

# The Great Breakthrough

— Vestal Profiles —



 **10<sup>th</sup>**  
**YEARS ANNIVERSARY**



[info@vestalprofiles.com](mailto:info@vestalprofiles.com)

## Articulate Production Technique

After a lot of experiments and strict examination, we are able to develop a set of production formula and technique suitable for co-extrusion white profile by using co-extrusion technique of color profile. The designed “double layer” window frame reinforces the anti-aging property of profile, solves the problem of windows fading, and achieves the great breakthrough in the super weather resistance property of profile.

## Good Physical Mechanics

Test Item	National Standard	Test Result
Thermal Deformation	$R \leq 2\%$ $\leq R 0.4\%$	R: 1.5%   R: 0.1%
Low-temp Impact	1/10 breakage	0/10 breakage
Welding Residual Stress	Average $\geq 35$ MPa	Average 50 MPa
	Minimum $\geq 30$ MPa	Minimum 47 MPa
Tensile-Impact	$\geq 600$ KJ/M <sup>2</sup>	730 KJ/M <sup>2</sup>
Major Brands	$\geq 75^{\circ}$ C	82 $^{\circ}$ C
Flexural Module	$\geq 2200$ MPa	2680 MPa

## Theory of Good Anti-UV Performance

### Scientific Cavity Design

Vestal anti-UV profile comes with multi-cavity structure, good temperature insulation; tiny heat transfer coefficient which is only 1/1250 of aluminum profile; better air proof property than aluminum window by installing rubber sealing; good water proof property by independent drainage cavity in frames and sashes.

### Systematic Optimized Design

Plentiful varieties including hundreds of profiles are able to meet requirement of making different complicated windows. The systematic optimized design of anti-UV profile ensures the increase of wall thickness without adding weights to the profile. The window rate is from 96 to 160.43 m<sup>2</sup>/T, a good performance-price rate.

### Solid Anti-blast Pressure Property

It is possible to insert 2-3mm reinforcement steel into cavity of profile. According to local blast-pressure, heights of building and hole size, reasonable window design and usage of reinforcement steel and profile can ensure the intensity requirement of windows and doors in construction.



# Anti UV All Weather UPVC Profiles

## Vestal Profiles

## The Great Breakthrough

Aiming at the special weather of India, Vestal Group seriously developed Vestal anti-UV co-extrusion profile in its profile factory. It completely solves the aging and fading problem of white profile under high intensity UV light and fills the blank of the industry in India.

## Special Techniques Formula

Modifying the common-used CPE and ACR systems in profile formula, we use special technique to solve more efficiently the aging and fading problems of white profile in the area of high UV intensity, meanwhile overcoming the default of low-temperature impact performance of co-extrusion profile.



## Theory of Good Anti-UV Performance

### Weather Resistance Performance Difference of CPE and ACR System

#### 1. Weather Resistance Default of CPE

Because the reacting HDPE presents as particle, the reaction starts from the surface of the particle to the interior, thus there exits non-release HCL inside, resulted in the product degradation to fade.

#### 2. Structure Advantage of ACR

ACR is the core-shell structure copolymer of methyl methacrylate and butyl acrylate monomers, unable to degrade PVC, thus highly enhancing the weather resistance performance of PVC profile.



### Principle of High Density TiO<sub>2</sub>

1. Because of high density TiO<sub>2</sub> of co-extrusion layer and Vestal specific disperse technique, it produces a high unit density of TiO<sub>2</sub> in the co-extrusion layer of the profile, which is 2.5 times higher than the normal profile, thus resulted in apparently better absorbability of UV light by the surface than other similar products.

2. The high density of TiO<sub>2</sub> in the co-extrusion layer greatly enhances refraction and dispersion rate, more efficiently resists UV light, and prevents the possibility of photochemical reaction with copolymer or other additives by absorbing UV energy.

### Principle of UV Absorbent

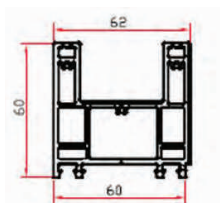
UV absorbent can efficiently absorb and transfer UV energy, lower the damage of UV light to the profile.



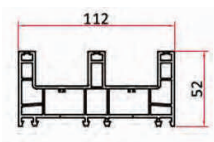
# Anti UV All Weather UPVC Profiles

## Vestal Profiles

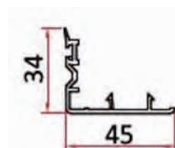
### The Section of 60-88-110 Sliding Series



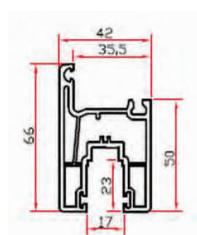
**VT60-K**  
Frame  
Unit weight  
1.2 kg/m



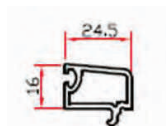
**VT246H**  
Frame  
Unit weight  
1.68 kg/m



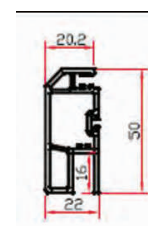
**VT95FB**  
Cover  
Unit weight  
0.235 kg/m



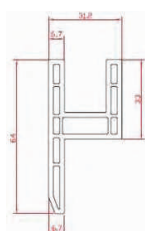
**VT95-S**  
Sash  
Unit weight  
1 kg/m



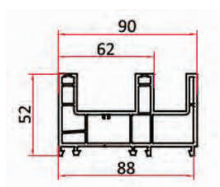
**VT88-DY**  
Single Gazing Bead  
Unit weight  
0.214 kg/m



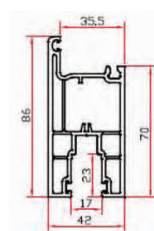
**VT-80-88DSS**  
Screen sash  
Unit weight  
0.47 kg/m



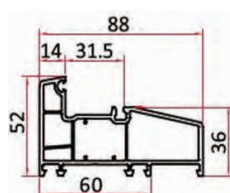
**VTIF30**  
Screen Frame  
Unit weight  
0.76 kg/m



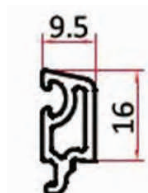
**VT88-PK**  
Frame  
Unit weight  
1.39 kg/m



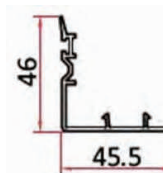
**VT-034**  
Sash  
Unit weight  
1.28 kg/m



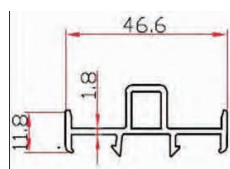
**VST88-07**  
Fixed Frame  
Unit weight  
1.11 kg/m



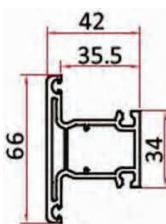
**VT88-SY**  
Double glazing bead  
Unit weight  
0.145 kg/m



**VT016**  
Interlock  
Unit weight  
0.27 kg/m



**VT80SSL-T**  
Cover  
Unit weight  
0.284 kg/m



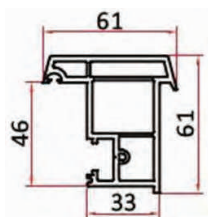
**VT60ST**  
Mullion  
Unit weight  
0.8 kg/m



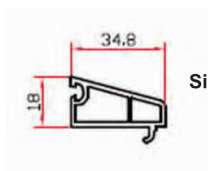
# Anti UV All Weather UPVC Profiles

## Vestal Profiles

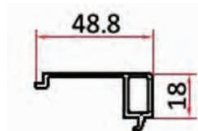
### The Section of 60 Casement Series



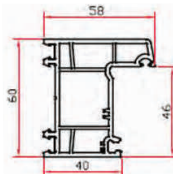
**VP60FZT**  
Door Mullion  
Unit weight  
1.08 kg/m



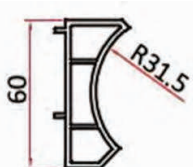
**VP60-DY**  
Single Gazing Bead  
Unit weight  
0.275 kg/m



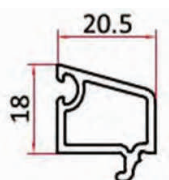
**VP60LB**  
Lower bead  
Unit weight  
0.33 kg/m



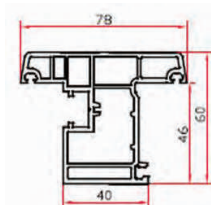
**VP60-K**  
Frame  
Unit weight  
0.995 kg/m



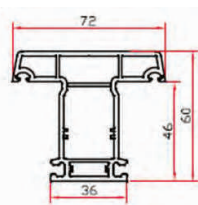
**VF-WXZJ**  
Bay post adapter  
Unit weight  
0.52 kg/m



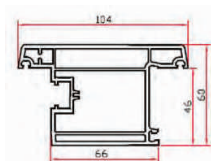
**VP60-SY**  
Double glazing bead  
Unit weight  
0.195 kg/m



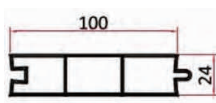
**VP60-WKS**  
Outward sash  
Unit weight  
1.3 kg/m



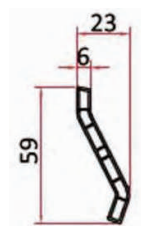
**VP60-ST**  
Mullion  
Unit weight  
1.05 kg/m



**VP60-MS**  
Outward sash  
Unit weight  
1.57 kg/m



**VP60DP**  
Door panel  
Unit weight  
0.58 kg/m

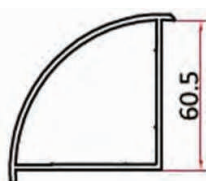


**VP60LS**  
Lower sash  
Unit weight  
0.235 kg/m

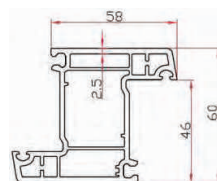
### Accessories



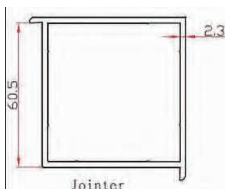
**VF-YG**  
Bay post  
Unit weight  
0.74 kg/m



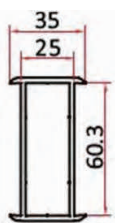
**VF60-ZJ**  
61 curved corner  
Unit weight  
0.78 kg/m



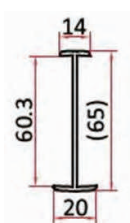
**VSP60-42**  
Z Mullion  
Unit weight  
1.18 kg/m



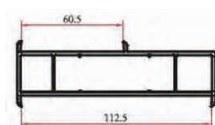
**VSP60-14**  
Square corner  
Unit weight  
0.86 kg/m



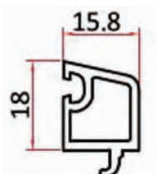
**VF60-PG**  
60 frame connector  
Unit weight  
0.66 kg/m



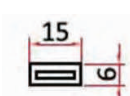
**VF60-PB**  
61 frame connector  
Unit weight  
0.3 kg/m



**VST112-02**  
Jointer  
Unit weight  
0.99 kg/m



**VMB-YT**  
Double glazing bead  
Unit weight  
0.174 kg/m



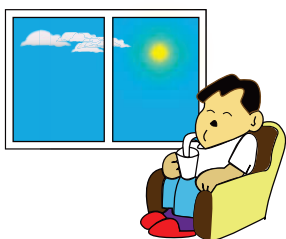
**VST77-14**  
Grid gasket  
Unit weight  
0.09 kg/m

# Anti UV All Weather UPVC Profiles

## Vestal Profiles

### Product Features

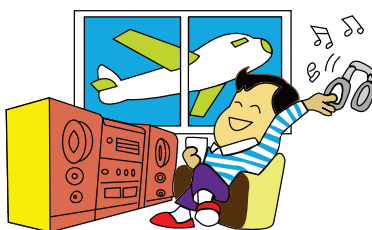
#### Excellent thermal preservation performance



Plastic has heat conductivity factor, and has a heat insulation effect 1250 times better than aluminum material.

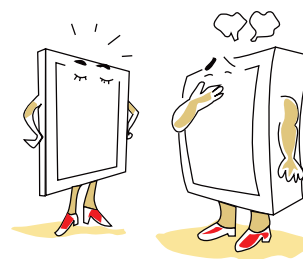
Besides plastic has good air tightness, therefore, in cold or hot areas, your house is another world though the outdoor temperature is several decades degree below zero or of very high temperature.

#### Good sound insulation performance



Its structure is designed very well, with tight joints. The test result indicates that its sound insulation is <20db and complies with DIDN4109.

#### Anti-aging



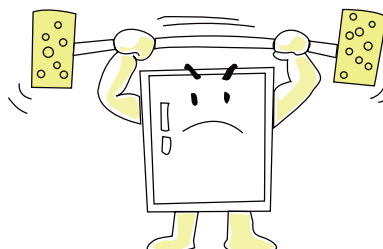
Imported denaturalizing agent is applied, and the agent for preventing UV rays absorption is added in the raw materials. The product does not discolor, and become aging or brittle even when it is exposed to direct sunlight, rainstorm, drying or humidity between -30°C and 70°C.

#### Good combustion-retarding performance



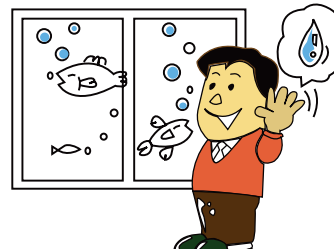
Plastic window is made of quality combustion-retarding material, and does not ignite itself or support combustion and can extinguish the fire by itself. So it is your ideal choice.

#### Resist Impact



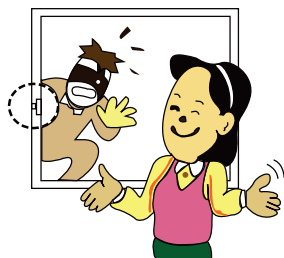
Special impact-resisting design is applied, and the section material can bear cold impact test of 1kg hammer dropping freely from one meter height at -10°C.

#### Good waterproof performance



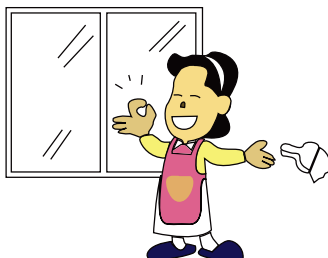
Its water absorption is <0.1%. The doors and windows are designed to have rainproof plates and water drain slots, and can completely isolate the rainwater outside of your room. Its waterproof performance complies with DIDN18055.

#### Good anti-theft



Plastic doors and windows are provided with high-quality metal articles. Inside of windows will be fitted with glass strips according to the design so that thieves have no solutions.

#### Easy maintenance



Plastic sections are not corroded and do not discolor or get yellow. They are not affected by ash, cement or binding agents, so they almost need no maintenance.

#### Good air tightness



All the joints and gaps of the plastic windows are fitted with ternary sealing strips, and unit length of gaps can vent below 4m<sup>3</sup> mmhm. In the house equipped with cold and heating facilities, the plastic window can be fully utilized as air-conditioners, and can save energy.

# Anti UV All Weather UPVC Profiles

————— Vestal Profiles —————





# VESTAL

## UPVC PROFILE

Since 2008

Second Floor, Seema Building Near Padma Junction, Off M.G. Road,  
Kochi - 682035, India / Tel : 91 484 2381338 / Fax : 91 484 2362062

E-mail : [vestalprofiles@gmail.com](mailto:vestalprofiles@gmail.com) / web : [www.vestalprofiles.com](http://www.vestalprofiles.com)

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## Vestal Impex

Door No :65, Ground Floor, Adinath Trade complex , Adinath Nagar,  
200ft Ring Road, Jawaharlal Nehru Road, Madhavaram, Chennai-600 060

Ph : 90425 64760 / E-Mail : [info@vestalprofiles.com](mailto:info@vestalprofiles.com)

