Leonhard Kurz produces study on the recycling of decorated plastics

Fürth/Germany, 5 August 2019: Leonhard Kurz is presenting the results of a comprehensive study on recycling at K 2019, in the VDMA Circular Economy Forum. The in-house produced study examined the mechanical recyclability of plastic parts that have been decorated with surface coatings from Kurz.

Kurz commissioned its development team to effectively support its customers in setting up a return and recycling system and in reducing their CO_2 footprint. “Our customers need clear evidence that our surface decoration products do not affect the recyclability of their plastics. The scientifically sound study and our more than 120 years of experience in surface decoration enable us to effectively advise them in the development of their recycling concept,” explains Astrid Rauh, who works as a recycling engineer in the Environmental and Safety Management department at Kurz.

Decorative layer with no impact on recyclability

In elaborate tests, plastics with recycled content derived from decorated and undecorated plastic parts were compared. Firstly, plastics with different levels of recycled content were tested. Then previously recycled plastic was recycled again several times. The results were clear: recyclable plastics with the extremely thin Kurz coatings remained recyclable under a variety of test conditions.

To identify any possible influence of the decoration process, parts produced and decorated using two different injection molding processes were tested: IMD (In-Mold Decoration), and the IMD Varioform technology developed by Kurz in which the parts are decorated, formed, back-injected and stamped directly within the injection mold. While only the decorative coating is transferred to the part in IMD, in the case of the IMD Varioform process the carrier foil of the coating also remains on the part. The carrier foil is therefore selected not only on the basis of

technical criteria. The foil material is also tailored very specifically to the injection molding material, to ensure it supports the recyclability of the plastic part.

Live processing and decoration of recycled materials

Visitors can obtain details, facts and figures on the study at the VDMA Pavilion, which will be located in an outdoor area in front of Hall 16. How the positive results can be implemented as a successful return and recycle system can be experienced live at the Engel booth B42 – C58 in Hall 15. Here plastic to which Kurz decorative foil has been applied will be used as recycled material and processed into a high-quality decorated part in the IMD Varioform process. This plastic part is itself recyclable. It also exhibits another characteristic that makes return and recycle systems so compelling: a brilliant, good as new appearance thanks to the applied surface design.

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The plastic part with recycled content decorated in the IMD Varioform process
(Photo: Kurz)

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About KURZ: The KURZ Group is a global leader in thin film technology. KURZ devel-

ops and manufactures decorative and functional layers applied to carrier foil for a wide range of industries, from the packaging and printing industry through to the automotive, electronics, card and textile sectors. KURZ offers a comprehensive portfolio of products for surface finishing, decoration, labeling, and counterfeit protection, rounded off by an extensive range of stamping machines and stamping tools. The company is also continuously investing in new technologies and developing innovative solutions for integrating functionality into surfaces. The KURZ Group has more than 5,000 employees at over 30 sites worldwide and produces under standardized quality and environmental standards in Europe, Asia and the USA. A global network of subsidiaries, representatives and sales offices ensures short paths and individual, on-site consulting.

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