Chiguard® 380W

PRODUCT DATASHEET

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Introduction

Chiguard® 380W is a highly efficient and non-staining UV absorber, covering both of UV-B and UV-C regions up to 400 nm. It is based on benzoxaxinone structure which delivers a short-term heat stability up to 350 °C and a long term heat stability up to 160 °C. By a proprietary process, Chiguard® 380W is made to dissolve quickly in PET resin and to give a transparent appearance even with high dosage (as demonstrated in the Comparative Data section below).

Due to these non-staining and transparent properties, Chiguard® 380W is ideal for film/sheet/plate applications such as solar cell, window film, etc. Furthermore, Chiguard® 380W is registered on FDA and is approved for food contact applications such as PET bottles and food wrap films.

Figure 1. Transmittance Spectrum

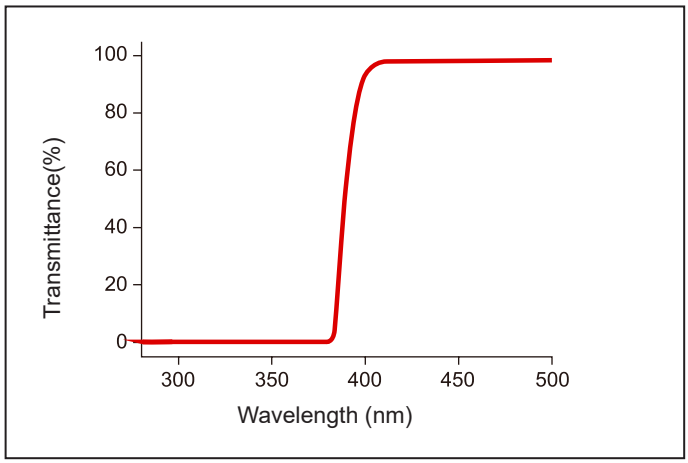
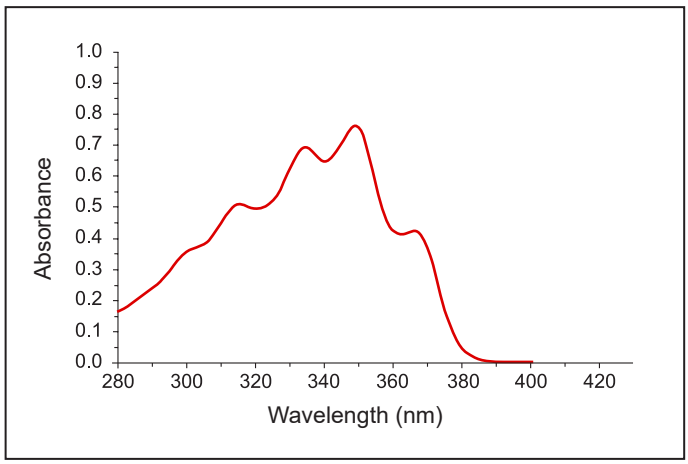


Figure 2. Absorbance Spectrum

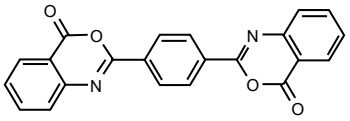


Packaging

25 kg carton box with inner anti-static PE bag.

Chemical Information

Structure



Chemical name

2,2'-(1,4-Phenylene)bis(4H-3,1- benzoxazin-4-one)

CAS No. 18600-59-4

EINECS No. 418-280-1 (REACH 1-100 t/a registered)

FDA status Approved (FCN No. 935)

Physical Data

Odor	:	None
Bulk density	:	0.52 @20 °C
Extinction coefficient (ε)	:	ca. 13,000 at 370 nm

Specification

Appearance	:	Off-white to pale yellow fine powder
Melting point	:	300 °C min.
Color (YI, 2 g sample)	:	4.0 max.
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

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)		
Transpancy in PET plate (Extrusion temperature : 270 °C)[a]	Clear	Opaque
Long term heat stability (160 °C, one week)[b]	Pass	Pass

a. Sample plate (1/4" thick) is available upon request.