avanzare

www.avanzare.es

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Founded in 2004, in **avanzare Innovacion Tecnologica** we provide our customers with high-performance nanomaterials and nano-technology-based solutions. This company is specialized in the development, production and commercialisation of specialty additives for different materials, mainly plastics and rubber, with international presence across different industries: automotive, aeronautics, safety equipment, footwear, painting, building, wire and cable sector, fabrics, packaging and paper, among others. It has extensive experience in the scope of functionalities such as antistatic, electrical conductivity, thermal dissipation, flame retardant/fire resistance, anti-bacterial, hydrophobic, etc.

**avanzare**’s solutions and specialty performance additives create added value and competitive advantage for our customers, improving or bringing new functionalities to different materials. In a market where product differentiation is playing an increasingly important role, our products will contribute to achieving it.

Our highly qualified and large R&D department (21 professionals, 3500 m2 lab and a complete pilot plant), and solid experience in European Innovation Projects, at the service of our customers, represent a strong competitive advantage.

Ensatec, a European ILAC-ENAC accredited laboratory, became part of **avanzare**’s group in 2014. It is specialized in testing, certification and calibration service with a fire testing division and capacity to issue a wide range of certifications. This synergy has delivered vertical efficiencies and improves **avanzare**’s ability to offer a wider scope of services and complete turn-key projects to better meet our customer’s needs.
At **avanzare** we have extensive expertise in 2D materials research and production, above 10 years now, and we are specialized in the production of different bulk graphene and graphene/graphite nanoplatelets grades, for both industrial and R&D purposes.

Currently our graphene grades stand out mainly thanks to the following properties:

- Electrical conductivity
- Thermal dissipation and conductivity
- As a nucleating agent for mechanical properties enhancement

Our grades range from graphene oxide grades, along with partially reduced and highly reduced graphene oxide grades, to pristine graphene. Dispersions and masterbatches are also available upon customer request. Additionally, thanks to our extensive know-how in this material characteristics and preparation methods, we offer tailor-made graphene grades in which oxygen content, lateral size, number of layers and other characteristics can be modified to better suit our customer’s applications needs.

For more information about our graphene and graphene/graphite nanoplatelets grades, please ask for our graphene brochure or visit our webpage: [www.graphene.avanzare.es](http://www.graphene.avanzare.es)
ESD/Antistatic

Resins and plastics are intrinsically insulating materials; nevertheless, materials with conductive or antistatic performance features are increasingly demanded both for production and protection purposes.

Our antistatic/ESD additives impart certain conductivity in host materials so that they can release static electricity effectively in a controlled way and thus prevent problems caused by static electricity and uncontrolled electrostatic discharges, such as electric shocks, destruction of electronic circuits, sparks, appliance malfunctions, dust adhesion, etc.

avanSTATIC, avanNATUR and avanION antistatic additives ranges share the following features:

- Static dissipative and ESD levels long-lasting performance
- Colourless and colourable
- Low dosage required
- Minimal effect to host material properties
- Non-migratory
- Food contact grades available
- Solid, liquid, pellet MB formats available

Product specifically developed to ensure compatibility with the host matrix

- Rubber
- EVA
- Polyurethanes
- Thermoplastics: TPU, PVC, PA, PP...
- Thermosets: epoxy, polyurea...
- Composites
- Fabrics

+ tailor-made solutions

For more information about our ESD/antistatic grades please ask for our antistatic additives or visit our webpage: www.avanzare.es
Flame retardant /Fire resistant

Flame-retardant and fire-resistant solutions development, testing and production consisting of non-halogenated and antimony oxide free compounds.

+ tailor-made solutions and turn-key projects

Fire-reaction and fire resistant European standards compliance are a wide-spread concern across many sectors. Ensatec, European accredited fire testing lab (Ilac-ENAC) became part of *avanzare*’s group in 2014, in order to address its customer’s concerns in this domain and take advantage of other resulting vertical efficiencies such as the possibility of offering turn-key projects.

*avanzare* now has the ability to develop, test and certify tailor-made solutions that deliver results, catering to each material type of application and regulation compliance requirements.

For more information please contact sales@avanzare.es or visit: www.avanzare.es
**Anti-bacterial**

avanZnO BAC is a highly efficient anti-bacterial product line at controlling and removing microorganisms. It is specially designed to eliminate bacteria and fungi in every type of matrices and materials even when coated.

avanZnO BAC products exhibit an excellent cost-effectiveness since extremely low doses are required. They are suitable to be applied in clear or any colour materials and available in solid, liquid and masterbatch. PU foams, rubber, composites, concrete, fabrics, paper, cardboard, wood.

**avanzare** ANTI-MOULD and fungicide nanomaterials are highly efficient to prevent spoilage and moulds growth.

**avanzare** ANTI-ODOUR (additional optional feature), is designed to eliminate the odour that results from the body contact with the treated material. Suitable for applications that are meant to be in contact with the human body: insoles, textile, foams in furniture or automotive interiors.

**avanWATER**

avanzare’s ANTI-STAIN solutions enable to generate lipophobic and hydrophobic coatings.

- Do not alter original material aspect.
- Bactericide properties.

Developed to be applied in:
- Paper
- Cardboard
- Wood
- Fabric
- Cotton

**UV/IR FILTER**

Clear UV/IR filter based on TiO2 nanoparticles mainly used in cosmetic applications, paints, varnishes, etc...

Value of SPF (Sun Protection Factor) based on the percentage of solids in the formula offered by **avanzare** UV/IR filter.
Quality certificates, accreditations & associations membership:

Chemical tracer

Chemical trademark (anti-counterfeiting)

Unique solutions of tailor-made additives based on organometallic compounds for materials differentiation/identification, which allow avoiding illegitimate claims. **avanzare** offers a unique tailor-made additive for each raw material producer and material. Each of these unique additives are neither reused nor subjective to be copied. Based on organometallic compounds, these additives allow identifying and differentiating the treated material from any other, even when included in another formulation or transformed into a finished good.

Main advantages of **avanzare** chemical trademark (unique tracer) solutions for materials:

- They allow differentiating your material/blend
- Illegitimate claims regarding material origin are avoided
- Disincentive and entry barrier for unsafe raw materials suppliers
- They enable to reduce costs on civil liability insurance
- Very low required dosage and cost repercussion
- Tailor-made in terms of design and security levels preferences

**avanzare** has been nationally and internationally awarded

NANOAWARD: Best Product Award
As part of **avanzare**'s continuous search for improving and broadening its product range, it allocates many of its resources in Research and Development projects.

Not only does **avanzare** offer **tailor-made solutions and R&D projects**, but it is also currently involved in the following European Union Innovation projects, within Horizon 2020 Programme for Research and Technological Development:

### PHOENIX project
Synergic combination of high performance flame retardant based on nano-layered hybrid particles as real alternative to halogen based flame retardant additives. 01/01/2013-31/12/2016
http://www.phoenix-eu-project.eu/index.php

### GRAPHENE FLAGSHIP
Graphene-Based Revolutions in ICT And Beyond
Graphene Flagship is the EU’s biggest research initiative ever, and, according to the European Commission, ‘history’s greatest distinction for excellent research’. With a budget of EUR one billion, the Graphene Flagship project has the ambition to take graphene and related materials from the research laboratories to industrial exploitation in a huge range of application areas. // 01/10/2013 – 31/09/2023.
http://graphene-flagship.eu/

& **GrapheneCore 1**
(The second in the series of Graphene Flagship )
01/04/2016- 31/03/2018

### PolyGraph project
Will develop new production techniques to deliver industrial-scale quantities of graphene-reinforced thermosetting polymers, suitable for use in a number of key applications where improvements are needed in the strength, stiffness, toughness, electrical conductivity and thermal properties//01/11/2013- 31/10/2017.
http://www.polygraphproject.eu/

**SETNanoMETro**
It aims to develop well-defined and controlled protocols for the production of TiO$_2$ NPs. The materials produced according to such procedures, will be hence sufficiently characterised and homogeneous in their properties to become candidate Certified Reference Materials, to be used in various applications where the lack of metrological traceability is encountered.
http://www.setnanometro.eu/ 01/12/2013- 31/03/2017

**NanoREG II**
It will establish safe by design as a fundamental pillar in the validation of novel manufactured materials in order to deal with a rapidly diversifying system of manufactured nanomaterials (MMN) over time.
http://www.nanoreg2.eu/ 01/09/2015- 31/08/2018

**I-ThERM**
It aims to investigate, design, build and demonstrate Innovative Plug and Play Waste Heat Recovery Solutions to facilitate optimum utilisation of energy in selected applications with high replicability and energy recovery potential in the temperature range of 70°C – 1000°C.
http://www.itherm-project.eu/ 01/10/2015- 31/03/2019

**PROCETS**
PROCETS main target is to deliver protective coatings covering a wide range of applications such as automotive, aerospace, metal-working, oil and gas and cutting tools industries via thermal spray and electroplating methods by utilizing more environmental friendly materials, compared to the currently used.
https://www.facebook.com/Procets-Project-187437001627106/

AND MORE... For further information, please check our webpage, R&D services.