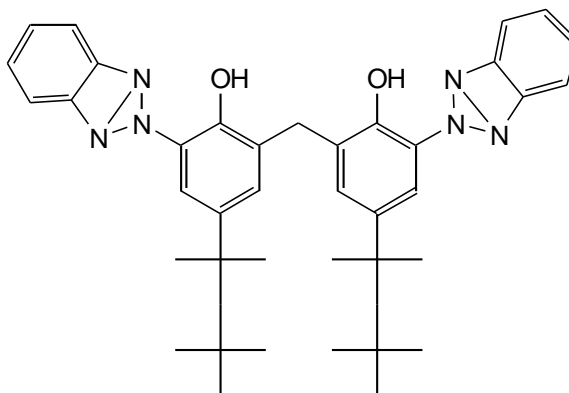


## 1. General

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

## 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

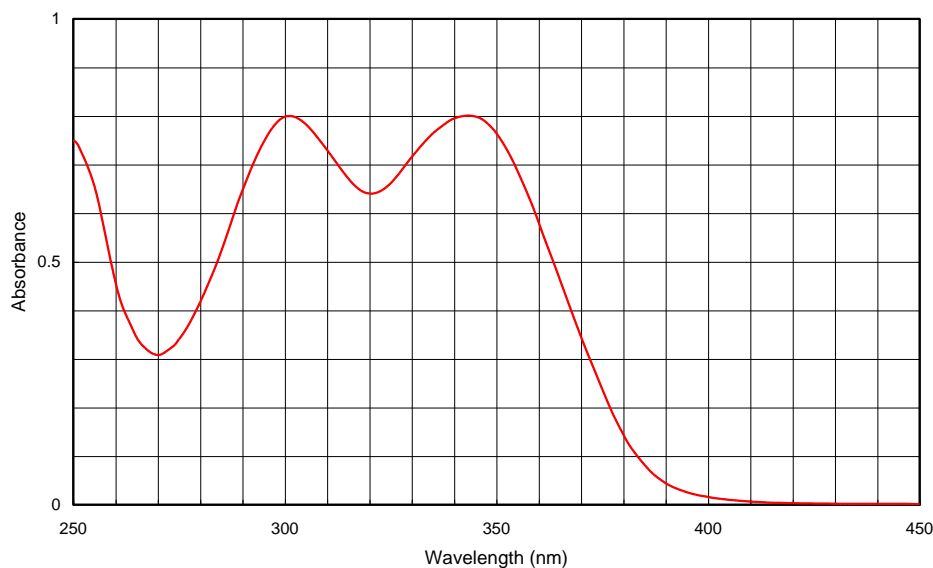
Chiguard<sup>®</sup> 5431 is most suitable for polymer production where additive losses may occur during high temperature processing. Therefore, Chiguard<sup>®</sup> 5431 has been widely used in the following area:

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

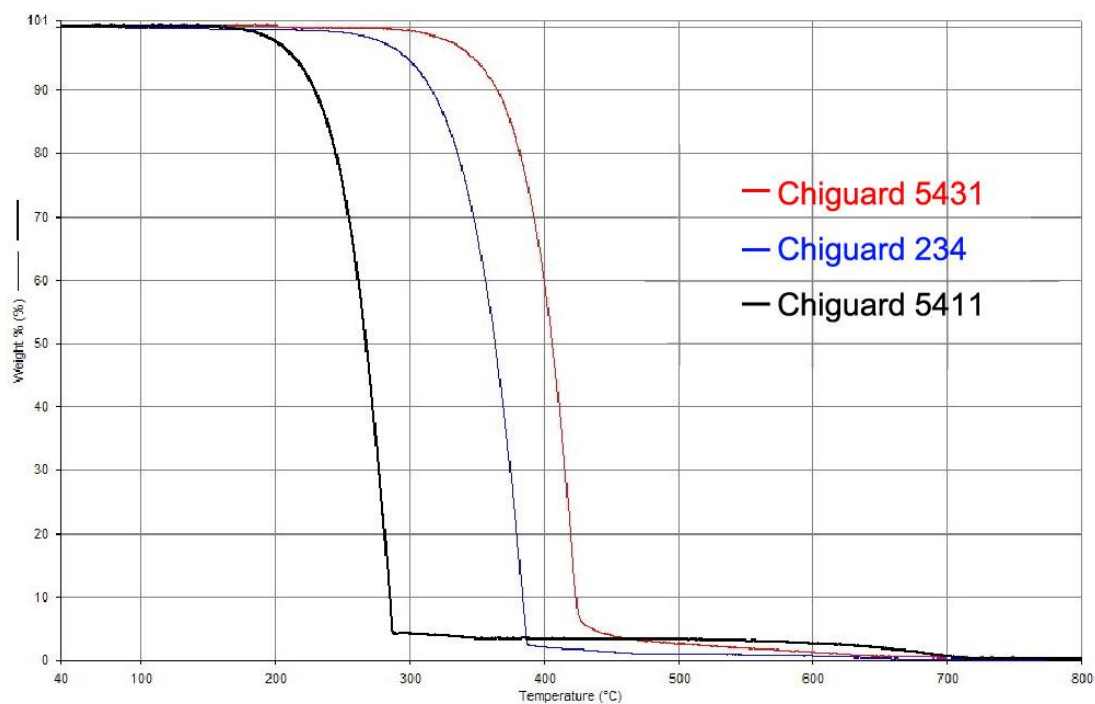
A percentage of 0.3% - 3% of Chiguard<sup>®</sup> 5431 is recommended for protection. Light stability of polymer can be further enhanced by use of a phenolic antioxidant (e.g. DEOX 10 and 76) and a hindered amine light stabilizer (e.g. Chiguard<sup>®</sup> 770 and 944) in the combination with Chiguard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

## 7. UV Spectrum

UV Spectrum of Chiguard 5431



## 8. Comparison TGA Spectra



## 9. Storage

Must be stored in closed containers in dark dry conditions.

## 10. Packaging

20kg net/carton box

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