









# Avocet Nano-Carbon Coated Aluminium Datasheet

## AvNANO:

*Next generation graphite coated aluminium foil for the manufacture of Lithium-ion batteries.*

-  Nano graphite is used to coat the surface of aluminium, improving energy and power density. Thickness of the functional coating is around 400nm.
-  Increases adhesion between aluminium and active material.
-  Allows for less binder needed for the electrode, enhancing energy density and lowering cost of production.
-  Protects the Al collector from surface corrosion and oxidation.
-  Reduces interface resistance and internal resistance of the cell.
-  Decreases polarization and improves the specific capacity of the electrode material.
-  Mitigates exothermic reactions and enhances battery safety.
-  Improves production stability and reproducibility, as well as increases the consistency and cycling life of the cell.

### Properties

Planar Density	Covering rate	Conductivity	Peel strength
0.5g/m <sup>2</sup> (+/-0.2mg/cm <sup>2</sup> )	≥80%	≈30S/cm	2.0N
1.0g/m <sup>2</sup> (+/-0.2mg/cm <sup>2</sup> )	≥90%	≈30S/cm	2.5N
1.5g/m <sup>2</sup> (+/-0.3g/m <sup>2</sup> )	≥95%	≈30S/cm	2.8N
2.0g/m <sup>2</sup> (+/-0.3g/m <sup>2</sup> )	100%	≈30S/cm	2.8N



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### Usage and Storage

-  Use in a temperature of 20-25C and humidity of  $\leq 20\%RH$ .
-  The coating is highly hydrophilic so protection needs to be worn when handling.
-  Avoid using in areas of dust, dust purification should be over 0.1M.
-  Product can be easily damaged and so needs to be handled carefully.
-  Should be stored below 35C.
-  Vacuum package should only be opened immediately prior to use. After use, the left product should be dried at 40-60C for 2 hours under vacuum. It should then be kept in a cabinet filled with Nitrogen at room temperature.
-  This product can be stored under vacuum for one year at ambient temperature and moisture without direct sun. Once the vacuum package is opened, the product can be kept in a vacuum cabinet for max one month.



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