

Paris, February 20, 2024

# PLASTIC OMNIUM PRESENTS ITS TECHNOLOGIES TO DECARBONIZE MOBILITY AT H2 & FC EXPO IN TOKYO

Plastic Omnium and EKPO Fuel Cell Technologies, its joint venture with ElringKlinger, are exhibiting at H2 & FC EXPO in Tokyo from February 28 to March 1, 2024. The show, a major international event focused on hydrogen and fuel cells, is part of Smart Energy Week. Plastic Omnium will be showcasing its hydrogen and battery electrification solutions for decarbonizing heavy and commercial mobility (trucks, buses and commercial vehicles).

Find Plastic Omnium booth at: W4-55, Tokyo BIG Sight, Japan.

Highlights:

- February 28<sup>th</sup> at 10:30am, West C. A talk by Christian Maugy, Plastic Omnium hydrogen expert "Battery and hydrogen electrification for decarbonizing heavy mobility".
- March 1<sup>st</sup> at 15:30am, West C. Talk by Carole Brinati, Managing Director of EKPO Fuel Cell Technologies "Development and industrialization of PEM fuel cell stack modules".

## Hydrogen electrification technologies showcased by Plastic Omnium

**The 150kW FCM** (fuel cell module) is a next-generation fuel cell system developed by Plastic Omnium for use in heavy mobility (trucks of 16 tonnes and over). It includes an NM12 Twin fuel cell that takes hydrogen and oxygen from the air to instantly generate electricity used to power the electric motor. The fuel cell is incorporated into a system that manages all the associated functions, including thermal control, electric and electronic management, and the supply of air and hydrogen. The 150kW FCM is presented in Asia for the first time at H2 & FC EXPO.





**The NM12 Twin module** is a fuel cell stack developed by EKPO Fuel Cell Technologies, a joint venture between Plastic Omnium and ElringKlinger. Fuel cells serve as the onboard power plants for hydrogen vehicles: a chemical reaction between oxygen and hydrogen generates electrical energy to power the vehicle's electric motor or charge its battery modules. The NM12 Twin module is designed for high-power applications (>150 kW) and has been tailored to meet the needs of heavy-duty, marine and rail applications as well as for generating electricity in static applications.

The health monitoring system for hydrogen vessels is a smart system that analyzes the status of onboard tanks to extend their lifecycles and facilitate maintenance operations.



# Battery electrification technologies showcased by Plastic Omnium



The high-voltage power battery system is a battery specially designed to meet the needs of all forms of heavy mobility: buses, trams and trucks. The 750v battery comprises several modules of high-performance lithium-titanate-oxide (LTO) cells developed by Toshiba, a Plastic Omnium partner. It is extremely powerful and accepts ultra-fast charging without compromising its service life. The battery system is suitable for electric and hybrid vehicles that are used intensively, may be required to operate in low temperatures

and need frequent recharging, as well as in hydrogen vehicles as back-up for the fuel cell system to extend its lifecycle and improve overall vehicle performance. Additional advantages are intrinsic safety and very long service lives.

The 2.2kWh nickel manganese cobalt (NMC) lithium-ion energy battery is a battery system sub-assembly suitable for electric vehicle applications. Connected in parallel or series, these modules are integrated into a system that includes a protective housing, cooling system, power electronics, battery management system (BMS) and the full range of safety, control and diagnostic functions. The modules offer excellent volumetric and gravimetric energy density. They are used in vehicles that require extended ranges as well as the ability to accept fast charging, including cars, buses and trucks.



### About Plastic Omnium

Plastic Omnium is a world leader in innovative solutions for a unique mobility experience that is safer and more sustainable. Innovation-driven from the outset, Plastic Omnium develops and produces intelligent exterior systems, customized complex modules, lighting systems, energy storage systems, and electrification solutions for actors from every mobility sector. With €9.5 billion economic revenue in 2022, an international footprint of 150 plants and 43 R&D centers, Plastic Omnium relies on its 40,500 employees to meet the challenges of transformations in mobility.

Plastic Omnium is listed on Euronext Paris, compartment A. It is eligible for the Deferred Settlement Service (SRD) and is part of the SBF 120 and CAC Mid 60 indices (ISIN code: FR0000124570). www.plasticomnium.com

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