

# Solyfast™ 0010

## Product Description

Solyfast 0010 is a photolabile metal catalyst used to efficiently catalyze a variety of reactions upon exposure to UV light, while exhibiting a low catalytic activity in the dark to ensure a suitable potlife.

Upon direct irradiation or (if appropriate) under photosensitized conditions, Solyfast 0010 yields a metal catalyst, which is then capable of accelerating certain polymerization reactions, e.g. more specifically the crosslinking of polyols with polyisocyanates.

## Key Features & Benefits

- Fast curing of 2K-PUR coating at room temperature
- Short time to dust-free
- Short time to handling/moving of coated coatings
- Long pot-life

## Chemical nature

Non-Tin metal catalyst

## Properties

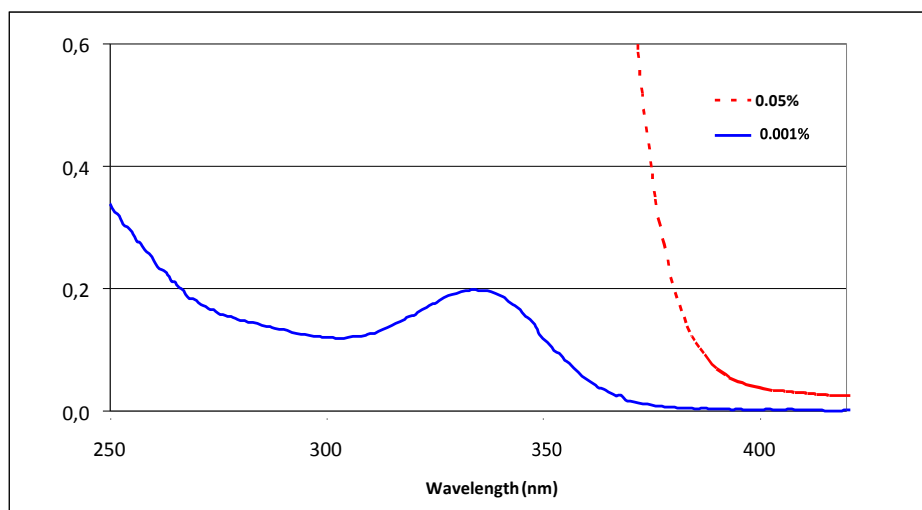
### Physical Form

Slightly yellow crystals

### Typical Properties

Solid content	%	100
Metal (non-tin) content	%	9

### Absorption Spectrum



### Solubility, Diluent Tolerance

Solyfast 0010 can be easily diluted into Butylacetate.

### Compatibility / Incompatibility

The latency of Solyfast 0010 and its photo-activation may be partially or completely affected when mixed with acidic compounds.

## Application

### General

Solyfast 0010 is designed for use in 2K PUR systems both clear and pigmented, such as coatings used for the protection of plastics, wood and metal substrates. Furthermore, thanks to its broad absorption spectra, it can also be used in pigmented coatings. It is particularly recommended when fast catalysis is required and – at the same time – a longer pot-life of the formulation than with non- latent catalysts is desired.

Various sources of UV light can be used, including UV-A flood lamps, fluorescent lamps or UV LED (up to 395 nm), as well as more conventional medium pressure mercury and doped lamps.

Due to its broad absorption spectrum and good UV response, the use of a photo sensitizer, e.g., benzophenone (BP) and isopropylthioxanthone (ITX), is not required, at least in clear coats. The use of such compounds may be useful depending on the film thickness, emission spectrum of the light source or interference with certain pigments or fillers.

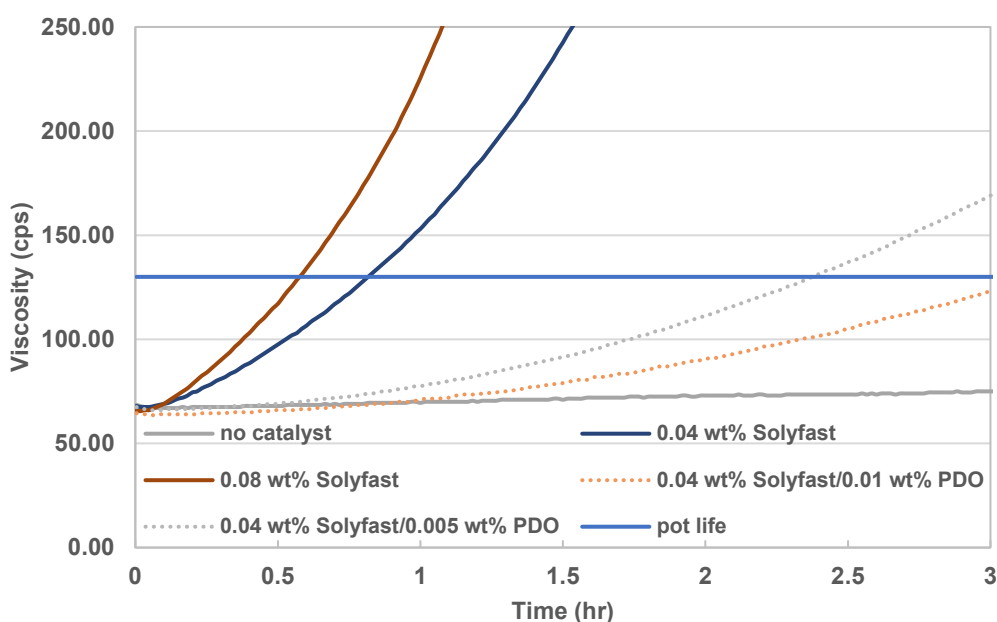
When Solyfast 0010 is used in combination with a small proportion of 2,4-pentanedione (PDO), the pot-life of the formulation with Solyfast 0010 can be significantly extended. Its catalytic efficiency after UV activation is usually not affected, at least up to a ratio 80:20 Solyfast:PDO (on solids basis).

**Recommended Concentrations** Clear coat: 0.02 - 0.2 wt.% on total formulation  
Pigmented coating: 0.02 - 0.4 wt.% on total formulation

### Standard 2K-PUR Formulation Suggestion

Material	Weight %
<b>Component A</b>	
Polyacrylatepolyol (Joncryl® 507)	52.72
Leveling Additive (Efka® 3030)	0.6
Butylacetate	25.95
Solyfast 0010	0.02-0.08
PDO(2,4-pentanedione)	0-0.01
<b>Component B</b>	
HDI Polyisocyanate (Basonat® HI 2000 NG)	10.07
HDI Polyisocyanate (Basonat HA 1000)	10.57

Solids, 63% by weight, initial viscosity, 65 cps at 21°C. Isocyanate Index=105.



In solventborne 2K-PUR, it is usually recommended to mix Solyfast 0010 into component A (polyol) at RT before adding the hardener (polyisocyanate).

In waterborne 2K-PUR, it is recommended to mix Solyfast 0010 into the polyisocyanate, since it may progressively be hydrolyzed during prolonged exposure to water, e.g. if mixed in component A, which contains the waterborne polyol.

Please contact the local BASF technical specialist for further details.

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## **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 Solyfast 0010.

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## **Storage**

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

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