

# Chimassorb<sup>®</sup> 81

## Product Description

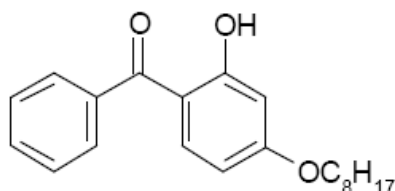
Chimassorb 81 is a solid UV absorber of the 2-hydroxy-benzophenone class.

## Key Features & Benefits

- Low yellowing
- Good absorbance in the UV-B region
- Reduces failure of coatings resulting from exposure to sunlight including discoloration, cracking, and loss of adhesion

## Chemical Structure

Methanone, 2-hydroxy-4-(octyloxy)-phenyl



## Properties

### Typical Properties

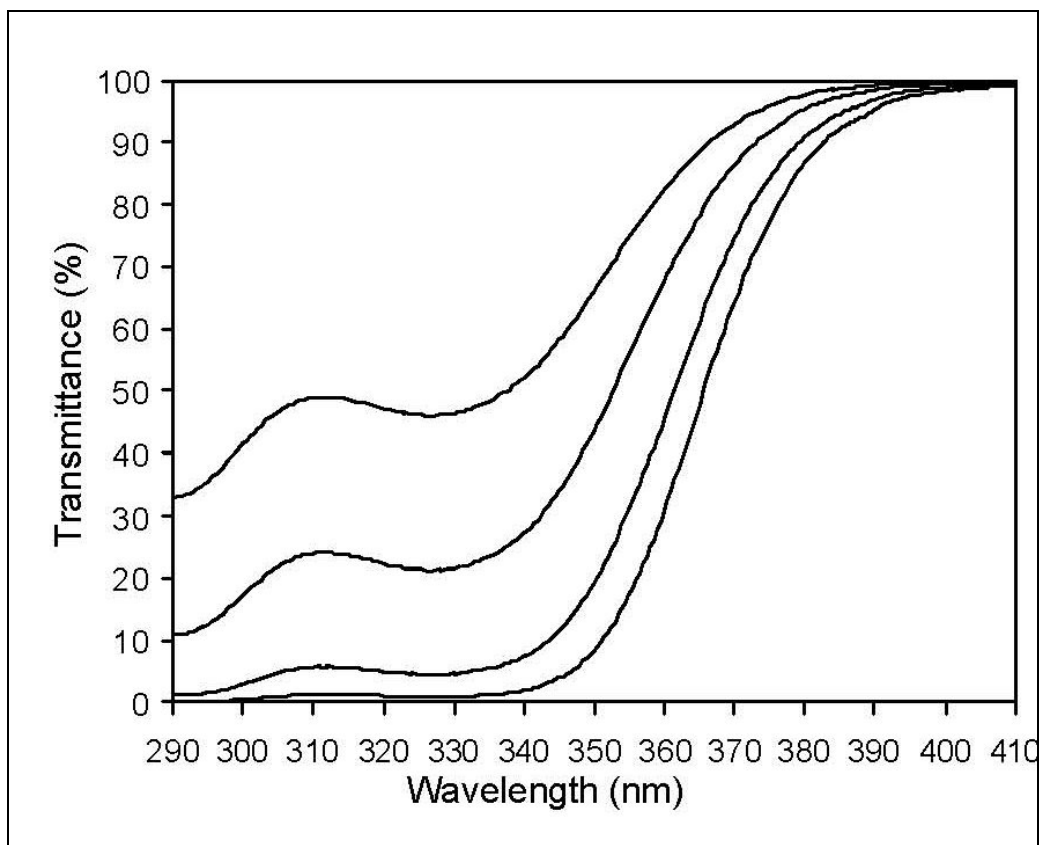
CAS No.		1843-05-6
Molecular weight	g/mol	326.4
Appearance		slightly yellow powder
Melting range	°C	48 – 49

### Solubility at 20 °C (g/100 g solution):

acetone	43
ethanol	3.5
ethyl acetate	44
hexane	12
toluene	> 50
water	< 0.01

These typical values should not be interpreted as specifications.

**Transmittance Spectrum**  
(in chloroform, cell thickness 1 cm)



Top line: 0.001% Chimassorb 81, corresponds to 0.25 % in a 40 µm film  
 Second Line: 0.002% Chimassorb 81, corresponds to 0.50 % in a 40 µm film  
 Third Line: 0.004% Chimassorb 81, corresponds to 1.00 % in a 40 µm film  
 Bottom Line: 0.006% Chimassorb 81, corresponds to 1.50 % in a 40 µm film

## Applications

### Processing

Chimassorb 81 significantly improves the resistance of clear coatings to failures upon exposure to sunlight such as discoloration, cracking, loss of gloss and loss of adhesion. Its performance in outdoor applications can be improved further by use in synergistic combination with a hindered amine light stabilizer (HALS) such as Tinuvin® 292, Tinuvin 249 or Tinuvin 123.

The use of Chimassorb 81 should be reserved for applications where expectations of the final coating's durability are moderate since the light stability of 2-hydroxy-benzophenone derivatives is known to be limited.

For better long-term performance use of UV absorbers of the benzotriazole class e.g. Tinuvin 1130 or Tinuvin 384-2 is recommended.

The amount of Chimassorb 81 required for optimum performance should be determined in trials covering a concentration range.

<b>Recommended Concentrations</b>	Interior clear coating	1.0 – 3.0 %	Chimassorb 81
	Exterior clear coating	1.0 – 3.0 %	Chimassorb 81
		+0.5 – 2.0 %	Tinuvin 292, Tinuvin 249 or Tinuvin 123

(concentrations are based on weight percent binder solids)

## Safety

### General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care and wearing of protective goggles.

### Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Chimassorb 81.

## Storage

Please refer to the "Handling and Storage of Polymer Dispersions" brochure.

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#### **U.S. & Canada**

BASF Corporation  
24710 W Eleven Mile Road  
Southfield, MI 48034  
Phone: 1(800) 231-7868  
Fax: 1(800) 392-7429  
Email: [CustCare-Charlotte@basf.com](mailto:CustCare-Charlotte@basf.com)  
Email: [edtech-info@basf.com](mailto:edtech-info@basf.com)  
[www.basf.us/dpsolutions](http://www.basf.us/dpsolutions)

#### **Mexico**

BASF Mexicana, S.A. de C.V.  
Av. Insurgentes Sur #975  
Col. Ciudad de los Deportes  
C.P. 03710  
Mexico, D.F.  
Phone: (52-55) 5325-2756  
Fax: (52-55) 5723-3011