

Greener, safer,
and
more effective
Chemistry



Chiguard® 380W



Chitec E-book Shelf

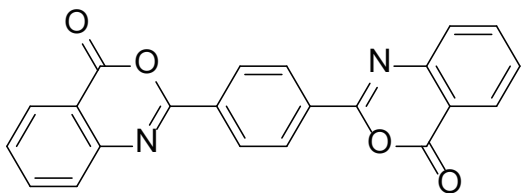
chitec
www.chitec.com

16F., No. 51, Sec. 2, Keelung Rd.,
Taipei City 110, Taiwan
sales@chitec.com
+886-2-2700-6678

Chiguard® 380W
Full UV Coverage Up to 380nm



Chiguard® 380W



CAS No. : 18600-59-4

Introduction

Chiguard® 380W is a highly efficient, non-staining UV absorber that offers protection across both UV-B and UV-C regions, extending up to 380 nm. Built on a benzoxazinone structure, it delivers excellent short-term heat stability up to 350°C and long-term heat stability up to 160°C. Chiguard® 380W is designed to be highly compatible with PET resin, ensuring a clear, transparent appearance even at high dosages (as shown in the Comparative Data section below).

Thanks to its non-staining, transparent properties, combined with excellent thermal stability, recycling or reworking of scrap could be achieved with minimal color contribution and stabilization loss. Chiguard® 380W is ideal for use in films, sheets, and plates for applications like optical lenses and window films. Additionally, Chiguard® 380W is FDA-approved and safe for food contact applications, making it suitable for products like PET bottles and food wrap films.



US FDA Compliance

Food Contact Substance (FCS) Notification No. 935, approved and notified by Chitec. Authorized as a UV light stabilizer in PET polymers intended for food contact applications.

REACH Compliance

EU REACH registration for 10–100 t/a completed, with Chitec serving as the Lead Registrant.

Physical Data

Odor	: None
Bulk density	: 0.52 @ 20 °C
Extinction Coefficient (ε)	: ca. 13,000 @ 370 nm
Volatile	: 0.2% max.

Solubility (g in 100ml solvent @ 25 °C)

Ethyl acetate	: < 0.1
Ethanol	: < 1
Methyl ethyl ketone	: < 1
DMF	: 2
Water	: < 0.01

Recommended Applications

1. Film/Sheet/Plate for Engineering Plastics
2. Window Film
3. Optical Lenses
4. PET/PA Fiber
5. Electronic Display
6. PET Bottles

Figure 1. Transmittance Spectrum

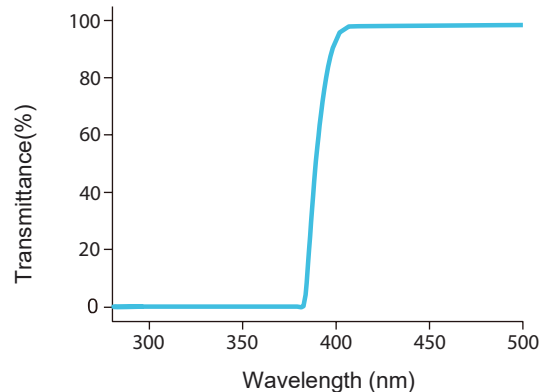


Figure 2. Absorbance Spectrum

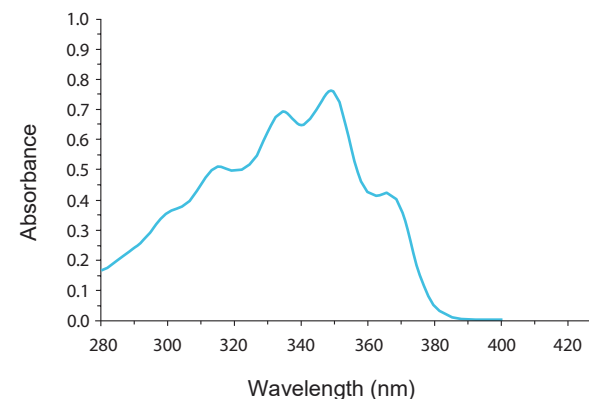


Figure 3. Comparative Data

Item	Chiguard® 380W	Incumbent
Color in powder (YI, 2 g sample)	-2.2	1.0
Color in solution (Hazen, 0.2% w/w in 1,2,4-trichlorobenzene)	9.7	17.5
Melt color at 370 °C(3 g sample)		
Transparency in PET plate (Extrusion Temperature : 270°C)	Clear	Opaque
Long term heat stability (160 °C, one week)	Pass	Pass

Strengths of Chiguard® 380W

1. Excellent UV absorption capability
2. High thermal stability
3. Great compatibility
4. Environmentally friendly
5. FDA Approved for Food Contact
6. Minimal color contribution
7. Low volatility