KREYENBORG

PRESS RELEASE

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Success for Kreyenborg's IR-Clean Technology: EFSA gives positive “Scientific Opinion” on decontamination of rPET flakes

Process reduces contamination of recycled material to a level determined harmless to health

Senden, July 4, 2025. The Germany-based mechanical engineering company Kreyenborg has achieved a significant success under the new regulation (EU) 2022/1616 of the European Food Safety Authority (EFSA). At the end of May 2025, the authority issued a so-called positive "Scientific Opinion" for its infrared technology "IR-Clean" to the manufacturer, which specializes in processing technology for bulk materials in the plastics and food sectors. This process decontaminates recycled PET flakes which can then be processed again for food packaging that can come into contact with all types of food. With this approval of the process by EFSA, Kreyenborg's IR-Clean system will be assigned a unique recycling authorization number (RAN) and listed in a public register. According to the machine manufacturer Kreyenborg, several IR-Clean processes have already been individually rated positively by customers in accordance with the old regulation (EC) 282/2008. According to Kreyenborg, the approval procedure would be significantly streamlined and simplified under the new regulation (EU) 2022/1616, both for Kreyenborg itself and for its customers in the packaging industry.

No safety concerns found when adhering to certain process conditions

After evaluating the data from a so-called "challenge test", the EFSA Panel has concluded that there are no safety concerns for the recycled PET obtained from the IR-Clean process and can therefore be reused for packaging with direct food contact. The boundary conditions for this are: A) Up to 100 % of recycled PET flakes can

be used for the production of materials and items that come into contact with all types of food and are stored at room temperature or below. B) The starting material shall consist of washed and dried post-consumer PET flakes originating from packaging produced in accordance with Union legislation concerning food contact materials and consisting of no more than 5 % PET from non-food consumer applications. C) The process must run under the same strict process conditions as the "challenge test" for decontamination assessed by EFSA.

Decontamination efficiency through two steps

In the process at Kreyenborg assessed by EFSA, two main steps were evaluated: the decontamination of PET flakes in an infrared dryer (IRD) and the subsequent treatment in a finisher unit. "These two steps were crucial for the efficiency of decontamination at our plant," says Marcus Vogt, Technical Sales Manager for the plastics sector, summarizing the complex measurements carried out over a long period of time, as part of various challenge tests that preceded EFSA's assessment. Vogt helped initiate the petition and had been accompanying the approval process for more than six years, which entails various approvals according to US FDA regulations in addition to the EU standards.