

VAC (PVB)



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VAC (PVB) Overview

VAC(PVB) Overview



Recycled Vinyl Acetate Copolymer (VAC/PVB)

Applications: Interlayer of safety glass, automotive windshields, architectural glass, solar panels



VAC Characteristics



Eco-Friendly



Anti-Slip



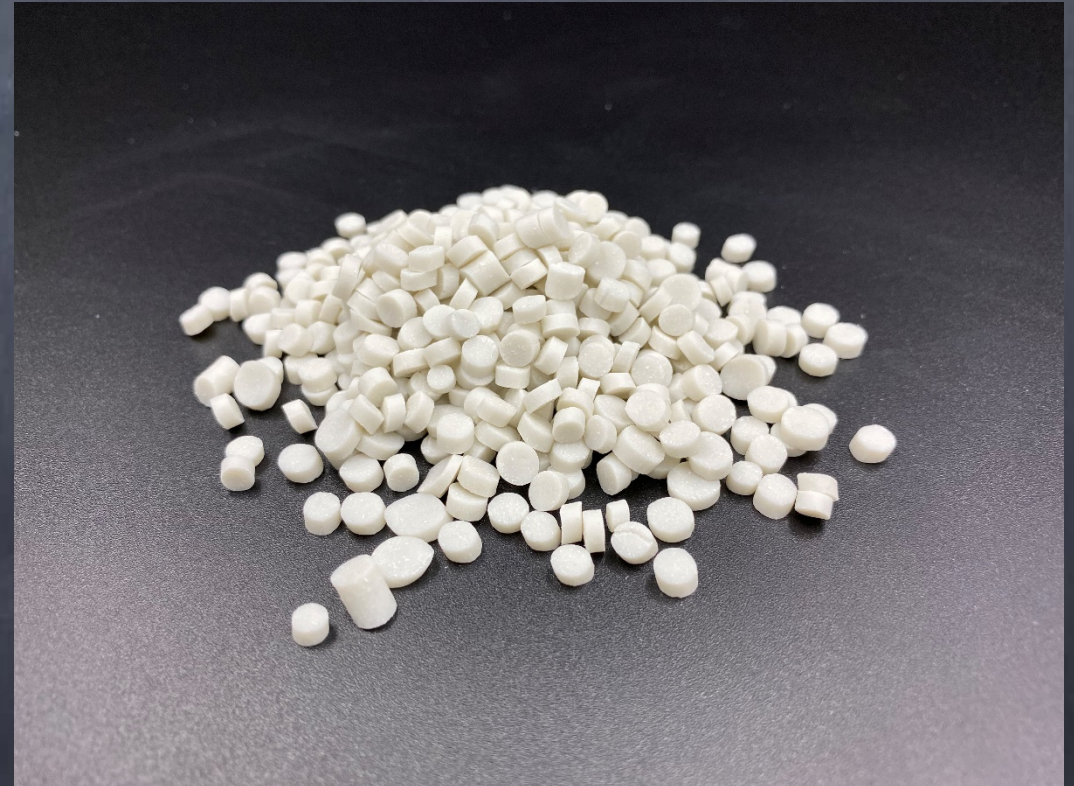
Softness



Abrasion Resistance



Weather Resistance



Recycling & Manufacturing Process

Recycling & Manufacturing Process Of Pre-consumer VAC (PVB)

Tempered Glass Factory

01



Production line of safety glass

02



VAC (PVB) film was put on the glass

03



The extra VAC (PVB film) on the sides were cut and discarded

04



Pre-consumer scrapped VAC (PVB) film

Recycling & Manufacturing Process Of Pre-consumer VAC (PVB)

Tempered Glass Factory

- Pre-consumer scrapped VAC (PVB) film set aside for recycling.

Lamination & Coating Factory

- Adding Evatex' s exclusive formula for a product with great physical properties and wide range of applications : VAC film / fabric coating (RVAC).



Crushing Plant

- Recycled VAC (PVB) scrap crushed into pieces.

Compounding Plant

- Crushed recycle VAC (PVB) pieces melted and compounded into VAC (PVB) pallets.

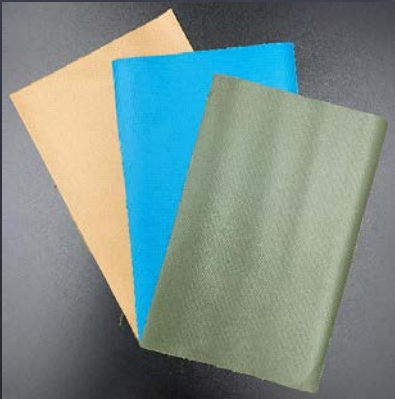
Recycling & Manufacturing Process Of Pre-consumer VAC (PVB)

Tempered Glass Factory



Pre-consumer scrapped VAC (PVB) film

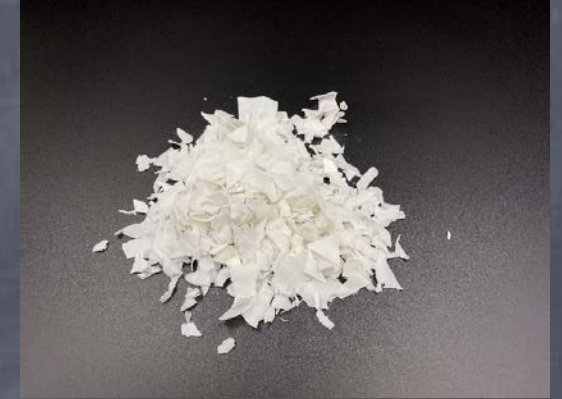
Lamination & Coating
Factory



Fabric Coating : RVAC coating
Fabric Lamination : VAC Film



Crushing Plant



Crushed recycle VAC (PVB) pieces

Compounding Plant



Recycled VAC (PVB)
pellets



Recycling & Manufacturing Process Of VAC (PVB)

Recycled VAC (PVB) Supply Sources:

- Worldwide VAC (PVB) recycling produces about 12,000 tons of raw material per month.
 - Equates to roughly 144,000 tons per year.
- Around 800 tons of recycled VAC (PVB) in Taiwan per year.
 - 50% from pre-consumer mill waste recycled VAC (PVB):
400 tons /year
Recycled Origin: Taiwan, Japan
 - 50% from post-consumer glass extraction VAC (PVB):
400 tons /year
Recycled Origin: America, Europe



Recycling & Manufacturing Process Of VAC (PVB)

VAC (PVB) Supply Source:

- 800 tons recycled material per year (50% pre-consumer + 50% post consumer)
- Estimated enough to produce 4 million yards of fabric per year.
- Usage of VAC (PVB) on fabric:
 - RVAC*5 coating – 160g/yard
 - VAC Lamination – 250g/yard
- We use mill waste recycled VAC (PVB) for production. The annual recycled pre-consumer mill waste raw material will be 400 tons.

Product Comparison

Product Comparison

VAC (PVB)

	VAC	PVC	PU	TPU
Price	\$\$	\$	\$\$\$	\$\$\$\$
<u>Chemical Properties</u>				
Hydrolosis	15 Years	500M Years	5 Years	10 Years
Anti-Yellowing	5	5	4	4
<u>Processability</u>				
HF Welding	Yes	Yes	Yes	Yes
Printing	4	5	4	5

*5=Best, 1=Worst

Product Comparison

VAC (PVB)

	VAC	PVC	PU	TPU
<u>Physical Properties</u>				
Abrasion	4	4	4	5
Flexing	3	4	4	5
Softness	5	4	5	4
Scratch Resistance	5	4	4	5
<u>Environmental Protection</u>				
Dioxin Contamination	None	Yes	None	None
Residual DMF	None	None	Yes	None
Eco-Friendly	Yes	No	No	Yes

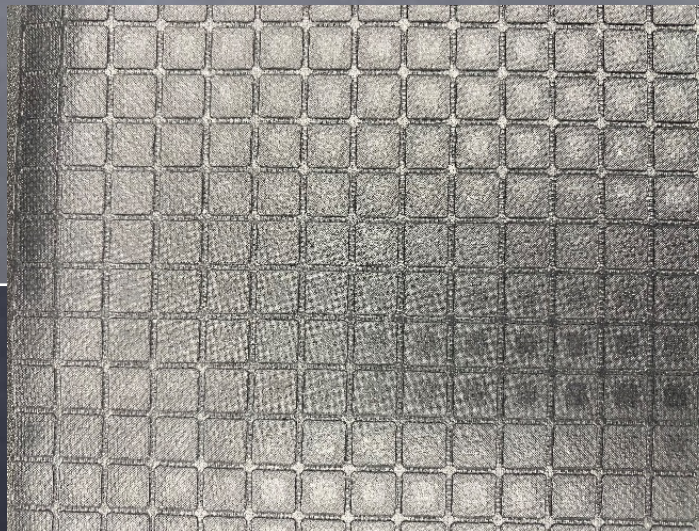
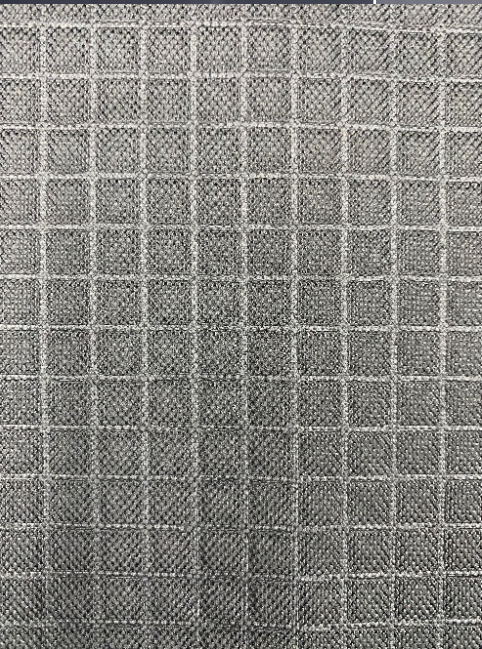
*5=Best, 1=Worst

Post Processing Applications

Post Processing Applications

Combine VAC with the following processes to maximize added value to the product:

- HF Welding
- Hot Press
- Printing
- Punching
- Spraying



Product Applications

Product Applications

VAC Manufacturing Methods :

- Lamination (Backside)
- Lamination (Face)
- RVAC Coating
- Sheet

VAC Product Applications :

- Synthetic Foam Leather (Sponge Leather)
- Medical
- Bag
- Footwear

