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 **Fraunhofer**
IFAM

PRESS RELEASE

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Production without release agents

The Infiana Group and Fraunhofer IFAM have agreed upon an exclusive cooperation for the production and marketing of Flex^{Plas}® release film.

Even more innovative together: Scientists of the Fraunhofer Institute for Manufacturing Technology and Advanced Materials (IFAM) and experts of the Infiana Group are jointly working on the further development and marketing of the Flex^{Plas}® technology, an elastic release film. It optimizes the production of composites parts - complex large structures of fiber-reinforced plastic (FRP) in particular - such as those used for manufacturing aircrafts or rotor blades for wind turbines. When using Flex^{Plas}®, you can be assured of a safe and efficient production process, free of release agents and without any delays: the subsequent steps, for instance coating, can be taken as soon as the component is cured.

Flex^{Plas}® release film reduces material costs and increases productivity, as the tooling can be re-used sooner after the component's demolding. So far, traditional release agents, which were applied to the surface of the mold, ensured easy removal of the components. However, before any further processing processes could start, the remaining residues containing fluorine, wax or silicone had to be removed both from the manufactured part and the tool by means of abrading or blasting – a complex process, which not only strains the surfaces, but which is also cost-intensive. These process steps are no longer required with Flex^{Plas}® release film.



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Its use can reduce relevant production costs by up to 70 percent. In addition, solvent-free manufacturing saves the environment, increases working safety and protects the health of employees.

"A team of experts at our institute has developed the plasma-polymer release coating, which is applied to the highly elastic special film of the Infiana Group," Dr. Gregor Graßl, Flex^{Plas}® Project Leader at Fraunhofer IFAM, explains. Soheila Salehi-Schneider, Flex^{Plas}® Project Leader at Infiana, adds: "Both sides contribute their extensive expertise – a win-win situation for all of us, especially for our customers."

Flex^{Plas}® can be used for a range of procedures (such as pre-preg technology in autoclaving, (vacuum) infusion, hand lay-up process or Resin Transfer Molding/RTM). The release film, which is extensible up to 300 percent, highly elastic and thermally stable, is applied to the mold like a second skin. After the fibrous material has been placed in the mold, the cured component can be easily removed thanks to Flex^{Plas}®. The release film can either remain on the component as transport protection, or it can be safely and easily removed. Without any residue: each component can be further processed, for example coated.

Another advantage: applying a gel coat to the Flex^{Plas}® release film prior to covering it with fibrous material saves additional time and energy. In addition to omitting the cleaning and grinding steps from the process, the component now no longer needs to be coated and additionally cured. The coating is cured together with the component in one production stage.



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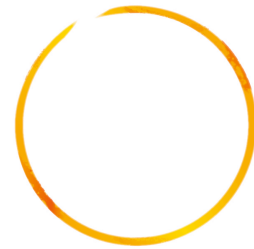
For the first time, the two cooperation partners will present Flex^{Plas}® together at JEC Europe, the worldwide largest trade fair for composites in Paris (Booth K 35, Hall 7.2), from the 10th to the 12th of March.

On Infiana Group:

Infiana Group develops and produces engineered and innovative films for the consumer market and the industry. The Group has around 1,000 employees at four production sites in Forchheim (Germany), Malvern (USA), Camaçari (Brazil) and Samutsakorn (Thailand), and is equally active in the consumer market (film products for packaging and as components of hygiene products), the industrial market (release and surface films for technical applications) and the pressure sensitive market (silicone-coated release films). In 2014, Infiana Group generated a turnover of 200 million euros.

On Fraunhofer IFAM:

Fraunhofer IFAM is one of the leading independent research organizations in Europe in the fields of “Adhesive Bonding Technology and Surfaces” and “Shaping and Functional Materials”. The focus of all the R&D activities is to provide customers with effective, application-oriented solutions. Fraunhofer IFAM has a highly qualified workforce of more than 600 people, organized into project teams and business segments covering specific topics.



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