

# Industrial Coatings

## Technical Data Sheet

# Chimassorb<sup>®</sup> 81



### Product Description

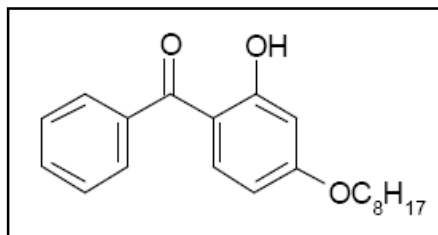
Chimassorb<sup>®</sup> 81 is a solid UV absorber of the 2-hydroxy-benzophenone class.

### Key Features & Benefits

- Low yellowing
- Good absorbance in the UV-B region
- Improves 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

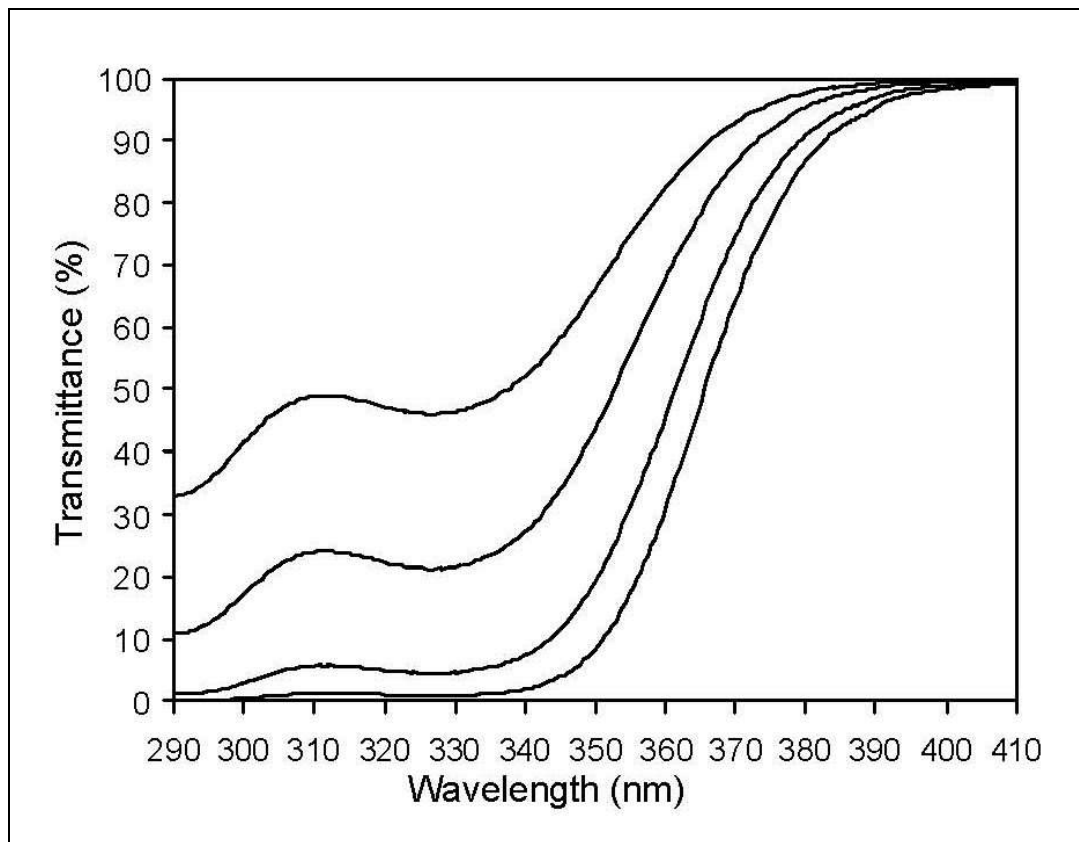
CAS No.	1843-05-6
Molecular weight	326.4
Appearance	slightly yellow powder
Melting range	48 – 49 °C

### 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 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 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 Chimassorb® 81.

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