



# UV Protected

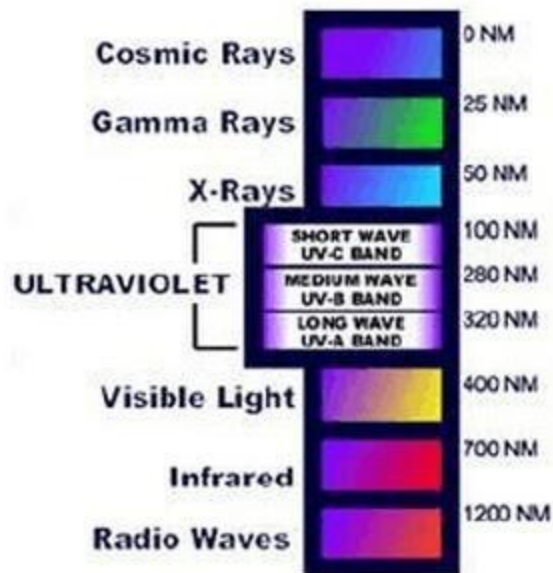


# Artificial Plants



# What's UV protection?

For outdoor application, artificial hedges plants should be UV-protected for years to keep best lifelike green appearance. How to make it happen? Let's get to know what are UV rays & how to make plastic plants UV-engineered. According to the wavelength, UV rays can be divided into three categories - UVA, UVB & UVC.



UVA 320-400nm It can penetrate grass to degrade polymer. UVB 280-320nm The 95% was absorbed by ozone sphere and the rest becomes main cause for polymer degradation and skin sunburning. UVC 100-280nm All is absorbed by ozone sphere.

These UVA and UVB rays will degrade these plastic polymer as time goes. The main degrading causes are listed as follows:

1. Heat
2. Thermal oxidation
3. Chemical damage
4. Radiation
5. Physical
6. Biological

The representative performances of degradation are listed below:

- Fade
- Mechanical Decline
- Physical Appearance Change
  - Glossiness decreased
  - Transparency drops
  - Viscosity change
- Strong irritating odor
- Cracks
- Black spots

On top of everything, you have to add UV protector or absorber in plastic artificial plants manufacturing process for long-lasting outdoor use. We usually add UVA additive and Tinuvin (Hals) in artificial plants to absorb UV rays or turn UV radiation into heat to shield plastic plants from degradation for outdoor application. The additive quantity needed should be set according to local conditions like weather and temperature which are fatal factors for speeding plastic plants degradation.

## **How to test lifetime of different UV-protected plastic artificial plants?**

The artificial plants projects have become a main trend not only for residential home indoor & outdoor landscape but also for commercial interior or exterior decor. Therefore, it is of great significance for project managers, garden retailers & suppliers or landscape contractors to be aware of why we use UV-protection and how to find out the outdoor lifetime which is in close relation to its UV-protection in artificial plants. The more premium the UV-protection is, the longer the artificial plants will keep its perfect lifelike natural looking.

Of course, we can put it under the sun for testing its ageing timeline. However, it is apparently time-consuming. Those pros in the industry usually use herna lights for quick lifetime test. The UV shielding rating criteria for artificial plants including color change, glossy change & cracked degree of the test before & after. Specific standard refers to SAE J2527 & SAE J2020.