

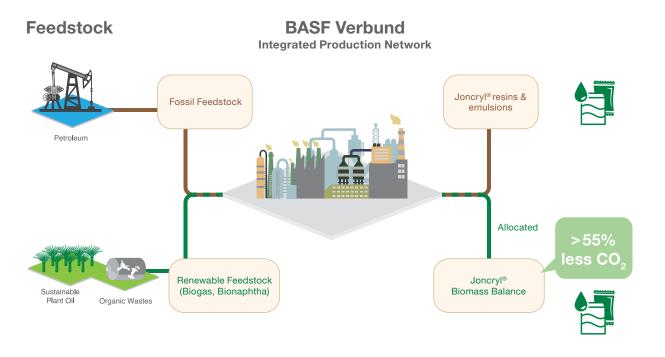
We create chemistry that makes inks love renewable raw materials.

As our customers and consumers are becoming more aware of how packaging is made, and the impact of packaging production on the environment, BASF brings a new solution based on renewable feedstock to the world of packaging. Joncryl® Biomass Balance opens up new opportunities to create more sustainable solutions – water-based inks containing renewable raw materials without the need to change your printing and/or converting process.

Turning sustainability challenges into market opportunities

BASF has developed a groundbreaking approach to deriving products from renewable raw materials: Certified renewable feedstock is used to replace fossil resources at the beginning of the production process and is then allocated to sales products in the respective quantities. An independent certification issued by TÜV SÜD confirms the use of the required amount of renewable raw materials needed to manufacture the product. The resulting products are identical in terms of formulation and quality but are associated with lower CO₂ emissions and saving of fossil resources.

BASF Bio Mass Balance approach



Use of renewable feedstock in very first steps of chemical production (e.g., steam cracker)

Utilization of existing network production for all production steps Allocation of renewable share to selected products

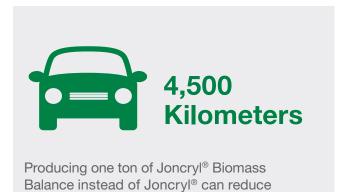
Meeting the sustainability need in inks for the packaging industry



Sustainably produced feedstock*

- - * In accordance with European Union Renewable Energy Directive's (RED) requirements.

as much CO₂ as emitted from driving a passenger car for 4,500 km.*



* EU regulation No 443/2009

Independent Certification by TÜV SÜD

http://www.tuev-sued.de/home_en



Renewable Resources

- 100% of fossil resources saved by using renewable raw materials
- Audited feedstock balance

www.tuev-sued.de/erneuerbare-rohstoffe ID 71.0074.16

The Joncryl® product line: The best choice for printing and packaging applications

Joncryl® resins and emulsions for the packaging industry are used for printing inks, overprint varnishes and functional coatings. The packaging industry is facing performance challenges, such as consistency, resistance and resolubility as well as sustainability challenges as grinding efficiency, low VOC, and food contact compliance.

With the Joncryl® portfolio we address these issues to printers, converters, and therefore also brand owners and increase the effectiveness and structural qualities of their packaging.

DISCLAIMER:

 $\ensuremath{\mathbb{R}}$ = registered trademark of BASF Group

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www.basf.com/massbalance