

**JCT** INDUSTRIES  
GROUP

# JCT Industries: About Us

## Our Story

Established in 2017, JCT Industries Group Sdn Bhd is committed to delivering cutting-edge, tailored solutions for global needs by specializing in the production of **High Strength and High Modulus (HSHM) PVA Fiber and Filament**. Strategically located in the industrial hub of Sungai Petani, Kedah, Malaysia, its close proximity to **Penang Port** provides easy access to global shipping routes.

## Our Global Roots

Blending international expertise with local talent, JCT Industries is led by a globally experienced management and technical team from **China** and **Singapore**. JCT Industries is supported by a workforce of over 200 professionals from **Malaysia** and Singapore, ensuring innovation and operational excellence.

Our products have been exported all over the world, including Eurasia and the Americas.

## Our Products

JCT Industries produces two main types of PVA products: Short Cut Fibers, and Filament.



**Short Cut Fiber**  
*T1 (Over Short) Pictured*



**Filament**  
*1100 dtex Filament Pictured*



# Production Plant and Capacity

8,000 tons per year

65,000 square meters

1,500 tons per year

Encompassing a total area of more than **65,000 square meters**, JCT Industries features state-of-the-art facilities designed to support large-scale production of our HSHM PVA Fiber and Filament.

Our current phase of HSHM PVA fiber production has a capacity of **8,000 tons** per year, supported by five fully operational production lines. To meet growing global demand, the second phase—focused on HSHM PVA filament—is planned to reach a total capacity of **1,500 tons** per year. Currently, our PVA filament production stands at 1,000 tons per year, with three of the five planned production lines fully operational.



JCT Industries' Production Plant

## Mind on Innovation

JCT Industries boasts a skilled research team with extensive experience. The team leaders, with over **30 years** in the chemical industry, have spearheaded the development of our production lines.



Their involvement ensures that our HSHM PVA Fiber and Filament products meet the stringent requirements demanded by global industries.

## Mind on Sustainability

JCT Industries places a strong emphasis on sustainability and environmental responsibility.



We adhere to the strict environmental standards set forth by the Malaysian Government in our manufacturing processes, minimizing waste and reducing our carbon footprint.

# JCT's: PVA Filament



## Strength at any Length

Like our Short Cut Fiber, JCT Industries' High Strength, High Modulus (HSHM) PVA Filament consists of the same **high-performance, lightweight** materials. Thanks to its strong affinity/bonding strength with cement and rubber, PVA Filament is ideal for a wide range of applications. Its high tensile strength, resistance to alkalis and acids, and biodegradability further expand its **potential** uses across multiple industries. Unlike our Short Cut Fiber, our Filament can be extruded and manufactured in any length.

## Unbreakable Under Stress

With an Individual Fiber Strength exceeding 11.0 cN/dtex and an Elongation of no more than 6.6%, our PVA Filament maintains its **strength and integrity** even under demanding conditions. These properties make it an **ideal choice** for applications requiring high durability and performance.

*"Individual Fiber Strength exceeding 11.0 cN/dtex, Elongation no greater than 6.6%"*

## PVA Filament - A Plethora of Applications

Our Filament's lightweight yet strong nature makes it an ideal reinforcement material for plastic composites, enhancing **durability** in products like safety helmets, riot gear, and other protective equipment. It can also be used in rubber products such as brake and coolant hoses, conveyor belts, and fire hoses. Additionally, in the automotive industry, it serves as a strong rayon replacement for tire cords, highlighting its **versatility**.



### Automotive

Air Conditioning Hose  
Power Steering Hose  
Radiator Hose  
Brake Hose  
Tire



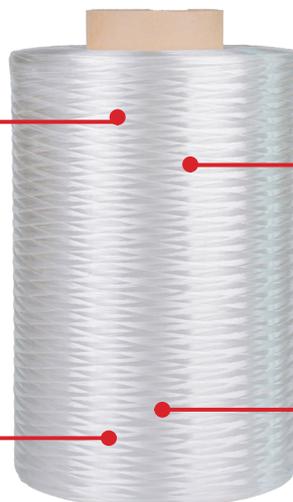
### Personal Protective Equipment

Safety Helmet  
Riot Gear



### Home and Environment

Geosynthetic Materials  
Concrete Mesh  
Reinforcement Geogrids  
Tatami Mat  
Sewing Thread



### Industry Uses

Oil and Gas Piping  
Conveyor Belts  
Fire Hoses



# HSHM Filament Fiber Types



## 1100 dtex Filament

*Filament comes in 200f and 500f types*

Linear Density, <b>dtex</b>	1100 ± 60
Monofilament Tenacity, <b>cN/dtex</b>	≥11.0
Yarn Tenacity, <b>cN/dtex</b>	9.5 ± 1.0
Tensile Strength at Break, <b>N</b>	≥90.0
Elongation at Break, %	≤6.6
Oil Content, %	0.25 ± 0.10
Heat Shrinkage (150°C,30 minutes), %	≤1.5



## 1330 dtex Filament

*Filament comes in 200f and 500f types*

Linear Density, <b>dtex</b>	1330 ± 70
Monofilament Tenacity, <b>cN/dtex</b>	≥11.0
Yarn Tenacity, <b>cN/dtex</b>	9.5 ± 1.0
Tensile Strength at Break, <b>N</b>	≥110.0
Elongation at Break, %	≤6.6
Oil Content, %	0.25 ± 0.10
Heat Shrinkage (150°C,30 minutes), %	≤1.5



## 2000 dtex Filament

*Filament comes in 750f and 1000f types*

Linear Density, <b>dtex</b>	2000 ± 100
Monofilament Tenacity, <b>cN/dtex</b>	≥11.0
Yarn Tenacity, <b>cN/dtex</b>	9.5 ± 1.0
Tensile Strength at Break, <b>N</b>	≥170.0
Elongation at Break, %	≤6.6
Oil Content, %	0.25 ± 0.10
Heat Shrinkage (150°C,30 minutes), %	≤1.5

## Flexible Shipping and Packaging Options



Fibers can be packaged in 10.5 ton/20'GP FCL Container, or 22 ton/40'HC FCL Container.

# JCT's: PVA Short Cut Fiber

## Enhancing the Strength of Concrete

JCT Industries' High Strength, High Modulus (HSHM) PVA Short Fiber consists of **small-length, high-performance, lightweight fibers**. Highly versatile, our Fibers are suitable for a wide range of applications, especially in construction. The inclusion of our Fiber enhances the tensile strength, impact resistance, and crack resistance of cement and concrete. Our fiber's excellent resistance to UV rays and aging ensures **long-term durability**, even in outdoor and harsh environments.



***“Tenacity exceeding 11.5 cN/dtex  
Elongation no greater than 7.5%  
Fiber Lengths between 4-6 mm”***

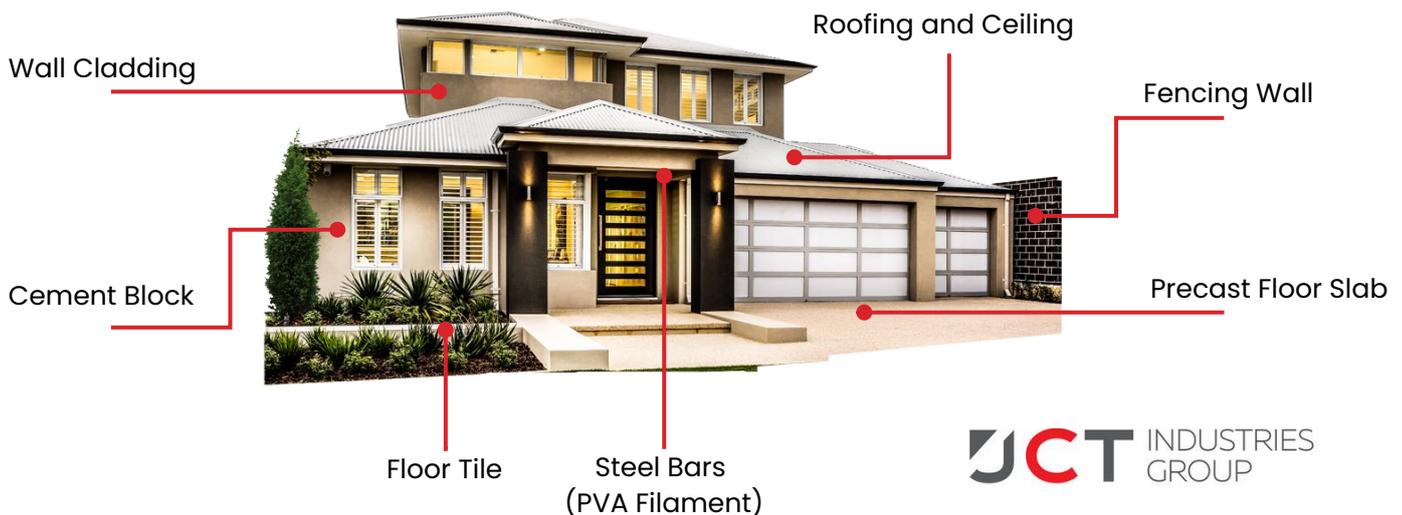
## Versatile and Strong

Manufactured to the highest standards, our Short Cut Fiber has a tenacity exceeding 11.5 cN/dtex and an Elongation no greater than 7.5%. While customizable to meet specific needs, most fiber lengths fall within 4-6 mm, making them suitable for a variety of construction applications.

## A Superior Alternative to Asbestos – and More

When evenly dispersed during the curing process, our lightweight Short Cut Fiber strengthens cement and concrete more effectively than asbestos or even steel. As a polymer-based fiber, our fibers are **corrosion-resistant** and offer excellent **bending elasticity**, giving them an advantage over traditional steel and asbestos reinforcements by reducing internal micro-cracks. Our PVA Short Cut fibers serves as a safer, **environmentally friendly** replacement for asbestos with minimal impact on human health and the environment.

## Construction Applications



# HSHM Short Cut Fiber Types

## TI (Over Short)



Linear Density, <b>dtex</b>	2.0 ± 0.30
Tenacity, <b>cN/dtex</b>	≥11.5
Initial Modulus (0.1-0.4%), <b>cN/dtex</b>	≥260
Elongation, %	≤7.5
Hot Water Solubility (90%, 1 hour), %	<1.5
Initial Melting Point, <b>°C</b>	≥100
Oil Content, %	0.05 - 0.30
Dispersion, <b>Grade</b>	1 to 3

## Flexible Shipping and Packaging Options



Length of all fiber types can be tailored to customer's need. Fiber lengths usually range between 4 to 6 mm.



Fibers will be packaged in polypropylene bags, net weight 180 kg/bale with dimensions 1020mm x 570mm x 600mm.



Fibers can be packaged in 12.96 ton/20'GP FCL Container, or 27.36ton/40'HC FCL Container.



## Tailored to Your Needs

At JCT Industries, our High Strength, High Modulus PVA products are available in a variety of lengths customized to meet specific customer needs. Thanks to the fiber's exceptional tenacity and versatile physical properties, our PVA Filament and Short Cut Fiber can be precisely tailored to suit any application or condition required by the customer.

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