

INMOULDnano.NET is a network of companies in the fields of ...

- design, tooling and construction
- development of innovative coating systems
- polyurethane foam processes
- carbon fiber reinforced plastics
- natural fiber reinforced plastics
- glass fiber reinforced plastics
- other polymer processing techniques

INMOULDnano.NET offers the complete technology chain especially for the following industries:

- agriculture machinery
- commercial vehicles
- automotive
- railways
- outdoor and indoor furniture
- camping and caravanning
- boating
- aviation

as well as other applications where the surface makes the difference.

INMOULDNANO◆**NET**

**Intelligent
Functional
Innovative
Surface Coating Technologies
For Polymer Processing**

- ◆ *INMOULDnano.NET provides new solutions for intelligent, functional surface coating of polymers.*
- ◆ *INMOULDnano.NET develops new and multi-functional surfaces.*
- ◆ *INMOULDnano.NET is a network of specialists providing complete solutions.*



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- ◆ Please feel free to contact us:
Web: www.inmouldnano.net
eMail: info@inmouldnano.net



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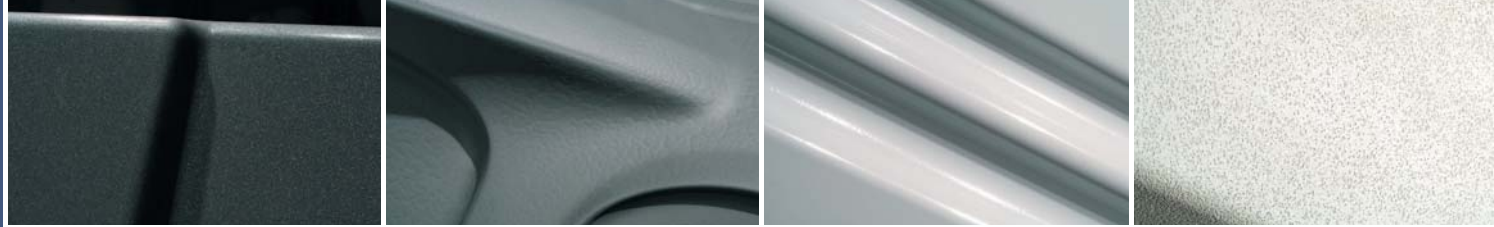
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INMOULDnano.NET is a **specialist** network employing ...

- new technologies
- new materials
- new coating systems
- nano particles
- new approaches for in-mould coating
- new manufacturing systems
- and the latest developments of R&D-institutes

Reaching superior customer benefits due to ...

- perfect surfaces
- cost reduction
- flame resistance
- conductive surfaces
- multifunctional surfaces
- enhanced noise reduction
- antibacterial effects



In-Mould-Coating is a modular designed system for surface coating of plastics moulding.

The coating system reaction group is based on amino groups and combines environmental awareness, high functionality with quality.



The innovation is defined by the renunciation of any solvents and the intrusion of nano-particles in a 100% polymer matrix, so the nano-particles neither are released at the application nor in the manufacturing process. The coating of a synthetic material is already used in the mould.

A very reactive 2-component varnish is taken into the mould by means of an innovative spraying technology. The carrier material on polyurethane basis is brought in an open or closed mould. After expiry of the reaction time, the moulding is taken from the mould. The result is a component with a finished surface. It can be structured from high gloss to dull depending on mould design.

The entire process results in a strong chemical and mechanical combination. It will combine coating layer and base material, due to the chemical similarity and timing of both components during the moulding at the boundary surface (adhesive bond).

Repair and paintwork after tempering of the In-Mould-Coating layer is possible.

In-Mould-Coating is a high-quality polyurea binder system with following parameters:

- total solvent-free system (100%)
- very high reactive (after 60 seconds in dust dry environment)
- variable final hardness from soft to hard
- colour shades according customer preference (RAL, NCS, pearl, metallic)
- the form defines precisely quality and appearance of its surface
- very high UV stability
- weather and chemical resistance
- innovation by nano-particles
- flame-resistant, fungicide, antibacterial and/or sound absorbing adjustable

In-mould coating results in the following vital advantages:

- cost reduction due to reduction or complete elimination of individual process steps
- high adhesion between polymer part and surface coating
- very strong chemical and mechanical bond
- quality of the surface can be adapted to specific customer requirements
- increased freedom as to design and profiling of the polymer part
- adaptation of the technology to different base materials and processing technologies possible
- ideal technology for reinforced plastics
- extremely short reaction and process times