

News Release

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Extremely safely packed in ex zones

- **Elastostat® from BASF allows PE blown film to be used in hazardous areas**
- **From patent to market launch: DUO PLAST and BASF cooperate to launch the world's first stretch film approved for use in potentially explosive areas**

The film innovation DUO EX-TRA by the film manufacturer DUO PLAST AG in Lauterbach, Germany, is equipped with the static dissipative polymer Elastostat®. This creates the first stretch film suitable for use in potentially explosive atmospheres. The newly developed film avoids the ignition source electrostatics. Thus, stretched pallet units no longer pose an explosion hazard.

Conventional stretch films are not approved for explosive areas due to the static charge and pallets must be repacked before entering. The effort involved in unpacking or packing incoming and outgoing goods with conventional stretch film is enormous. Therefore, stretch films with Elastostat® are particularly suitable for companies in the chemical industry and their suppliers, who can be supplied directly to hazardous areas in the future. The packaging delivery process becomes more efficient, sustainability is improved, and costs are reduced. BASF itself is not only a raw material supplier but also a customer and user of the new packaging film.

The secret ingredient: Elastostat®

Since 2017, BASF's development team, consisting of packaging consulting, safety engineering, product development and polyurethane sales in Lemfoerde,

Germany, had been working to fulfill the long-felt need for a dissipative film. The solution: Elastostat[®], a dissipative polymer based on TPU (thermoplastic polyurethane) from BASF Polyurethanes GmbH in Lemfoerde, Germany.

"Combining our additive with the film to increase conductivity was not feasible straight away. We had to both achieve the required surface resistance and maintain stretchability while at the same time considering the thinness of the film", explains Anja Oltmanns, TPU sales, BASF.

Fully secure and sustainable packaging

The film is color-coded with red flashes. Hence, wrapped pallets can be clearly identified visually and their suitability for the relevant areas can be ensured.

"The blown film produced in cooperation with BASF is unique worldwide as there has been no stretch film on the market before that was approved for hazardous areas. Thus, the film can be used for packaging conductive containers in contact with earth in potentially explosive atmospheres (zones 1 and 2). Removal of the foil is also permitted in the aforementioned zones", says Nina Schnitzler, Key Account Manager at DUO PLAST AG.

In addition, the DUO EX-TRA film is equipped with the patented Duo Double Edge which has enormous holding forces. The net structure created during processing enables optimum load unit stability with minimal material consumption.

About BASF's Performance Materials division

BASF's Performance Materials division encompasses the entire materials' know-how of BASF regarding innovative, customized plastics under one roof. Globally active in four major industry sectors – transportation, construction, industrial applications and consumer goods – the division has a strong portfolio of products and services combined with deep understanding of application-oriented system solutions. Key drivers of profitability and growth are our close collaboration with customers and a clear focus on solutions. Strong capabilities in R&D provide the basis to develop innovative products and applications. In 2020, the Performance Materials division achieved global sales of €5.63 billion. More information online: www.plastics.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 111,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio comprises six segments: Chemicals, Materials, Industrial Solutions, Surface

Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €78.6 billion in 2021. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com.

About DUO PLAST AG

DUO PLAST is a leading and innovative stretch film manufacturer. The company produces packaging films for the industrial, food and agricultural sectors. Several film patents, the distribution, and corresponding know-how of/about packaging equipment as well as the technology center DUO LAB for analyses and optimizations of individual load securing concepts make DUO PLAST unique worldwide.

In addition to the main site in Lauterbach/Hessen, the film manufacturer operates another production plant in Sünna/Thuringia as well as sales offices in Austria, France and Belgium. Since more than 35 years, the medium-sized company with more than 160 employees has been standing for environmental compatibility and fair competition in the film market. As a founding member of the ProStretch initiative, the producer is fully committed to supplying guaranteed quality films. www.duoplast.ag