



The Composite Technology



LIGHT-CURING SOLUTIONS FOR COMPOSITES





FAST & CLEAN: the advanced innovative composite UV solution

NUVORAD® is a brand of the Mäder Group providing industrial composite manufacturers a solution to improve safely their efficiency while protecting the environment.



A fundamental need is to go cleaner and faster

Contact molding is one of the main techniques used in the composite production. This process, realized in an open mould, becomes more and more jeopardized because of its styrene emissions and is not adapted for high productivity.

Nowadays, manufacturers of all industrial sectors need to improve their efficiency, with an increase of productivity, combined with a reduction of pollution.

By developing NUVORAD®, Mäder gives the perfect solution to answer these needs

Mäder Advanced Solutions



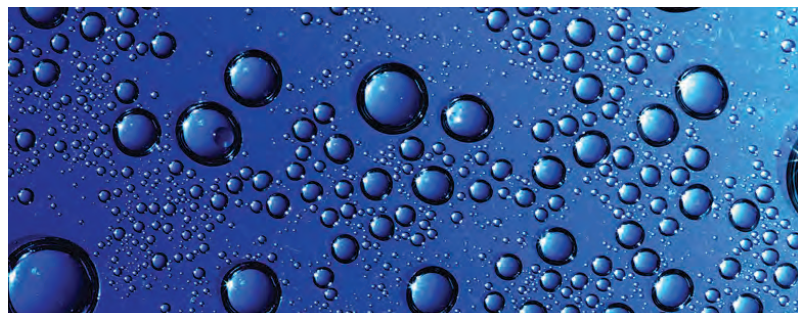
The Mäder Group is pioneer in the development of environmentally friendly solutions for coatings and composites: waterbased coatings, biobased materials, UV curing solutions, are in the heart of the researches of the Group.

NUVORAD® is the latest development in the history of Mäder environmental solutions.

Mäder main purpose is providing the best global solutions to solve our customer's needs and issues.

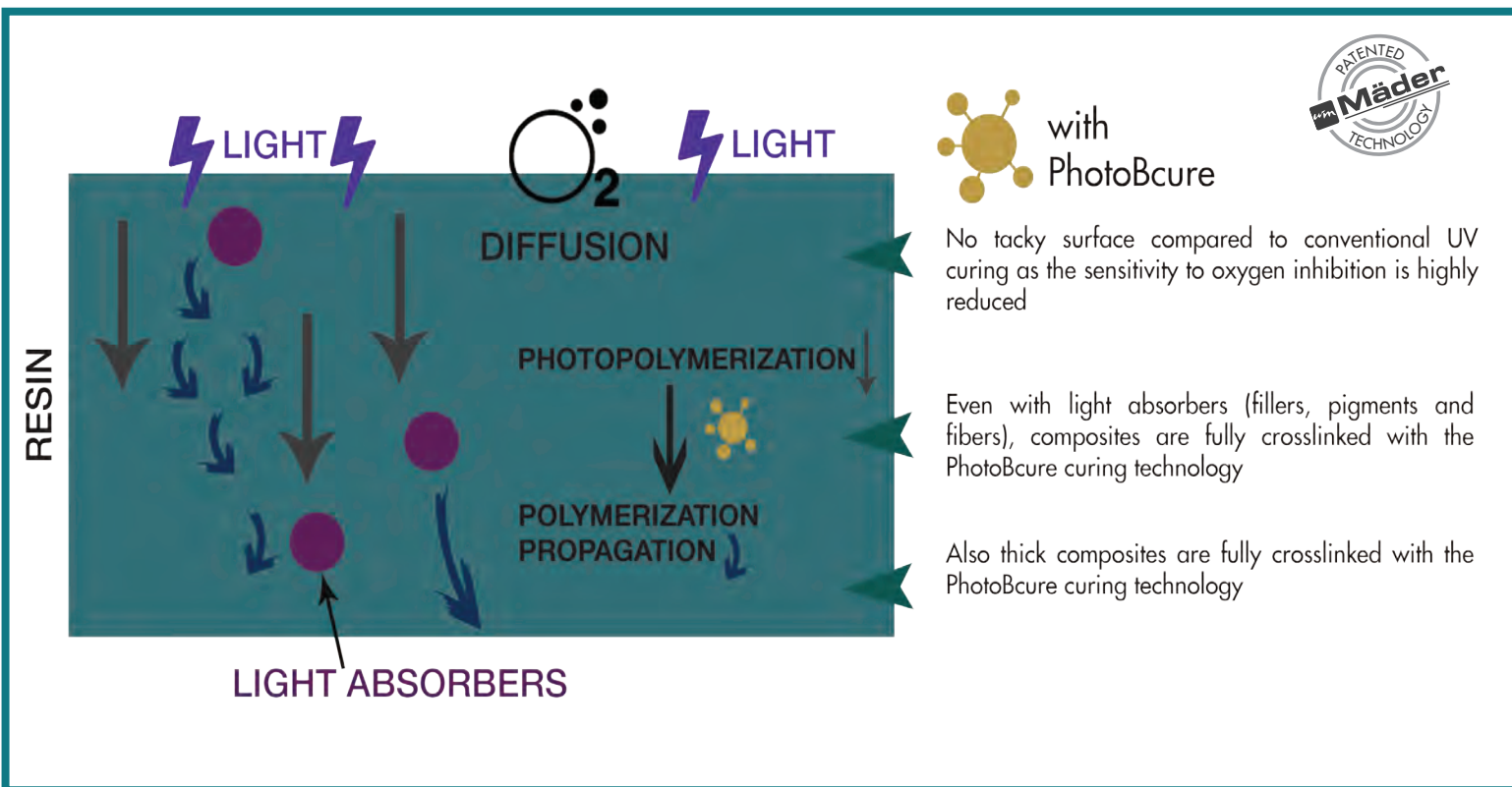
The development of the NUVORAD® brand is based on both objectives: **providing an ecological solution to increase your productivity.**

- Fast curing
- Low styrene emissions
- Productivity enhanced



NUVORAD®, a global and innovative concept

The NUVORAD® concept is based on the revolutionary, patented PhotoBcure UV curing technology which facilitates flexible and effective manufacturing processes.



Innovative global solution enables to polymerize complex, colored and thick composites.

The global NUVORAD® concept is very flexible for manufacturers. It is offering photopolymerization with low energy UV- but also with LED-lamps.

Additionally, Mäder offers support in the implementation of the total concept: process design, choice of equipment, prototyping. We are by your side to define the best and most efficient way to introduce these solutions.

What our customers say...

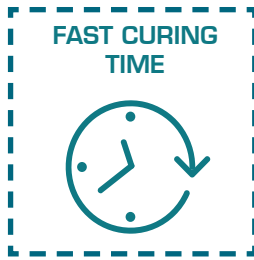
“
This solution combines many benefits for me: working faster, protecting my employees and the environment.
”

“
We observed that the process is easy to implement and very robust.
”

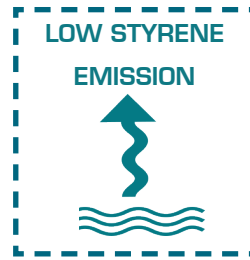
“
This is very impressive to see how fast this process is!
”

“
This global solution provided by Mäder enabled me to increase our productivity by 20% and reduced the styrene emissions.
”

Custom made NUVORAD® solutions



Increase Productivity
with Constant Quality



Safety and Protection
of the Environment

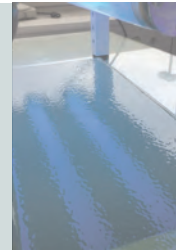
VERY LOW ENERGY (VLE) SOLUTION: low cost, easy to use



The VLE solution allows the light-curing of composites with all kind of shapes at very low cost. NUVORAD® products allow fast curing even with low energy lamps. Only sunglasses are needed.



- Very low investment
- Suitable for 3D parts
- Fast curing (within minutes)
- Reduction of styrene emissions

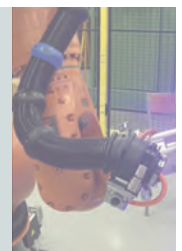


LED SOLUTION: ultra fast, ultra productive

The LED technology offers an instant full curing of gelcoats and laminates even when colored and/or filled. With NUVORAD® solutions for LED, productivity is highly increased for a wide range of products.



- Instant curing (within seconds)
- For colored products
- 3D composites with robot
- Maximum reduction of styrene emissions

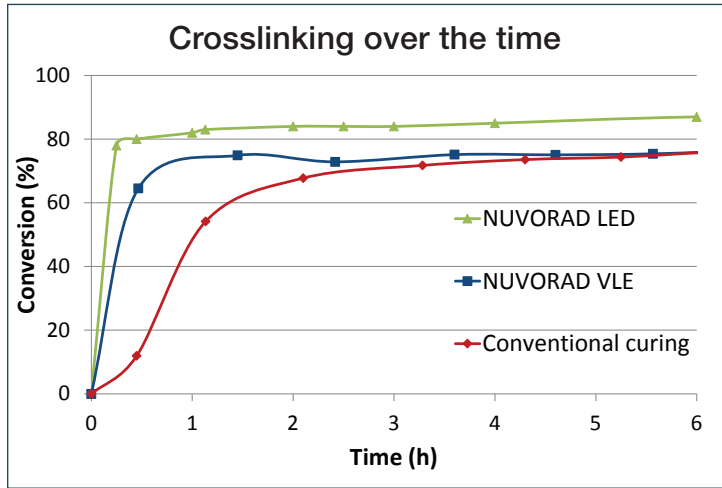


In order to meet all your needs, NUVORAD® products are also available for standard UV lamps.

Combining productivity, safety and environment protection is now possible

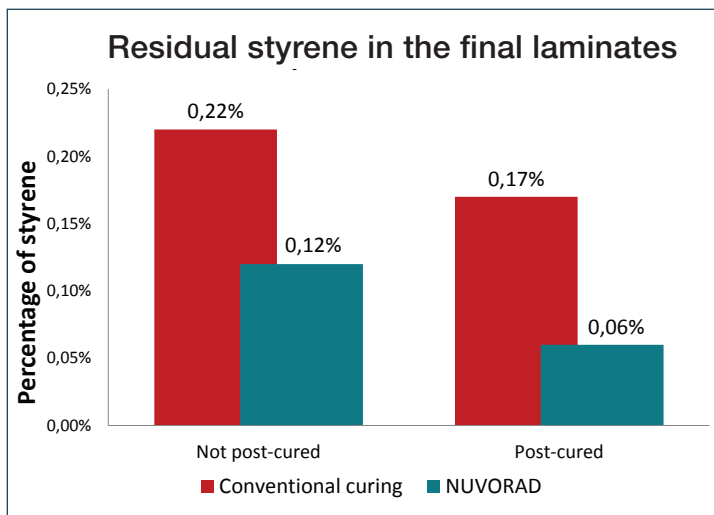
Using NUVORAD® will enable you to solve some major issues and provide several benefits:

Increase of your productivity with constant quality



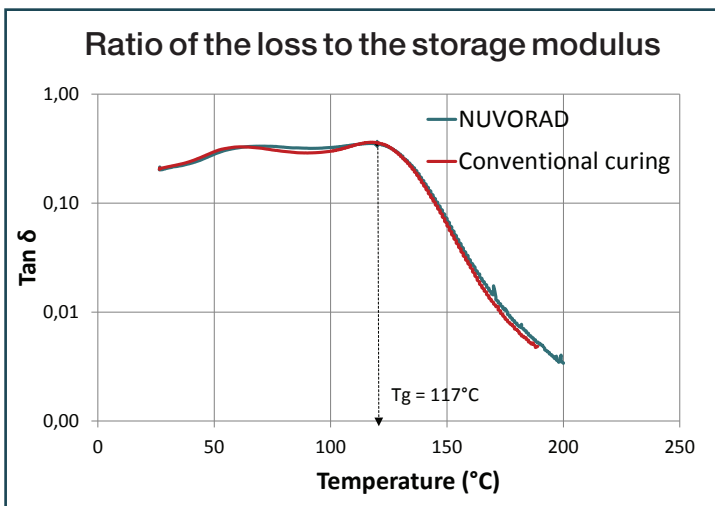
- Accelerated polymerization
- Same crosslinking and properties as with conventional curing
- Faster demolding

Safety and protection of the environment



- Low styrene/VOC emissions
- Low energy consumption
- Less residual styrene in the final laminate

Mechanical properties



- Same mechanical properties as with conventional curing

This development has been achieved in partnership with leading universities in the UV field.

INNOVATION BOOSTER

PAINTS, SPECIAL COATINGS and POLYMER SYSTEMS:
EXPERT IN INNOVATIVE SOLUTIONS WITH HIGH TECHNOLOGICAL CONTENT



AEROSPACE



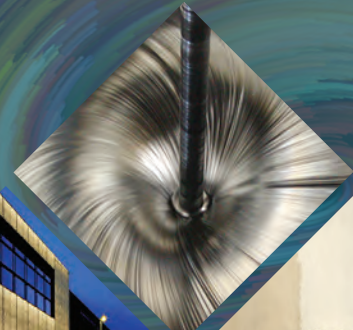
RAILWAYS



AUTOMOTIVE



GENERAL INDUSTRY



CONSTRUCTION



DECORATIVE



ADVANCED ECO-FRIENDLY SOLUTIONS

- Green technologies & products
- Health and Safety of human well-being
- Environmental Management System according to ISO 14001
- Continued involvement for a sustainable and responsible development



SERVICE & INTERNATIONAL PRESENCE

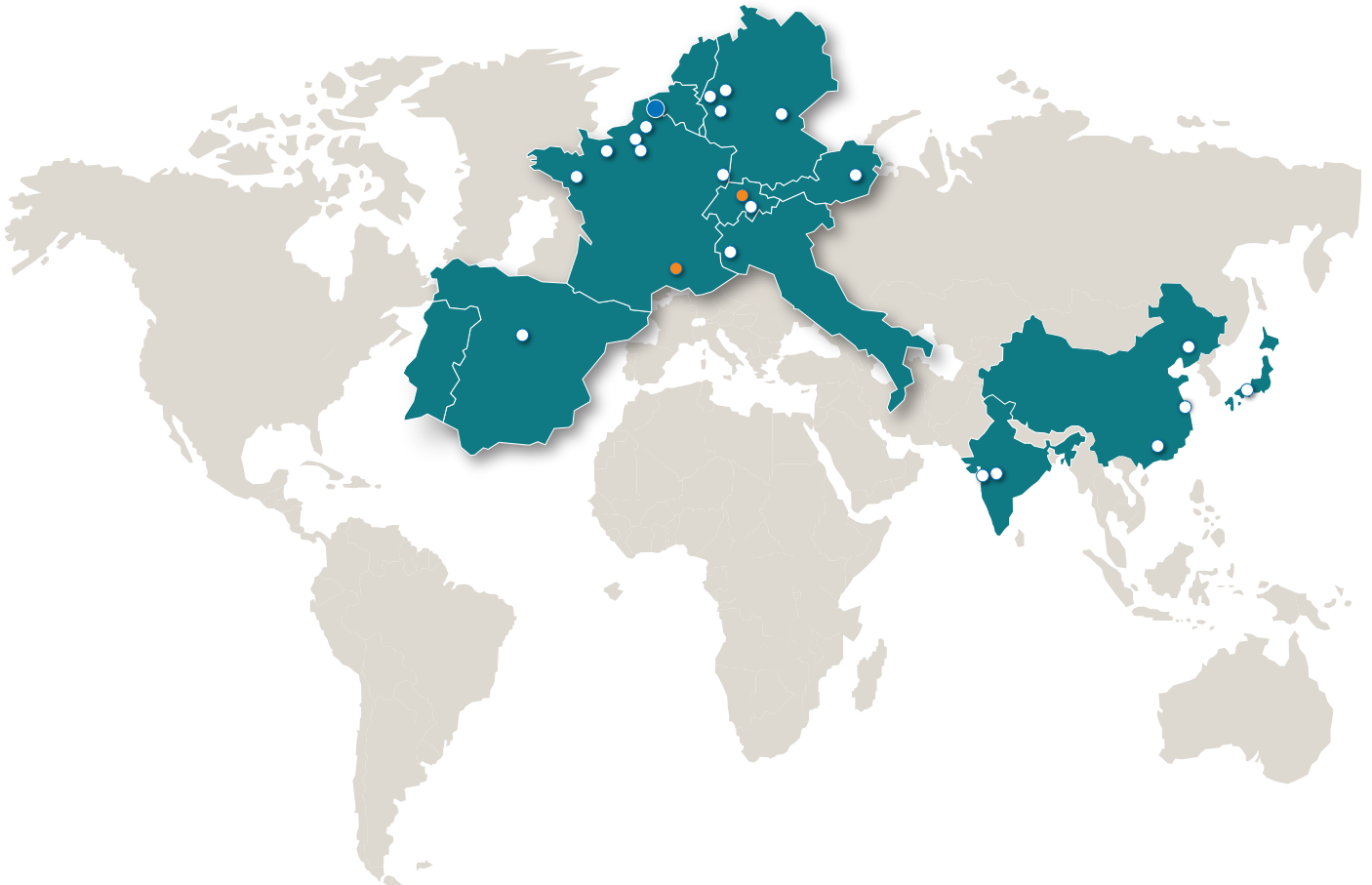
- International dimension close to our customers
 - Fulfilling local needs
 - Technical assistance
 - Customer training
- Tailor-made developments



HIGH TECH SOLUTIONS

- Specialized R&D task force
- 16 laboratories worldwide
- Partnerships with university and research centers
- High-Tech and innovative solutions: UV curing technology, water-based paints, bio-sourced resins...

MÄDER WORLDWIDE PRESENCE



● Composites Manufacturing Sites

○ Coatings and Distribution Sites

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