

The Epoxy Resin Committee  
wishes you a wonderful holiday  
season!

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## EPOXY RESINS NEWSLETTER

December 2020

*We wish you a wonderful  
holiday season  
and a happy 2021!*

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### WHAT'S NEW

#### NEW VIDEO "EPOXIES: KEY ENABLERS FOR RENEWABLE ENERGIES"



#### RECORDING OF THE WEBINAR ON THE UBA- BAUA RESTRICTION PROPOSAL ON BPA

On 09/11/2020 and 17/11/2020, the Epoxy Resins Committee held a webinar on the UBA-BAUA restriction proposal on BPA and its potential implications for epoxy technologies & the actions to take to support a risk-proportionate restriction proposal.



## DID YOU KNOW?

**THE EUROPEAN COMMISSION IS BANKING ON OFFSHORE WIND POWER TO REACH CARBON NEUTRALITY BY 2050 - AN ACHIEVABLE GOAL THANKS TO EPOXY RESINS!**



The European Commission has placed particular emphasis on the development of offshore wind energy as it estimates need **for 300 GW offshore wind capacity installed by 2050**. This means a massive change of scale for the sector in less than

30 years, at a speed unparalleled by the past development of other energy technologies. **It means multiplying the capacity for offshore renewable energy by nearly 30 times by 2050.** The investment needed to do so is estimated at up to EUR 800 billion.

Europe is the world leader in offshore wind power with a total installed offshore wind capacity of 22,072 MW currently. This corresponds to 5,047 grid-connected wind turbines across 12 countries (including UK).

Offshore wind power plants are tens of kilometres from the coasts and are therefore exposed to the extreme conditions found on high seas: strong winds, rough sea and salt water corrosion.

Most of the wind turbine poles in the North Sea are thus coated with epoxy resins to protect the structure from salt corrosion. Epoxy resins also ensure the robustness of the offshore wind turbines and their durability.

Epoxy resins have also made it possible to steadily increase the diameter of wind blades over the past 20 years enabling increased energy generation.

Discover more about offshore wind farms and the role of epoxy resins on our [website](#).

## EPOXIES AT WORK

### RESISTING THE PRESSURE: EPOXY RESINS FOR FILAMENT WINDING



One of the most discussed technologies for climate protection and energy generation is hydrogen and the fuel cell. The focus is on questions such as production and transport. If produced with renewable energy, for instance with the power of a wind blade, the resulting “green hydrogen” would have either none or only a minor carbon footprint. One of the problems, however, is regarding transportation: very high pressure or extremely low temperatures are necessary to store as much gas as possible in a reasonable space. This has not been efficiently possible with the previous metal containers.

**Therefore, more and more Composites based on Epoxy Resins and carbon fibers are the typical reinforcements used for compressed gas storage.** Composite-based tanks offer even more benefits compared to metal: they are corrosion and fatigue resistant (including resistance to a wide range of chemicals), have a good adhesion to metals and fibers, offer enhanced service lifetimes (up to 30 years versus 15 years), are up to four times lighter than usually used metals, and have an improved energy storage density as well as extended containment pressures (e. g. 5000 psi and higher with a practical structure weight). Not to forget that the reduction of weight by using composites allows for significant reduction of emissions.

Read more on the manufacturing of pressure vessels and other applications of Composites fabricated with filament winding [here](#).

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