



# UV Coatings: Basics, Recent Developments and New Applications

By Reinhold Schwalm

Download now

Read Online ➔

## UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm

Since UV curing (light induced polymerisation of multifunctional oligomers) is a very ecoefficient and energy saving curing method, the growth rates of UV curable coatings are in the range of 10% per year. The typical UV coatings are solvent free (100% solids), thus helping the industry and the environment to reduce significantly VOC (volatile organic compounds). Recently, the automotive industry has discovered that UV cured coatings are very scratch resistant, which stimulated very extensive work into the development of UV coatings for automotive applications. Since UV curing is very universal, also other systems besides the 100% solid (typical) UV coatings are developed, like waterbased UV- , UV powder and Dual cure (UV and thermal) systems.

**UV Coatings** contains an overview of the technology, the curing process including the equipment necessary, the raw materials (resins, diluents, photoinitiators) used, the advantages and drawbacks of this fast emerging technology, as well as proposed technical solutions to tackle the disadvantages. Structure-property relationships will be given, especially regarding the mechanical properties of coatings as well as scratch resistance, mainly dealing with automotive performance criteria.

The main part of the book will deal with new developments, like water-based UV coatings, UV powder coatings and dual cure systems, cured by UV and thermal energy, which have been developed to cure the coating on three dimensional substrates in shadow areas. The main applications of UV Coatings will be described, starting with the classical ones on temperature sensitive substrates, like wood, paper and plastics, where the UV curable coatings are already well established.

- \* Looking at UV curing as a key to scratch resistant automotive clear coats
- \* Ecoefficiency of UV Coatings
- \* Comprehensive overview of the technology, materials and markets

 [Download UV Coatings: Basics, Recent Developments and New A ...pdf](#)

 [\*\*Read Online\*\* UV Coatings: Basics, Recent Developments and New  
...pdf](#)

# UV Coatings: Basics, Recent Developments and New Applications

*By Reinhold Schwalm*

## UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm

Since UV curing (light induced polymerisation of multifunctional oligomers) is a very ecoefficient and energy saving curing method, the growth rates of UV curable coatings are in the range of 10% per year. The typical UV coatings are solvent free (100% solids), thus helping the industry and the environment to reduce significantly VOC (volatile organic compounds). Recently, the automotive industry has discovered that UV cured coatings are very scratch resistant, which stimulated very extensive work into the development of UV coatings for automotive applications. Since UV curing is very universal, also other systems besides the 100% solid (typical) UV coatings are developed, like waterbased UV- , UV powder and Dual cure (UV and thermal) systems.

**UV Coatings** contains an overview of the technology, the curing process including the equipment necessary, the raw materials (resins, diluents, photoinitiators) used, the advantages and drawbacks of this fast emerging technology, as well as proposed technical solutions to tackle the disadvantages. Structure-property relationships will be given, especially regarding the mechanical properties of coatings as well as scratch resistance, mainly dealing with automotive performance criteria.

The main part of the book will deal with new developments, like water-based UV coatings, UV powder coatings and dual cure systems, cured by UV and thermal energy, which have been developed to cure the coating on three dimensional substrates in shadow areas. The main applications of UV Coatings will be described, starting with the classical ones on temperature sensitive substrates, like wood, paper and plastics, where the UV curable coatings are already well established.

- \* Looking at UV curing as a key to scratch resistant automotive clear coats
- \* Ecoefficiency of UV Coatings
- \* Comprehensive overview of the technology, materials and markets

## UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm Bibliography

- Sales Rank: #2611054 in eBooks
- Published on: 2006-12-21
- Released on: 2006-12-21
- Format: Kindle eBook

 [Download UV Coatings: Basics, Recent Developments and New A ...pdf](#)

 [Read Online UV Coatings: Basics, Recent Developments and New ...pdf](#)

## **Editorial Review**

### **Users Review**

#### **From reader reviews:**

##### **Virgil Arriola:**

Reading a guide can be one of a lot of action that everyone in the world enjoys. Do you like reading book consequently. There are a lot of reasons why people fantastic. First reading a book will give you a lot of new data. When you read a guide you will get new information mainly because book is one of numerous ways to share the information or perhaps their idea. Second, reading a book will make you more imaginative. When you studying a book especially fictional book the author will bring that you imagine the story how the people do it anything. Third, you can share your knowledge to other people. When you read this UV Coatings: Basics, Recent Developments and New Applications, you are able to tells your family, friends along with soon about yours e-book. Your knowledge can inspire different ones, make them reading a reserve.

##### **Mary Flynn:**

The actual book UV Coatings: Basics, Recent Developments and New Applications has a lot of information on it. So when you make sure to read this book you can get a lot of gain. The book was authored by the very famous author. The writer makes some research prior to write this book. This kind of book very easy to read you can get the point easily after looking over this book.

##### **Oscar Jackson:**

Is it you actually who having spare time and then spend it whole day through watching television programs or just laying on the bed? Do you need something new? This UV Coatings: Basics, Recent Developments and New Applications can be the respond to, oh how comes? A fresh book you know. You are thus out of date, spending your extra time by reading in this brand new era is common not a nerd activity. So what these ebooks have than the others?

##### **Jeff Keenan:**

As a student exactly feel bored to help reading. If their teacher inquired them to go to the library as well as to make summary for some reserve, they are complained. Just minor students that has reading's heart and soul or real their pastime. They just do what the instructor want, like asked to go to the library. They go to presently there but nothing reading seriously. Any students feel that reading is not important, boring in addition to can't see colorful images on there. Yeah, it is for being complicated. Book is very important to suit your needs. As we know that on this period, many ways to get whatever you want. Likewise word says, ways to reach Chinese's country. Therefore , this UV Coatings: Basics, Recent Developments and New

Applications can make you feel more interested to read.

**Download and Read Online UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm #GU3JHPR0O24**

## **Read UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm for online ebook**

UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm books to read online.

### **Online UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm ebook PDF download**

#### **UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm Doc**

UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm Mobipocket

UV Coatings: Basics, Recent Developments and New Applications By Reinhold Schwalm EPub