plant**
Akhisar/MANISA

rPET Resin & PET Resin Facilities

**Baklali
Warehouse**

**Yumurtalık Port
(Free Zone) Warehouse**

FOUNDATION
YEAR

2000

SECTOR

Petrochemicals
(rPET Resin, Plasticizers and
PET Packaging Producer)

LOCATIONS
IN TURKEY

**Adana (4)
Manisa (1)**

EXPORT
(2024)

\$103.000.000
(% 52)

**Mersin
International Port**



Yumurtalık Port



Iskenderun Port

Milestones

Meltem Kimya: From Past to Present

Establishment

Our company, which started its commercial activities in 1976, has been operating under the name Meltem Kimya A.Ş. since the year 2000.

1976

Meltem Kimya

In 2000, Meltem Kimya achieved a world first by producing recycled DOTP plasticizer from recovered polyester waste. Subsequently, in addition to recycled plasticizer groups, the company began producing DOTP and DOA plasticizers from original raw materials.

2000

The First PET Resin Facility

Established with 100% National Capital

In 2009, the first PET resin facility in Turkey established with 100% national capital was completed and began production in the Adana Hacı Sabancı Organized Industrial Zone.

2009

2011

Special Polymer Production

In 2011, in addition to bottle, textile, and film chips, the production of special polymers was initiated.

2013

50,000 Tons Capacity

With additional investments made in 2013, the annual production capacity of the plasticizer plant was increased to 50,000 tons.

2014

Chemical Recycling rPET Resin Investment

Meltem Kimya has completed its investment in rPET Resin produced through Chemical Recycling — a world first — and has been approved and commercialized by a Global Beverage company.

2015

Manisa PET Packaging Facility

In 2015, in the Manisa Akhisar Organized Industrial Zone, the production of PET packaging product groups resistant up to 95 degrees — once again a world first — was initiated.

Milestones

Meltem Kimya: From Past to Present

MELPET Chemical rPET

As of 2018, MELPET chemical rPET resin product groups have been approved and commercialized by many global packaging and beverage companies.

2018

Annual Capacity of 50,000 Tons

In 2019, with additional investments made in the rPET resin facility, the production capacity was increased to 50,000 tons per year.

2019

108,000 Tons/Year Second Line Investment Decision

In 2021, to meet the increasing demand, an investment decision was made and initiated for a second line with a capacity of 108,000 tons per year, located next to the existing rPET resin facility.

2021

Annual Capacity of 158,000 Tons

In 2024, our second line with a capacity of 108,000 tons per year was commissioned, bringing the total capacity to 158,000 tons per year together with the existing facility. Thus, it became the largest rPET resin production capacity in a single facility in the world.

2024

2025

New Products

In 2025, our Special Polymers portfolio has been expanded with Cationic, Low Melt, PET-G, Flame Retardant, Semi-Dull, Full-Dull, L-CEG and Antimony-free PET chips, supporting our high value-added innovation vision. The addition of our rTEX portfolio to our product range became a new milestone in our product development.

The MELPOLIN Shrink product groups have also been added to our product range.

2026

EU Novel Technologies Achievement

With our chemical depolymerization technology, developed in compliance with the EU 2022/1616 regulation, we achieved a significant global milestone recognized by the European Commission. Among the 24 novel technologies announced outside Europe and the UK, Meltem Kimya stands as the only company recognized with this technology, further strengthening its leading position in advanced recycling. This achievement also demonstrates our country's capabilities in advanced recycling technologies and serves as a source of pride for both our company and our country.

Introduction

Adana Industrial Zone

PET & rPET & Specialty PET Resin Production Plant

Focused on
PET, rPET and **rTEX** Resin
production.



Manisa/Akhisar

Hot-Fill PET Packaging Production Plant

Specializes in
PET packaging production.

Adana/Dikili

Plasticizer and Integrated Production Facilities

Produces **DOTP, rDOTP, rDOTP+**
and **BIOMELFLEX** providing
leading solutions in the field
of plasticizer chemicals.



Adana/Baklali

MELPOLIN Production Plant & BONDED Warehouse

MELPOLIN offers **PE-based
packaging solutions** such as shrink
films, pallet covers, and industrial
protection.



MELTEX rTEX CHIPS TECHNOLOGY



Feedstock **Management**

1- Textile Waste

- 100% Polyester Textile Waste
- 10% Elastane-Blended Polyester Textile Waste
- Cotton-Blend Textile Waste
- Post-Consumer Textile Waste



Polyester Recycling Facility Operations

**400
TONS/DAY**
Total Installed
Capacity



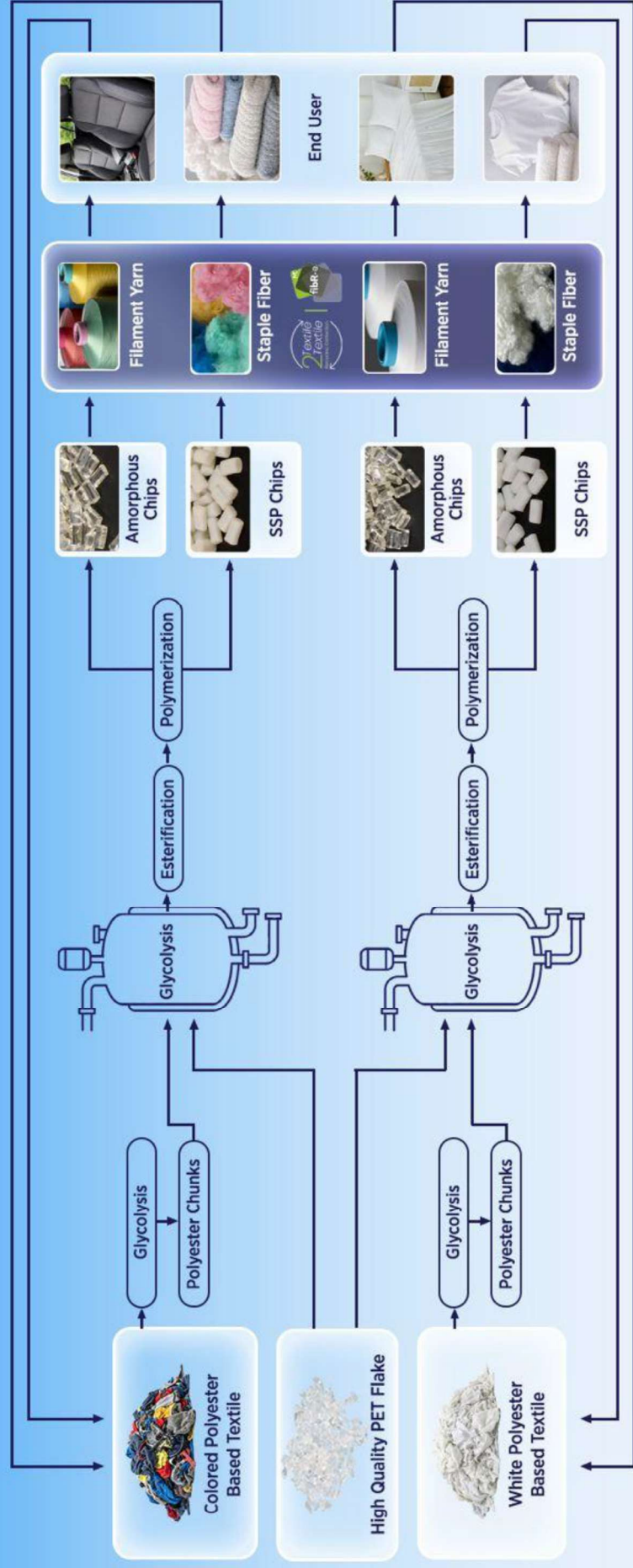
PET Polyester Sorting/Conditioning Unit



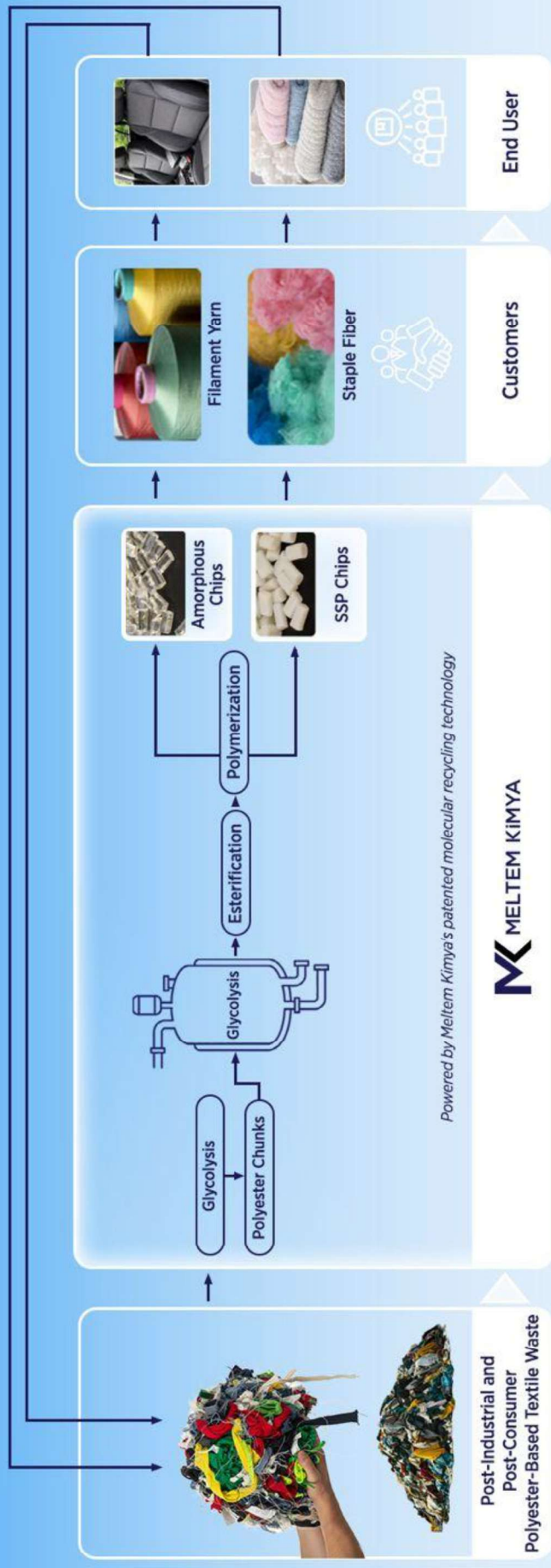
Chemical Recycling of Polyester Textiles



From Post Consumer Textile Waste & Post Consumer PET Flake to **r**TEX Chips via Glycolysis



From 100% Textile Waste to **rTEX** Chips via Glycolysis



The Largest **rPET** Production Capacity

at one single plant in the World!

Total Capacity **158 KTA**

Second **rPET** & PET Resin Line (Facility)

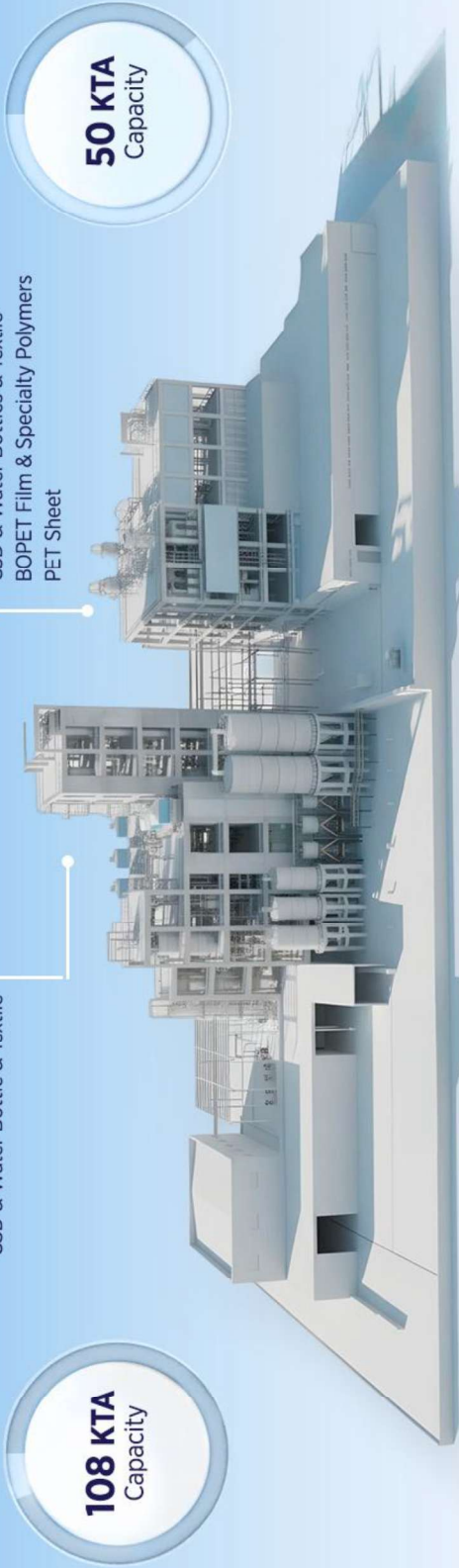
Continuous Polymerization
Continuous SSP
0.64 to 0.86 IV
CSD & Water Bottle & Textile

108 KTA
Capacity

First **rPET** & PET Resin Line (Facility)

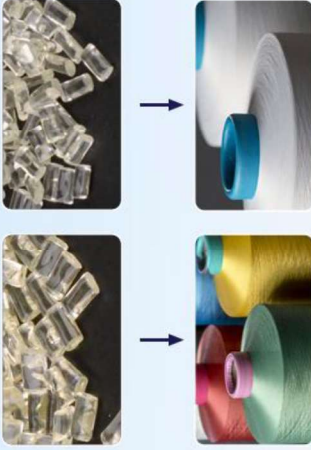
Continuous Polymerization
Batch SSP (Thumble Dryer)
0.57 to 1.4 IV
CSD & Water Bottles & Textile
BOPET Film & Specialty Polymers
PET Sheet

50 KTA
Capacity



MELTEX® rTEX PRODUCTS - Tex2Tex Resin Technology

MELTEX®
rTEX 64 rTEX+ 64
Structure: Amorphous



Application: **Filament Yarn**

MELTEX®
rTEX 64C
Structure: Crystalline



Application: **Staple Fiber**

MELTEX®
rTEX 70 rTEX+ 70
Structure: SSP

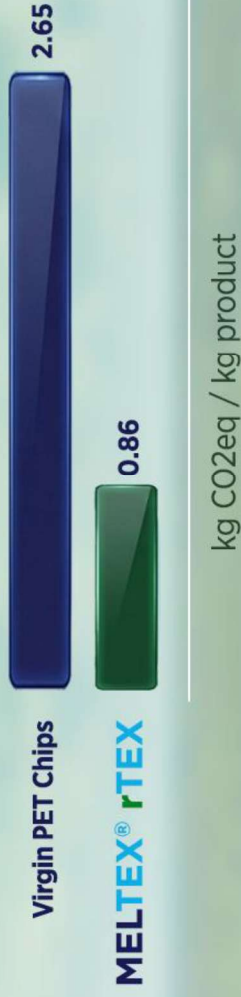


Application: **Staple Fiber**

Powered by its own patented technology and in-house expertise, Meltem Kimya transforms polyester waste into original-quality raw materials.

Life Cycle **Assessment** (LCA)

Switching from Virgin PET Chips to MELTEX® rTEX Chips delivers nearly 68% carbon reduction.



Based on 2025 cradle to gate data

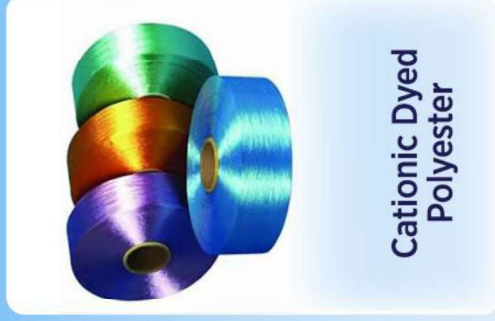
Specialty Polymers



Low Melt
Polyester



Flame Retardant
Polyester



Cationic Dyed
Polyester



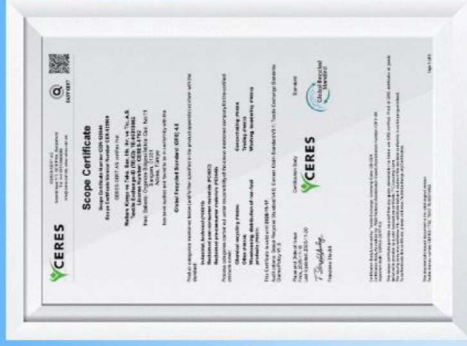
Low Carboxyl
Polyester



Full Dull-Semi
Dull Polyester

Certificates

Global Recycled Standard



Recycled Content Verification



ISCC PLUS



FSC 22000



ISO 22716:2013



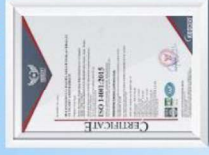
ISO 45001:2018



ISO 50001:2018



ISO 14001:2015



ISO 9001:2015

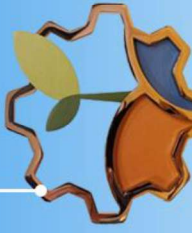


Our Rewards

Gold Award by the
World Packaging Organisation



Awarded First Place
Green Transformation Awards
by the Istanbul Chamber of Industry



Gold Award as the
Category Winner
Packaging Crescent
and Stars Competition



An Award by the
World Packaging Organisation



Our 100% rPET resin was granted the Gold Award by the World Packaging Organisation (WPO) among 440 projects. The rPET label produced from our rPET resin was honored with an award by the World Packaging Organisation (WPO) in 2021. Our packaging material won the Gold Award as the Category Winner in the 2022 Packaging Crescent and Stars Competition. Our 100% rPET resin was awarded First Place among 400 projects in the Green Transformation Awards organized by the Istanbul Chamber of Industry in 2023.

Exporting to Over 60 Countries



United States | Greece | Kazakhstan | Belgium | Spain | Algeria | Germany | Peru | Azerbaijan | Sweden | Iraq | Portugal | China | United Arab Emirates | Romania | France | Lithuania | Tunisia | Italy | Bosnia and Herzegovina



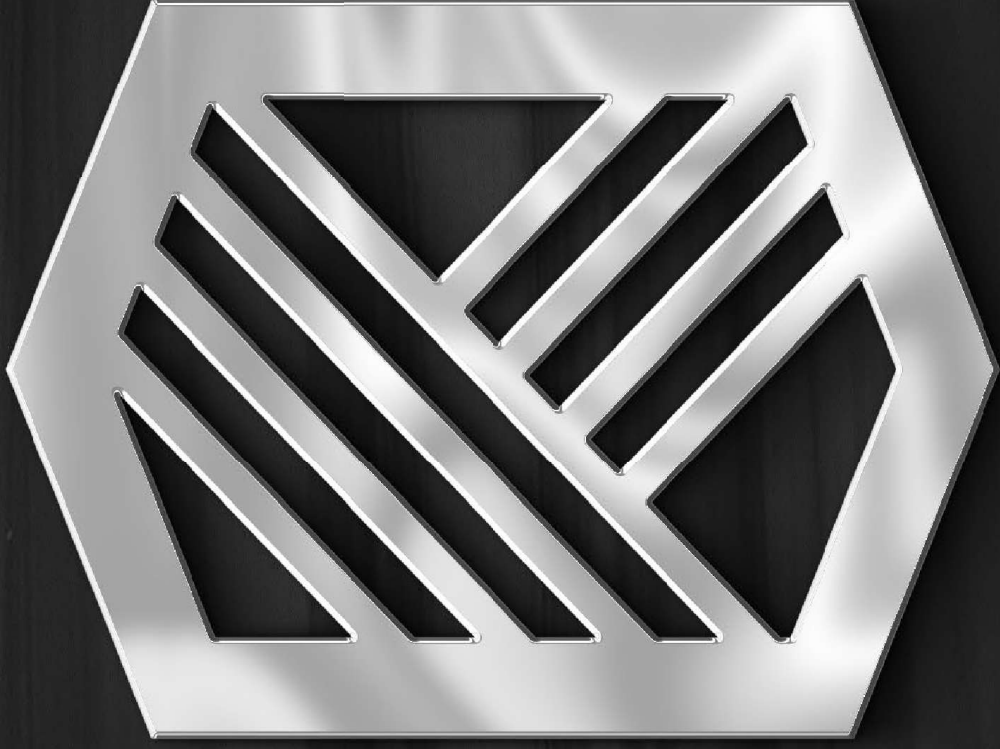
Our Customer





QUALITY IS HIDDEN IN ITS CHEMISTRY

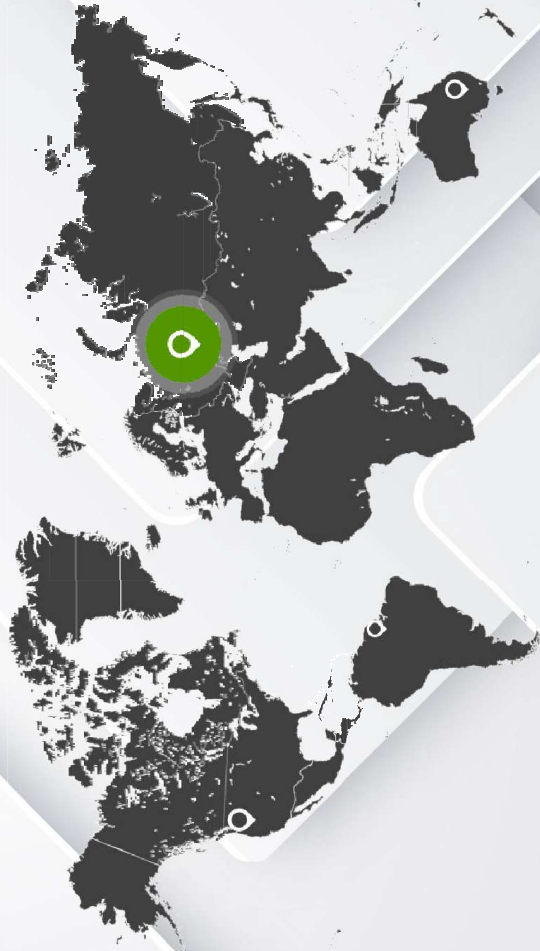
www.meltemkimya.com.tr



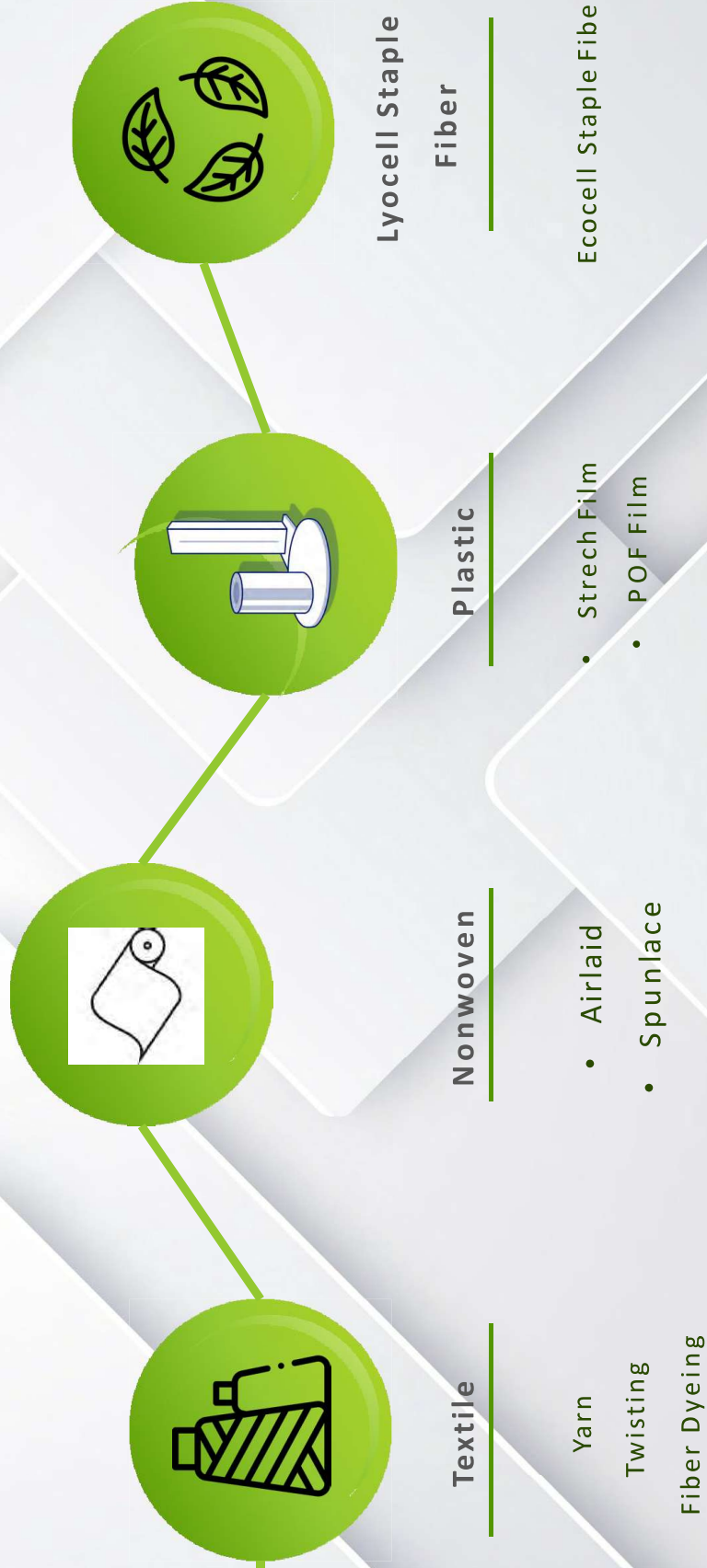
KARA HOLDING

a manufacturer with 36 years of experience...

- Ranked as **182nd** in the list of **top 500** Industrial Companies.
- Keep growing with it's **2000** employees.
- Operating in several sectors.
- Over **300** Million \$ Turnover in **2024**



KARA HOLDING



2.000+ employees

18
Facilities

"We are a team that embraces challenges
with determination and believes in the
power of teamwork."



ECOCELL FOR A CLEANER FUTURE



Sustain Your Fashion With EcoCell™

KARAFIBER.COM

Karafiber Lyocell

Established in **2019**, Karafiber Lyocell Plant is Turkey's first and only cellulosic fiber manufacturer.

Our facility, which started production in **2021** with its first line of **22,000 tons** capacity, has reached a total capacity of **50,000 tons** with the commissioning of the second production line in **2024 July**.



Cleaner future with EcoCELL™

EcoCELL™
A Better Way to Grow

What is EcoCell?



EcoCell™ Lyocell fibre is obtained from wood that is grown sustainably, and its production process uses a closed-loop system that conserves resources.

This closed-loop system ensures that the solvent used in the process is recovered, reducing waste and minimizing harm to the environment.

EcoCell™ Lyocell fibre has distinctive physical characteristics that result in high strength, excellent moisture regulation, and a soft and gentle feel on the skin.



Sustain your fashion with
EcoCell Lyocell Fiber.

What is EcoCell?

Classification of Fibers

Natural Fibres

Plant Based

Fibres

- Cotton
- Hemp
- Jute
- Linen

Animal Based

Fibres

- Silk
- Wool
- Cashmere
- Angora

Man-Made Fibres

MMCF

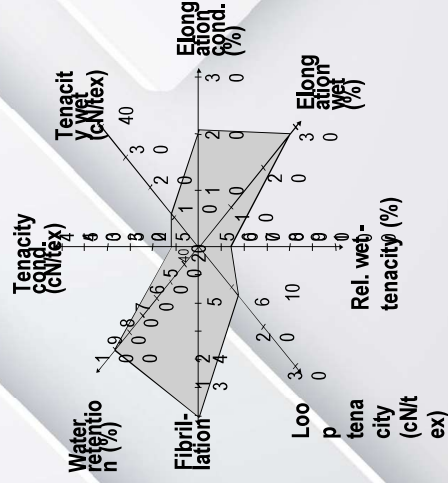
- Viscose
- Modal
- Bamboo
- **LYOCELL**

Synthetic Fibers

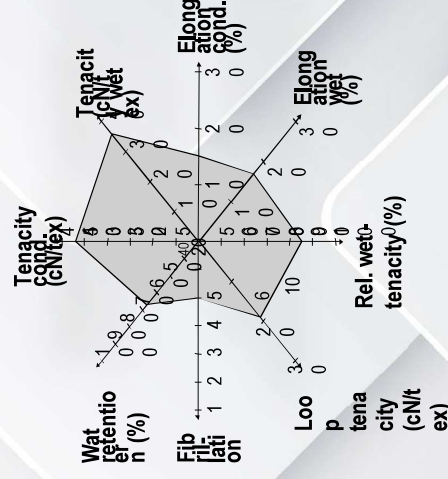
- Nylon
- Acrylic
- Lycra
- Polyester

What is EcoCell?

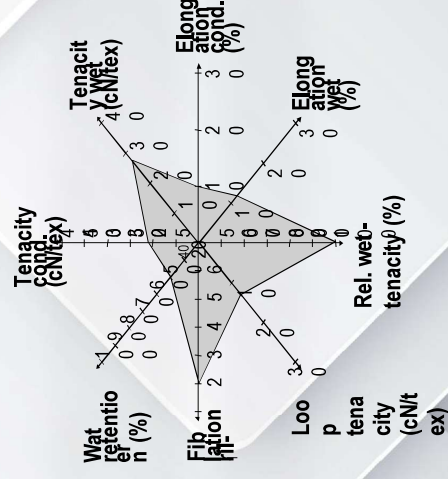
Viscose



Lyocell



Cotton

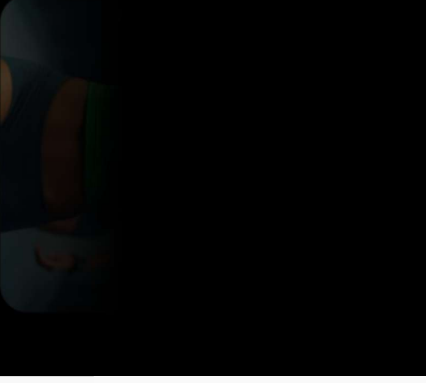
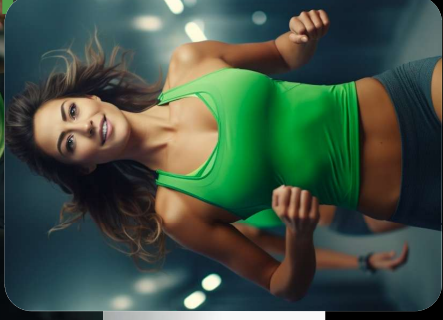
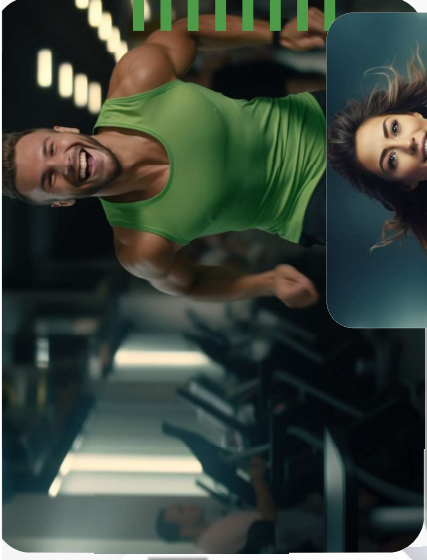


Comparison of Fiber Properties

Feature	Cotton	Viscose	Modal	Lyocell
Raw Material Source	Natural plant fiber (cotton plant)	Cellulose (wood or plant fibers)	Cellulose (beech tree)	Cellulose (usually from hardwood)
Fiber Structure	Irregular, naturally crimped	Round and smooth	Smooth and even	Round and smooth
Strength (Dry)	High	Low	High	High
Strength (Wet)	High	50% lower compared to dry state	Retains approximately 70% of dry strength	Retains 85-90% of dry strength
Elasticity	Medium	Low	Medium-high	Medium-high
Surface Softness	Medium	Very soft	Very soft	Very soft
Breathability	Very good	Good	Very good	Very good
Water Absorption	Medium-high	High	Medium-high	Medium-high
Pilling	High	Low	Low	Low
Wrinkle Resistance	Medium (easily wrinkles)	Low (easily wrinkles)	Wrinkles less	High (wrinkles less)
Weight (Texture)	Medium	Light	Light	Light
Dye Retention	Good	Very good (vivid colors)	Very good (vivid colors)	Very good (vivid colors)
Shine	Matte	Glossy	Slightly glossy	Silk-like natural shine
Sustainability	Medium (high water and agricultural impact)	Medium (chemical-intensive production)	Medium-high (beech tree production, optimized processes)	High (solvent recycling makes it eco-friendly)
Usage Areas	Clothing, home textiles, medical products	Textiles, lining, decoration	Undergarments, activewear, luxury textiles	Clothing, luxury textiles, sportswear

Advantages Provided to Consumers

- Soft and gentle touch on the skin
- Color fastness
- Skin-friendly
- 1,5 times more durable than cotton in washes
- Breathability
- Thermal regulation



Eco-friendly

durable



PROPERTIES OF ECOCELL



SOFT AND SMOOTH

EcoCELL has a soft and smooth feel, which makes it comfortable to wear and sleep on.



DURABLE

it is a strong and durable fiber, which means it can hold up well over time and maintain its shape and texture.



COLOR FASTNESS

EcoCELL fiber is also known for its colorfastness. The fiber is resistant to fading and discoloration, making it an excellent choice for clothing and textiles that need to maintain their color over time.



HYPOALLERGENIC

it is hypoallergenic and does not trigger allergies, making it a good choice for those with sensitive skin.



PROPERTIES OF ECOCELL



ECOCELL

Cleaner Future with



SUSTAIN YOUR FASHION WITH ECOCELL | WWW.KARAFIBER.COM

%100
Biodegradable



Sustainable Structure



Excellent Tenacity



Soft Drape



High Life Quality.



-  Soft Smooth
-  Keeps Color Bright
-  Moisture Absorbent
-  Wrinkle Resistant

Eco-Friendly Process:

Closed-Loop Production:

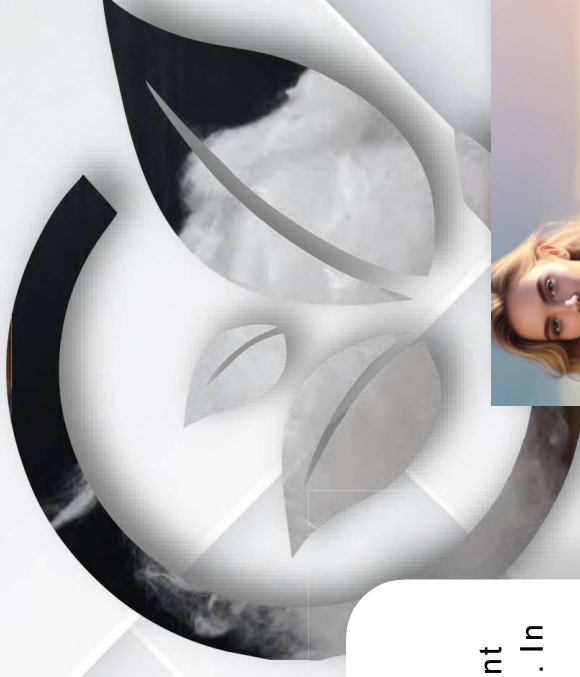
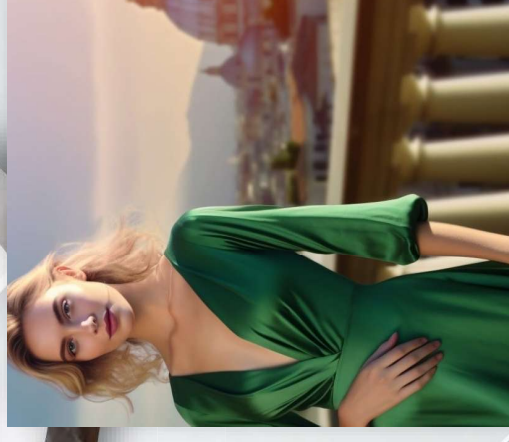
Chemical input during the production process, and utilising an organic solvent that is non-toxic and harmless which can be **99,7 %** recovered and recycled. In this respect, Lyocell is completely different from other cellulosic fibers.

Biodegradable

It can naturally decompose into its constituent substances over time.

Breathable

Ecocell fibers have a unique structure that allows air to circulate freely, helping to keep the skin cool and dry even in hot and humid conditions. Lyocell is highly absorbent and can absorb up to **50%** of its weight in moisture, which also contributes to its breathability.



Closed-Loop Production System



Water



Lyocell

Cellulose



NMMO
Water



Waste
Water



Bale Press
and
Packaging



%99,72 of the solvents used in the process is **recovered..**

SUSTAIN YOUR FASHION WITH ECOCELL™

Quality Management

- ❖ All of our operations are conducted in compliance with ISO 9001 Quality Management System standards.
- ❖ ISO 14001, ISO 45001 and ISO 27001 standards are in place.



❖ See our all certifications at <https://ecocell.tr/certificates/>



Sustainability is Our Priority

- We are working with our wood pulp suppliers, brands and Canopy organization in order to promote sustainable forest management and the protection of ancient and endangered forests.
<https://ecocell.tr/canopystyle-audit-report/>
- In 2025 Hot Button Report, Kara Fiber is achieved **29,5** buttons and awarded with Green Shirt by Canopy.
<https://canopyplanet.org/tools-and-resources/hot-button-report/karafiber>
- We are supplying wood pulp from FSC and PEFC certified plantations.
- EcoCell fiber is Oeko-Tex Standard 100 certified.



• View all our certificates:



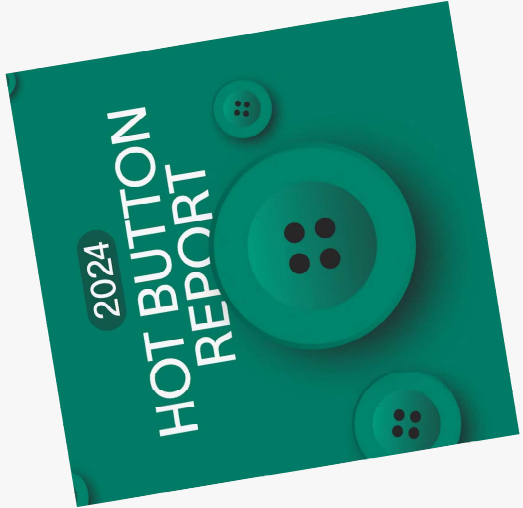
<https://canopyplanet.org/tools-and-resources/hot-button-report/karafiber>



← Back to Hot Button Report

Karafiber

Products: LYOCELL



Tools and resources

Q

Get involved

Menu



Risk Status

Low Risk

Next Gen Solutions

Chemical Management

(out of 8)

Hot Button Score

(out of 40)

⌘

29.5

=



Circular Economy

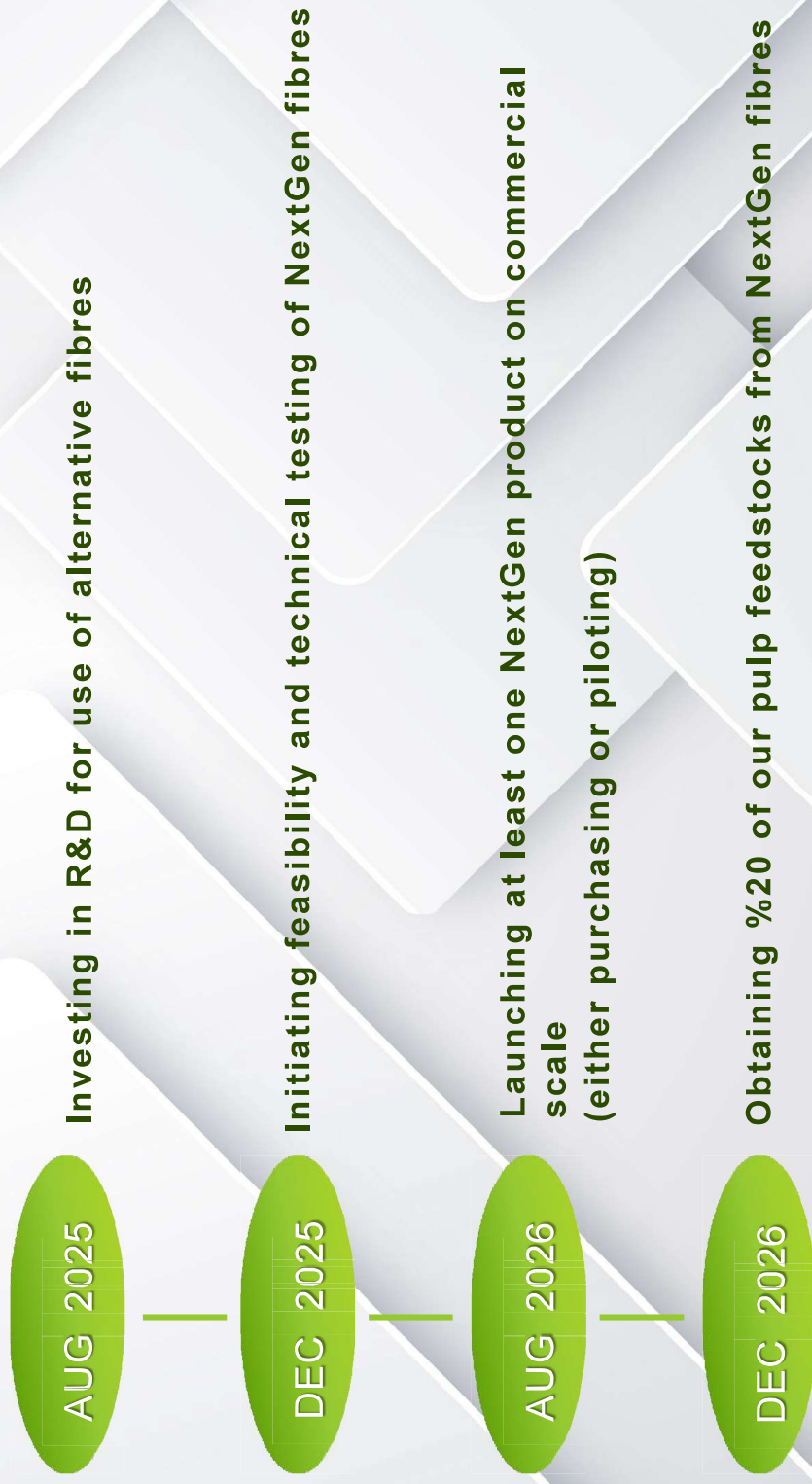


We support the [CanopyStyle Next Generation Vision for Viscose](#).

In order to proportionally contribute to the collective goal whereby 20% of all man-made cellulosic fibre (MMCF) produced (or 1.38 million tons) is made from Next Generation feedstock content, we have been collaborating with Canopy, brands, suppliers and innovators for increasing the use of alternative fibres within our current facility.

To be able to support [Next Generation Solutions](#), we are aiming to achieve:

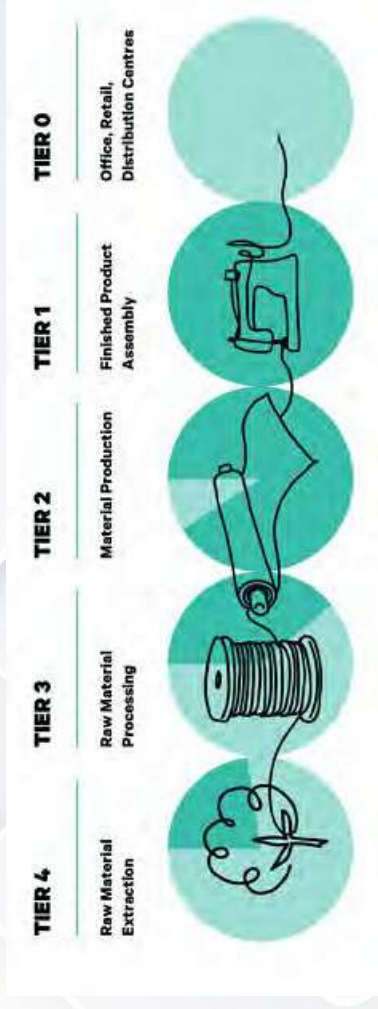
Circular Economy



Traceability

We can ensure both physical and digital traceability by using additive tracers (ink/rare earth flourescents).

Additive tracers facilitate better end-to-end traceability and have a broader use case in terms of meeting the users traceability objectives.



www.ecotrack.ecocell.tr

FibreTrace»

Traceability

Welcome To "ecotrack.ecocell.tr"

 **ECOTRACK**
KARA FIBER PROJECT

Updated To **V2.21 Beta**

 Now Powered With AI

TM: (+03:00) | Time: 10:21 Date: 9 January 2025



Username or E-mail *

Password *

☐ Keep me signed in

Login

Register

Forgot your password?

Traceability

Create TRF

Step 1 of 5

Thanks for your time. Approximately read and fill time: 3-5 minutes.
Please use only English characters when filling out the form.

Type of "TRF"

garment

☐ Garment

fabric

☐ Fabric

yarn

☐ Yarn



Example Traceability Certificate:




FABRIC CERTIFICATE

TRF Number (Internal Reference): "7edf9f2"

CLIENT NAME — BOSSA TİCARET VE SANAYİ İŞLETMELERİ TAŞ CLIENT ADDRESS — Hacı Sabancı Organize Sanayi Bölgesi Acıdere OSB Mah. Celal Bayar Bul. No.3 Sarıçam-Adana ADANA, SARIÇAMTÜRKİYE PRODUCTION DATE — 6/11/2024 PO NUMBER — 43635 BRAND — ZARA GARMENTER — EROĞLU GİYİM FINISHED FABRIC MANUFACTURER — BOSSA TİCARET VE SANAYİ İŞLETMELERİ TAŞ GREIGE FABRIC MANUFACTURER — BOSSA TİCARET VE SANAYİ İŞLETMELERİ TAŞ SPINNER — BOSSA TİCARET VE SANAYİ İŞLETMELERİ TAŞ FIBER PRODUCER — KARAFİBER ELYAF	PICTURE —
--	------------------

40

PRODUCT DETAILS:

- Product Deta ls (Count & Blend): 7 Ne 0 co / 6 Ne 0 ecocell / 153 cm / %40 LYOCELL %55 ORGANIC COTTON %5 RECYCLE COTTON
- CACO (Quality / Color): ORG.NW GOLD R-LEWA PFD-5/PFD
- Claimed "ECOCELL™" Content in

Example Traceability Certificate:

www.karfiber.com | 4



Date of Sample Test Finished:

Modified: Dec 31, 2024 at 12:18

Test Requested:

Verification of "ECOCELL™" by "KaraFiber" fibre in submitted sample

Test Results:

"40% ECOCELL™" by "KaraFiber" fibre is verified in submitted sample

—RESULT OF ANALYSIS



Total Quality Assured.

RESULTS

REPORT : TUR-IST-240086773

Page 3 of 4

30 December 2024

INDITEX CTW

INDITEX CTW

Test Method	Results	Requirements
Fiber Composition ISO 1833		
Microscopic Identification & Mechanical Separation & Method 1	58.4% Cotton 41.6% Lyocell	No Requirement

Estimated Total Uncertainty=(+2%)

We issue Ecoce||™ Fabric test report following these methods;

- Morphological test (according to AATCC 20 : 2013 & 20A : 2014 Microscopic Counting standard) performed by a third party with INTERTEK
- FiberTrace technology test performed by  Karatelber



Certificate Number: "7edf9f2"



EcoCell Product Range

Properties	Test Method	Unit	1.20 Dtex	1.30 Dtex	1.40 Dtex	1.50 Dtex	1.70 Dtex
Titer	ISO 1973	dtex	1.10 - 1.30	1.15 - 1.45	1.25 - 1.55	1.35 - 1.65	1.55 - 1.90
Titer	ISO 1973	den	0.99 - 1.17	1.04 - 1.30	1.13 - 1.40	1.22 - 1.49	1.40 - 1.71
Tenacity at break (conditioned)	ISO 5079	CN/tex	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40
Tenacity at break (conditioned)	ISO 5079	g/den	≥ 4.5	≥ 4.5	≥ 4.5	≥ 4.5	≥ 4.5
Elongation at break (conditioned)	ISO 5079	%	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10
Cut Length	DIN 53808-1	mm	37 - 39	37 - 39	37 - 39	37 - 39	37 - 39
Oil Pick Up	Methanol Extraction	%	0.15 - 0.30	0.15 - 0.30	0.15 - 0.30	0.15 - 0.30	0.15 - 0.30
CIE Whiteness	ISO 11475	-	≥ 70	≥ 70	≥ 70	≥ 70	≥ 70
Moisture	BISFA	%	9 - 13	9 - 13	9 - 13	9 - 13	9 - 13

The Production Capacity of **Ecocell**

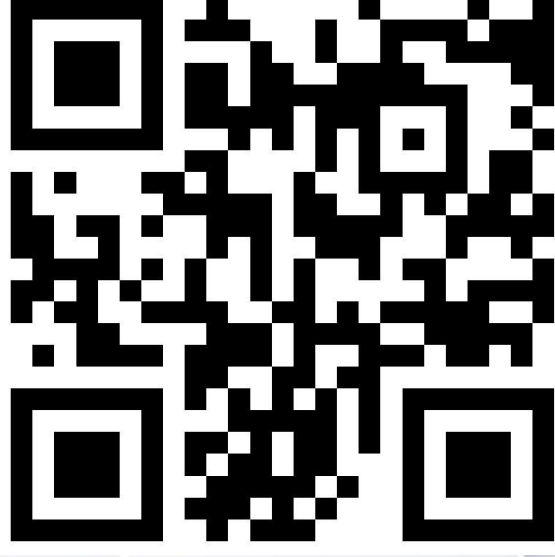
150.000 tons/year
Until 2030

50.000 tons/year
Actual capacity in 2025



100.000 tons/year
For the second step in 2027

Thank you!



www.ecocell.tr

