

News Release

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BASF's ultra-light polyurethane utility pole strengthens power grids and secures electricity supply after disasters

- **First commercial sale to a major utility pole distributor in Japan**
- **Durable Boldur™ utility poles help electricity companies lower installation and maintenance costs**
- **Enables fast electricity recovery after natural disaster, with less manpower and lifting equipment required**

Singapore – July 2, 2019 – Boldur™ utility poles can now help disaster-prone countries to strengthen their power grid and recover rapidly after disasters. Produced with Elastolit® polyurethane and with a unique filament winding technology, the robust, ultra-light Boldur utility poles can withstand the most severe weather conditions and maintain reliable electricity supply in disaster areas. Boldur is now being used by a major utility pole distributor in Japan.

“Countries prone to various natural disasters, such as typhoons, floods, and earthquakes, experience heavy property loss and widespread power outages,” said Andy Postlethwaite, Senior Vice President, Performance Materials Asia Pacific, BASF. “With our strong research capabilities in the compounding of continuous glass fiber and PU materials, combined with a deep understanding of customer needs, we have successfully re-invented the utility poles making them more lightweight, durable and resilient as compared to conventional concrete ones.”

Boldur poles weighing only 220 kg have a breaking strength that is 10 times greater than their weight. Similar strength is engineered for other Boldur poles weighing

between 40 kg up to 220kg. As such, this enables the poles to stand firm in strong winds during natural disasters and resist cascades, a phenomenon which occurs when traditional concrete poles fall like dominoes, causing widespread power outages.

“With typhoons getting more intense and destructive due to climate changes, there is a pressing need to improve the durability of power distribution infrastructure,” said Larsen Kolberg, Head of Business Management, Construction Industry, Performance Materials Asia Pacific, BASF. “During a disaster, Boldur poles can be quickly installed in place of traditional concrete poles, and with less manpower and lifting equipment required. This helps affected neighborhoods to restore electricity more efficiently,” Kolberg added.

In comparison, a typical 12-meter concrete pole of more than 850kg is difficult to transport to the job site and install without machinery, such as cranes, boom trucks, or bucket trucks. Thanks to the Boldur poles, only four crew members, and less lifting equipment are required for the transportation.

Different from wood, steel or concrete poles, Boldur poles are resistant to rust and corrosion and do not require periodic inspections to prevent rotting and insect infestation. Boldur poles are covered in a specially formulated UV-resistant topcoat, which can extend their service life. These features help utility operators reduce maintenance costs and extend the life of the power grid.

BASF is currently producing the Boldur poles in South Korea. Boldur poles can be customized in terms of length, strength and stiffness depending on requirements of pole distributors and power providers. The length ranges from less than 8 meters to 12 meters with mean breaking strengths from less than 4 to more than 20 Kilo Newtons (kN). They are also fire-resistant and can self-extinguish quickly.

Boldur poles are now commercially available worldwide. For more information on Boldur™ poles please visit: <http://www.boldur.basf.com>

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 a 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 2018, the Performance Materials division achieved global sales of €7.65 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. The approximately 122,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of around €63 billion in 2018. 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.