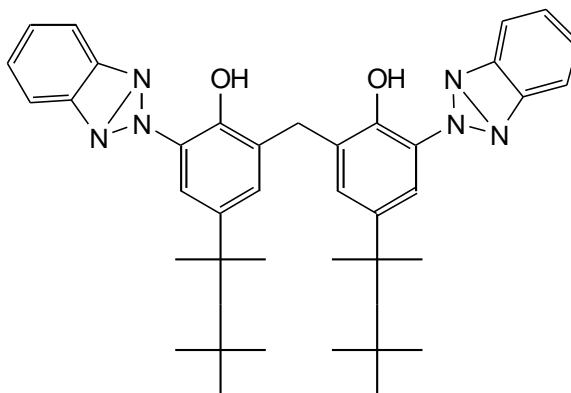


**Ultraviolet light absorber for plastics**
**UV ABSORBER**
**1. General**

Chiguard® 5431 belongs to the family of substituted benzotriazoles which protect against ultraviolet radiation. Compared to other Chitec's UV absorbers, Chiguard® 5431 is very low in volatility which makes it especially suitable for those applications involving a high temperature process.

**2. Properties**

Structure :



CAS Name	:	2,2'-Methylene bis(6-(2H-benzotriazol-2-yl)-4,1,1,3,3-tetramethylbutyl)phenol
CAS No.	:	103597-45-1
Molecular Formula	:	C <sub>41</sub> H <sub>50</sub> N <sub>6</sub> O <sub>2</sub>
Molecular Weight	:	658.87

**3. Physical Data**

Appearance	:	Off-white crystalline powder
Odor	:	Faint
Melting point	:	195 °C
1% weight loss	:	332 °C (630 °F)
Density	:	1.20 @20 °C

**4. Solubility**

(g in 100 ml solvent)

Methylene chloride	:	70
Toluene	:	34
Ethyl acetate	:	0.06
Acetone	:	0.05
Water	:	Nil

**Ultraviolet light absorber for plastics**
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**5. Specification**

Appearance	:	Off-white to slightly yellow powder
Assay	:	98% min.
Melting point	:	190 °C min.
Clarity in toluene	:	Clear solution (5g/100ml)
Transmittance	:	92% min. @460 nm
(2g/100ml Toluene)	:	95% min. @500 nm

**6. Application**

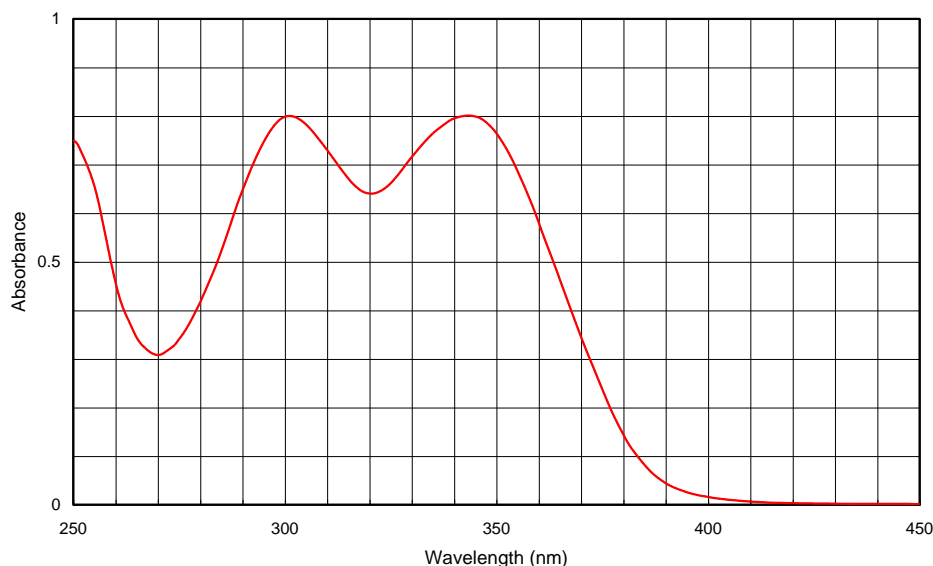
Chiguard® 5431 is most suitable for polymer production where additive losses may occur during high temperature processing. Therefore, Chiguard® 5431 has been widely used in the following area:

1. Acrylic resin
2. Polycarbonate
3. Polyalkylene terephthalates
4. Polyamide
5. High performance plastic

A percentage of 0.3% - 3% of Chiguard® 5431 is recommended for protection. Light stability of polymer can be further enhanced by use of a phenolic antioxidant (e.g. DEOX 10 and 76) and a hindered amine light stabilizer (e.g. Chiguard® 770 and 944) in the combination with Chiguard® 5431.

**7. UV Spectrum**

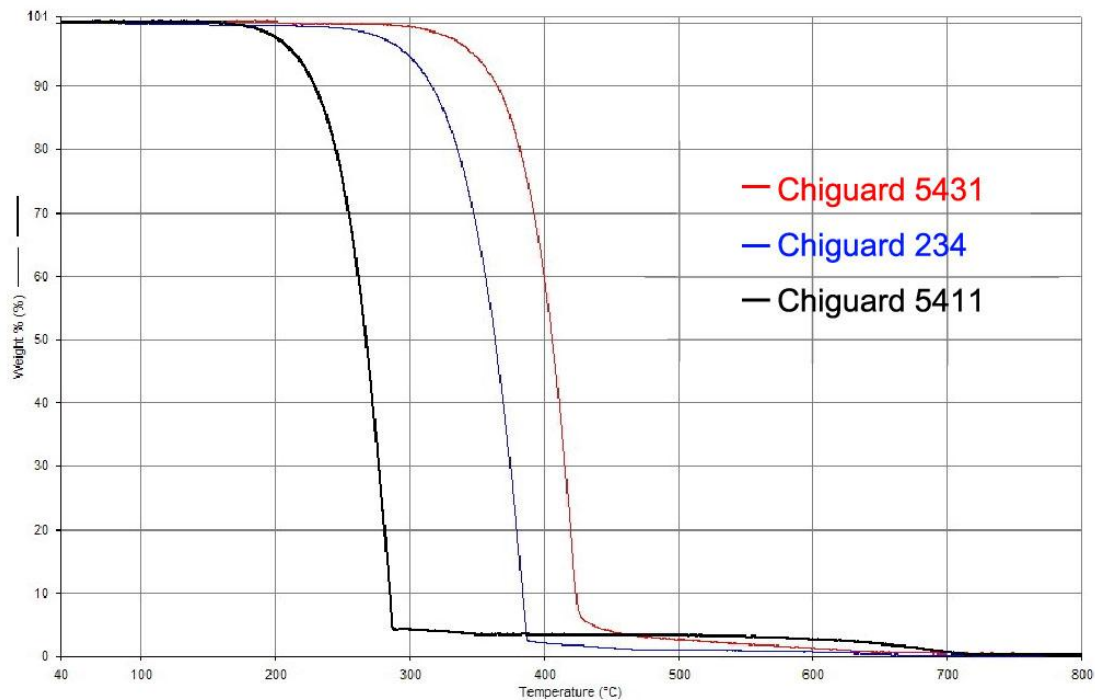
UV Spectrum of Chiguard 5431



Ultraviolet light absorber for plastics

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## 8. Comparison TGA Spectra



## 9. Storage

Must be stored in closed containers in dark dry conditions.

## 10. Packaging

20kg net/carton box