ARMOR
INDUSTRY FOR PEOPLE

Press release – March 25, 2020

Electric car: new retractable solar cover with an outer layer of the ASCA® organic photovoltaic film

With over 250,000 units registered in Europe during the first 9 months of 2019, the electric car segment nearly doubled over the preceding year[1]. In this context of growth, the manufacturing company ARMOR announced its partnership with ACPV, a project sponsor focusing on renewable energies. Together, they have designed a retractable solar car cover. The first prototype has been deployed on the *Gazelle*[2] electric car and may be duplicated on any type of electric vehicle. The cover incorporates modules of the ASCA® organic photovoltaic film used to partly charge the car's battery, thereby extending its range by up to 8,000 km per year with an objective of reaching 11,000 km per year by 2023.

New retractable solar cover for the *Gazelle* electric car

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Optimum integration of photovoltaic technology

Made of organic semi-conductor polymers, ASCA® by ARMOR is composed of fine layers of inks, deposited using a coating process designed for thin and flexible film, which offers innovative benefits such as flexibility and lightness. Flexibility first and foremost: ASCA® can be rolled up at least 50,000 times without any loss of efficiency. Followed by lightness: ASCA® weighs around 450g/m^2, i.e. a factor of 30 less than other technologies. These properties enable the technology to be easily integrated within the car's protective cover. The solar film can also be applied directly to the bodywork, integrated within the glazed features such as the sunroof or passenger windows, or within the sunshields.

Reduce your carbon footprint when traveling

With over 250,000 units registered in Europe during the first 9 months of 2019, the electric car segment nearly doubled over the preceding year. Using this type of vehicle also helps to reduce the ecological burden with the coming into force this year of the WLTP (Worldwide Harmonized Light Vehicle Test Procedure), a new procedure that assesses fuel consumption, electrical autonomy and emissions of CO_2 and pollutants. "*Equipped with a retractable solar cover, the* Gazelle *has been entirely redesigned to reduce the carbon footprint when travelling*", stresses Moïra Asses, Marketing & Business Development Manager at ARMOR. "*Providing the transportation of tomorrow with greater range and making it more fuel efficient is the objective of the ASCA® organic photovoltaic film*", she concludes.

Photo credits: ARMOR

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1 Source: ACEA.
2 The *Gazelle* was designed by GazelleTech, the leading manufacturer of suburban vehicles made entirely out of composites.
3 Tests conducted by our experts guaranteeing resistance over 50,000 cycles on a mandrel 50mm in diameter (i.e. much wider than classic applications).

ARMOR specializes in the industrial formulation of inks and the coating of fine layers onto thin films. The Group is the global market leader in the design and manufacture of thermal transfer ribbons for printing variable traceability data on labels and flexible packaging. The European market leader in innovative and sustainable printing services and consumables, the Group is a pioneer in the development and production of industrial inks and innovative materials, such as organic solar films, coated collectors for electric batteries and bespoke filaments for additive manufacturing. With an international presence, ARMOR has nearly 2,000 employees in some 20 different countries. In 2019 it posted annual revenue of €280m. Each year the group invests nearly €30m in industrial equipment and R&D. ARMOR is a responsible company committed to stimulating innovation within society. **www.armor-group.com**