PLASTIPACK LIMITED

Manufacturers of Energy and Resource Saving Products

What is UV light?

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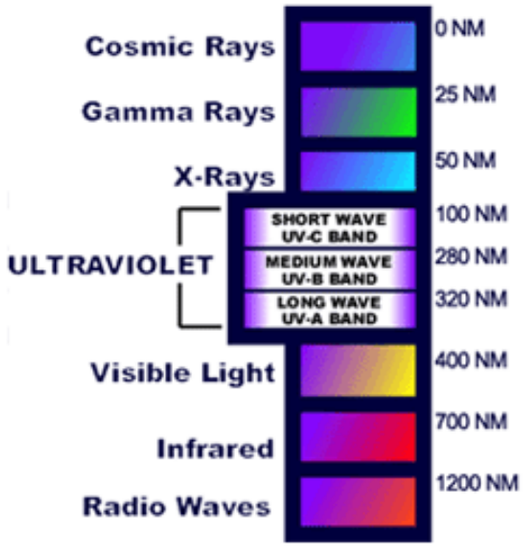
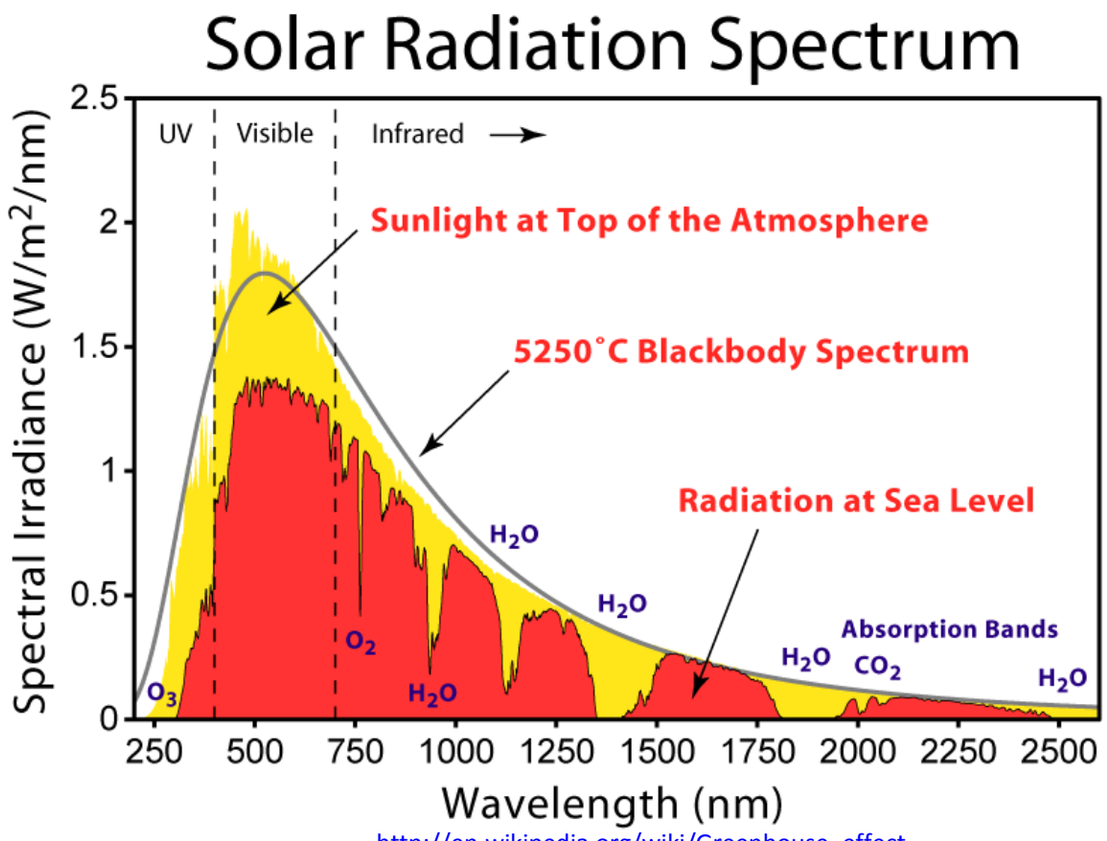
UV (Ultra Violet) is a high energy wavelength of light just outside of the visible spectrum. Though largely absorbed by the earth's atmosphere, some UV light reaches the earth through the atmospheric window which is not absorbed. The intensity of the UV radiations is dependent on the geographical location, and elevation the materials will be used in.

Within the polymer industry, UV intensity is measured in Klys/yr (KioLanley years) which is the amount of energy the material will be exposed to per m^2 per year. UV radiation Over time, UV radiation will decay the material's pigmentation and amorphous areas within the polymer, producing Hydroperoxides which are highly reactive. This then causes an autoxidation process which results in the rate of degradation increasing over time. A drop in mechanical properties occurs and there is a change in physical properties, like reduced transparency or loss of gloss, cracking, chalking or yellowing.



http://www.loc.gov/rr/scitech/mysteries/colors.html



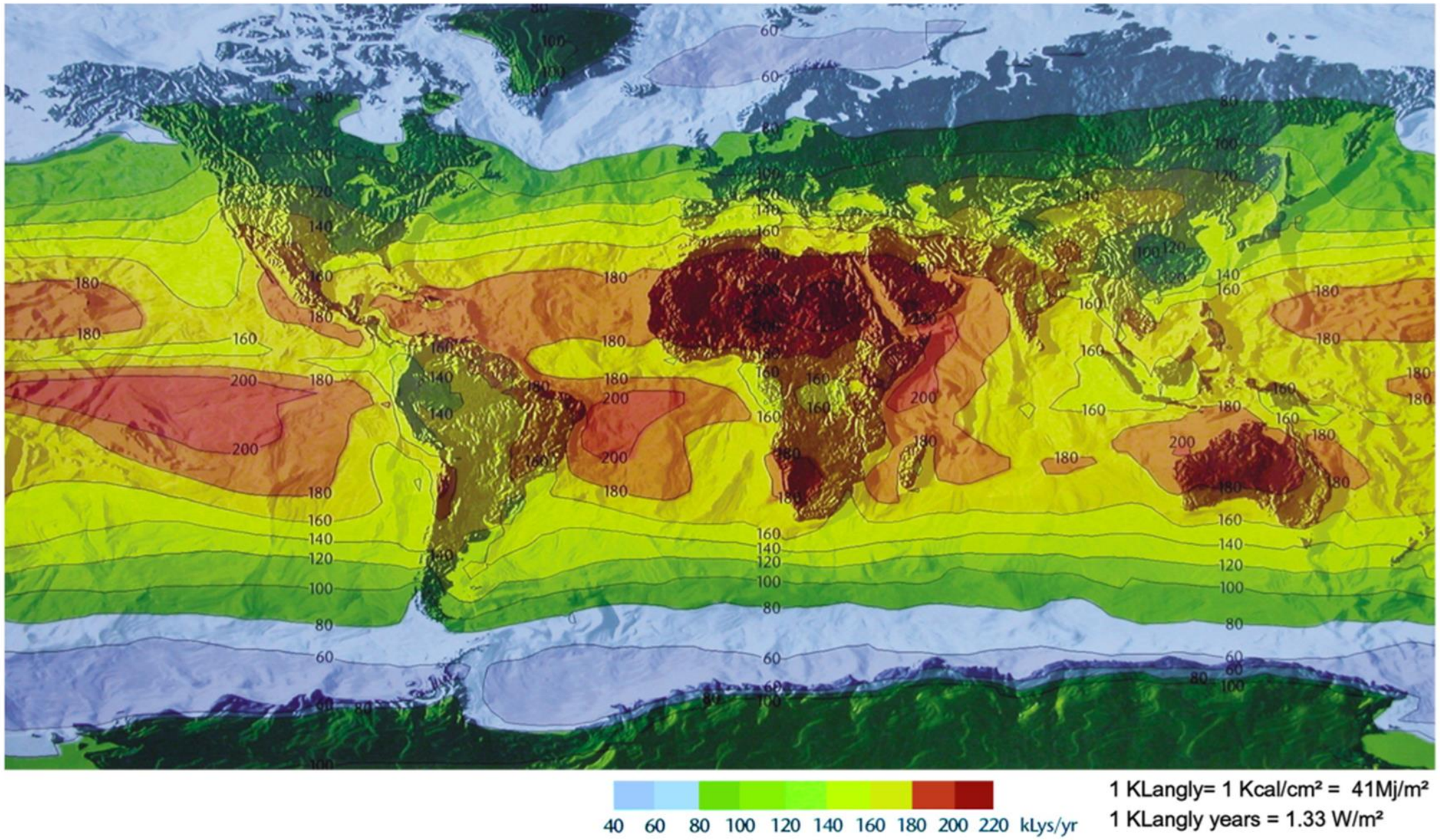
http://en.wikipedia.org/wiki/Greenhouse_effect

UV stabilisation

To provide the best quality material that can withstand this UV exposure, Plastipack tailors its stabilisation packages. These have been developed by leading additive and pigment specialists to ensure the material reaches its expected lifespan.

Plastipack continually test and develop materials to ensure quality and to improve the performance through additive development and improved product design. The development of GeoBubble™ is an example of our commitment to new product development.

UV intensity across the globe



Plastipack manufacture our materials to reach there expected lifespan to the market place our customers request. It is the responsibility of our customers to ensure the appropriate UV stabilized product is being sent to the end user. This is necessary to ensure the covers reach their expected lifespans within the environmental conditions the product will be exposed to.

Expected lifespans

The expected lifespans have been tested under chemical levels consistent with a pool balanced within industry standards.

Standard materials	
Product	**Expected lifespan**
400micron	**2-3 years**
400micron + weave	**2-3 years**
500micron	**3-4 years**
600micron	**3-4 years**
High performance materials	
Sol+Guard™	**5-6 years**
EnergyGuard™	**5-6 years**
CoolGuard™	**5-6 years**
Water storage material	
VapourGuard™	**up to 10 years**

Products with GeoBubble™ technology up to 25% longer lifespan.

Material testing

To ensure the product's lifespan, Plastipack externally tests accelerated weathering samples subjected to a high chlorine solutions. Plastipack also performs Gas chromatography and X Ray Fluorescence Radiation spectroscopy testing on materials which have reached the end of their working life to determine the chemical content within the material, ensuring it is reaching its desired lifespan outside of the lab environment. This, combined with the expertise of the leading additive and pigment suppliers that we collaborate with on product testing and development, allows us to produce a consistent and reliable product tailored to provide a good return on investment for your end users.

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Thank you

Manufacturer www.plastipack.co.uk

Product Information www.geobubble.co.uk

Water Storage www.vapourguard.com

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