

## CONVEYOR BELTS FOR ALUMINUM EXTRUSION



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## **ALUMINUM EXTRUSION LINE**

Standard layout of an aluminum extrusion production line.





profile cools down.

## **BELTING MATERIALS USED**

Different synthetic fibers used for aluminum extrusion.



#### PBO

PBO stands for Polybenzobisoxazole, which is a synthetic polymer that was invented by SRI International and is currently manufactured by Toyobo Corporation in Japan. The trademark name for PBO is Zylon. Zylon is 1.6 times stronger than Kevlar and can also withstand higher temperatures.

For aluminum extrusion, PBO normally can withstand temperatures up to 1200°F/600°C.



#### **KEVLAR**

Kevlar is the trademark name for an aramid fiber made by DuPont. An aramid fiber is a synthetic (man-made) fiber that is very strong and heat resistant. Aramids are generally prepared by the reaction between an amine group and a carboxylic acid halide group. The most popular aramid fibers are: Kevlar, Twaron, Technora and Heracron. The one that we and most of the market use is Kevlar. Kevlar is made by a solution of monomers 1,4 phenylene-diamine and terepththaloyl chloride in a condensation reaction.

For aluminum extrusion, Kevlar can normally can withstand temperatures up to 950°F/500°C.



#### NOMEX

Nomex is the trademark for a flame-resistant meta-aramid developed by DuPont. Nomex, like Kevlar is an aramid but Nomex is a "meta" aramid, and Kevlar is a "para" aramid. The variant "meta" just has a different location for the different compounds than the variant "para". This makes Nomex have an good thermal, chemical and radiation resistance for a polymer material. For example the firefighters' suits are made of Nomex because of its resistance to fire and chemicals... But this also causes Nomex to have a poorer strength and a lower resistance to heat than Kevlar. Nomex is made in USA and also Spain by Dupont.

For aluminum extrusion process it can withstand temperatures up to 450°F/230°C.



#### POLYESTER

Polyester is a synthetic polymer made of purified terephthalic acis (PTA) or its dimethyl esterdimethyl terephthalate (DMT) and monethylene glycol. It doesn't have high resistance to heat, which is why it is normally used at the very end of the process, where the profile is cooler.

For aluminum extrusion process it can withstand temperatures up to 300°F/150°C.



### **NEEDLED ROLLERS**



	РВО	KEVLAR	POLYESTER
MATERIAL	PBO + Kevlar	Kevlar	Polyester
INNER DIAMETER LENGTH THICKNESS	40mm to 140mm <1200 mm 5mm to 14mm	40mm to 140mm <1200mm 5mm to 14mm	40mm to 140mm <1200mm 5mm to 14mm
WORKING TEMP	1200°F   600°C	950°F  500°F	300°F   150°F
ADDITIONAL	Hard Type Available	Hard Type Available	Hard Type Available

## **NEEDLED PADS**



	PBO	KEVLAR	NOMEX	POLYESTER
MATERIAL	PBO + Kevlar	Kevlar	Nomex	Polyester
WIDTH LENGTH THICKNESS	50mm to 3,000mm Per Customer Request 5mm to 14mm			
WORKING TEMP	1200°F   600°C	950°F  500°F	450°F   230°C	300°F   150°F
ADDITIONAL	Adhesive Backing & Hard Type Available			



### **NEEDLED BELTS**



	РВО	KEVLAR	NOMEX	POLYESTER
MATERIAL	PBO + Kevlar	Kevlar	Nomex	Polyester
WIDTH LENGTH THICKNESS	<3,000mm <30,000mm 5mm to 14mm	<3,000mm <30,000mm 5mm to 14mm	<3,000mm <30,000mm 5mm to 14mm	<3,000mm <30,000mm 5mm to 14mm
WORKING TEMP	1200°F   600°C	950°F  500°F	450°F   230°C	300°F   150°F
ADDITIONAL	Truly Endless & Laced. Hard Type Available			

### **NEEDLED POLYESTER + RUBBER IMPREGNATED**



	NOVA 25	NOVA 40	NOVA 60
MATERIAL	NOVA	NOVA	NOVA
THICKNESS MAX. WIDTH	2mm 2,000mm	4mm 2,000mm	5.5mm 2,000mm
WORKING TEMP	248°F∣120℃	248°F   120°C	248°F   120°C
COLOR	Green, Black, White	Green, Black, White	Green, Black, White



950°F | 500°C

950°F | 500°C

5mm

5mm

### **WOVEN PRODUCTS**

K-24

K-26

	K-7	K-24		<b>K-26</b>
MATERIAL	DESCRIPTON		THICKNESS	TEMPERATURE
K-7	4-Ply woven Kevlar v dissipate heat & low	with wire construction to help ver the elongation.	5mm	950°F   500°C

<b>SPACER</b>	BARS	AND	AGING	<b>FURNACE</b>	CRATES

4-Ply woven Kevlar with pan fibers to help dissipate heat.

4-Ply woven Kevlar.



	SPACER BARS & AGING	NOMEX CRADLE	PROTECTIVE
	FURNACE CRATES	LINER STRIPS	COVERING
MATERIAL	Nomex	Nomex	Nomex
SIZE	Per Customer Request	Per Customer Request	Per Customer Request
THICKNESS	2mm	2mm to 10mm	
DENSITY	450 g/m2	N/A	
WORKING TEMP	450°F∣230°C	450°F   230°C	450°F   230°C

# **SPECIAL FABRICATIONS**

We love challenges. Test us!



## **TRULY ENDLESS KEVLAR COVER ON A TIMING BELT**



## **KEVLAR ON A REINFORCED BASE**



V-GUIDES: PVC AND KEVLAR ROPE AND NOVA WITH PVC GUIDE



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