



Our products and solutions for the shoe market

Avanzare Innovación Tecnológica

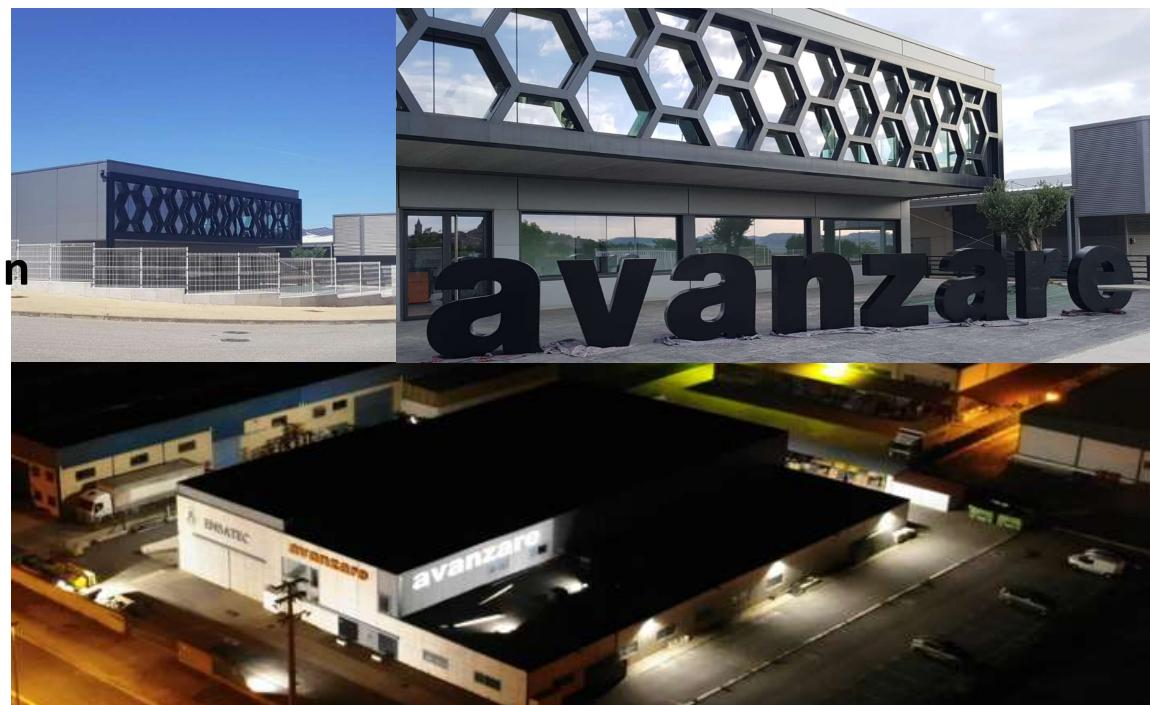
- C/ENCINILLAS Nº. 18-20
26370 NAVARRETE (LA RIOJA) ESPAÑA
- Office: +34 941 58 70 27
- sales@avanzare.es
- www.avanzarematerias.com



About us **avanzare**

- **We develop and produce differential additives for plastic,**

- ✓ **10.000 m² production plant.**
- ✓ **3.500 m² R&D (fully equipped).**
- ✓ **12 Chemistry PhD. (37 R&D – graduates in biology, biochemistry, chemistry, etc.)**
- ✓ **Mainly focused on differential additives**
- ✓ **Chemical and additives specialist**
- ✓ **Taylor made solution**
- ✓ **100 % European products.**



avanzare Presence in the world



Our products

Avanzare Innovación Tecnológica

Our products are specifically made for various materials:

RUBBER, EVA, PU, TPU, TR, PVC, ETC



Antistatic/ESD additives



Anti-bacterial additives



**Flame retardant/Fire
resistant solutions**



Graphene

For rubber

Avanzare Innovación Tecnológica



Antistatic agents



Flame retardant



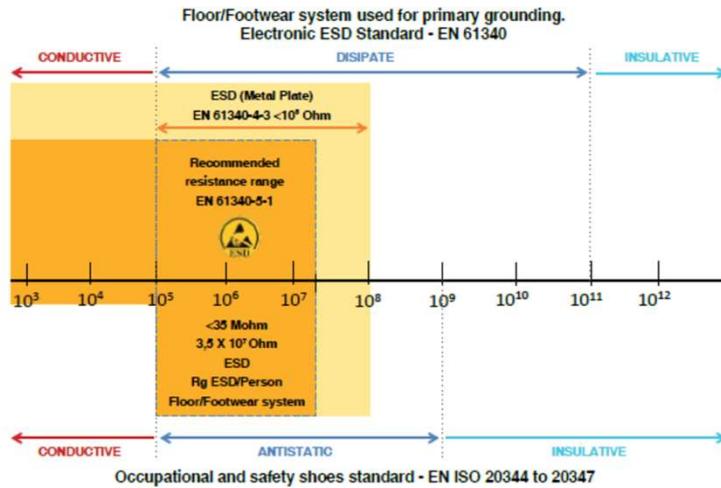
Blooming STOP

Conductivity ranges

Avanzare Innovación Tecnológica

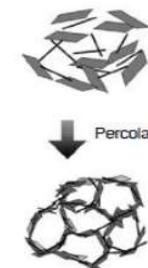
Our products are produced according to various ranges

Ranges of conductivity

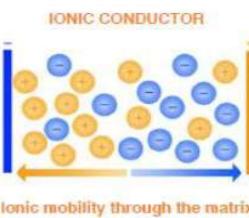


Mechanism to generate antistatic

Black system

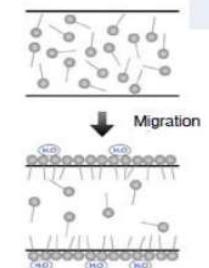


Percolation

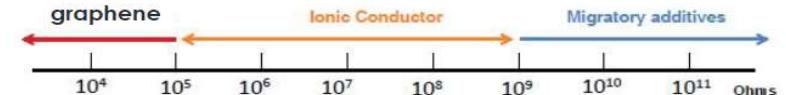


Ionic mobility through the matrix

No permanent



Migration



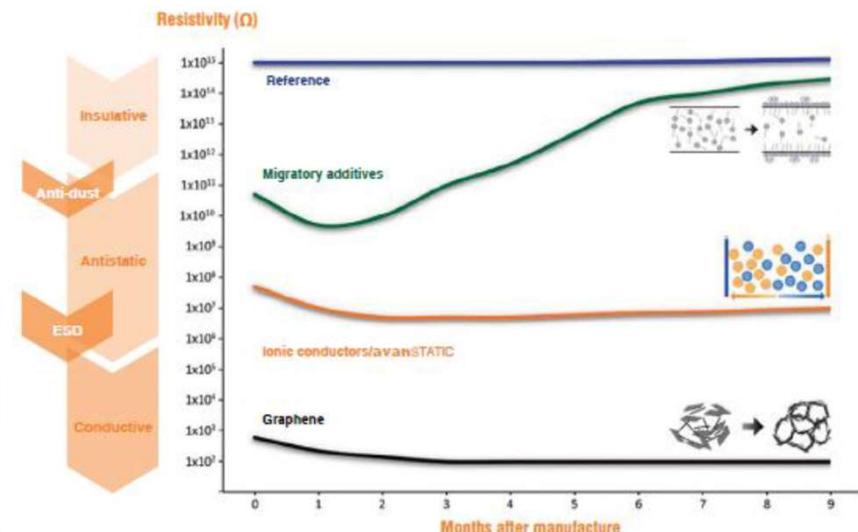
	Avanzare Graphene percolation	Avanzare Ionic Conductor	Migratory Additives
Colourable	NO/PARCIALLY	YES	YES
Permanent	YES	YES	NO
Humidity Dependent	NO	NO	YES
Resistance level Range	<10 ⁸ ohms	10 ⁸ to 10 ¹⁰ Ohms	10 ⁸ -10 ¹² Ohms

Conductivity ranges

Characteristics:

- Static dissipative and ESD levels permanent performance
- Colorless and colorable
- Low dosage required
- Cost-effective
- Minimal effect to host material
- Non-migratory
- Solid, liquid, pellet MB forms available depending on the product
- Food grade in some applications

Evolution of conductivity with the time





Products

Avanzare Innovación Tecnológica



	uses	phr	aspect	characteristic
avanSTATIC RUBBER	NBR	1-5	Powder	
avanSTATIC SBR/EPDM	SBR, EPDM,	7-12	Powder	
avanSTATIC 455 FDA	NBR, SBR, EPDM etc	7-12	Powder	FDA applications
avanSTATIC PLAST RUB	NBR, SBR/NBR	2-8	Liquid	
avanSTATIC PLAST	SBR, NBR, CSM, NR,	5-20	Liquid	plasticizer
avanSTATIC NBR 535	NBR, SBR/NBR	2-8	Liquid	



Antistatic agents (additive)

Application in NBR

Application in SBR

Application in NBR/SBR

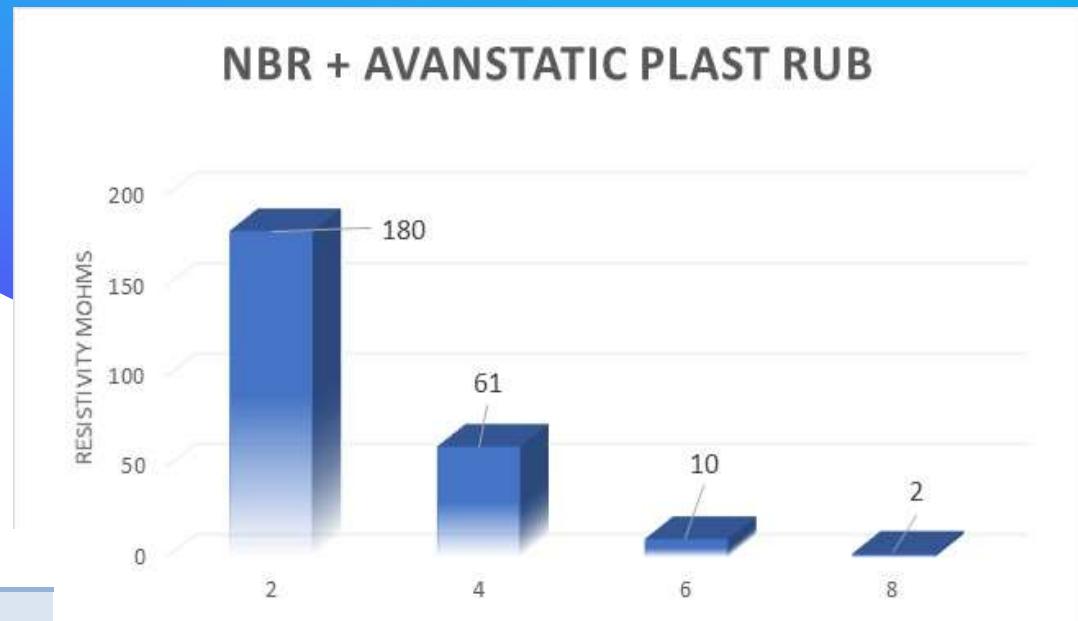
Application in NR



Flame retardant

SAFETY SHOES NBR

	phr
NBR 3380	90
BR	10
SiO ₂	30
DOTP	6
avanSTATIC PLAST RUB	2-6
ZnO and Zn stearate	5
PEG 4000	3
S8, MTBS etc	-



Safety shoes - FR



Avanzare --- avan FR81 and avanFR NBR 185

- Our FR for safety shoes .
- Formula (BS EN 15090)
 - NBR 747 - 100 Phr
 - Carbon black HAF - 65 PHR
 - Sio2 - 10 PHR
 - DOTP 20 PHR
 - AvanFR NBR- 185 30 PHR
 - Etc.

Hardness: 65

➤ Observation : FR property passed, very good tack property Alternative formula with avan FR-81

Recipe	PHr
NBR 3330	100
SIO2	20
Avan Fr-81	30
Acid stearate	1
ZnO	2
PEG-4000	1-2
Antioxidant	2
Silane	1,5
Avs plast rub-- nbr 535	5

avanSTOP Blooming 64

Modify filler able to reduce the migration of plasticizer, ZnO etc in rubber formulations

- ✓ Non-toxic additive.
- ✓ Valid for any colour.
- ✓ Minimal impact over physical properties.
- ✓ REACH compliance.
- ✓ Powder form





For EVA

Avanzare Innovación Tecnológica



Antistatic agents

avanFREE FORMAMIDE

avanNatur EVASTAT (S)

Avanzare Innovación Tecnológica

- Adjustable additive for antistatic/esd.
- Specially formulated for banbury processes.
 - Recommended to add 18-26 phr of silica (150-180)
 - Use high %vinyl acetate.
- 12 TO 25 PHR.
- Solid. No blooming efect.
- Colourable and coloured formulations.
- Non-toxic.
- Non petroleum derivates.



avanNatur EVASTAT 850 (general use)

Avanzare Innovación Tecnológica

- ESD/ANTIESTATIC.
 - EXTRUSION.
 - BANBURY.
- 8 TO 13 PHR. NOT INCREASE THE DOSAGE.
- POWDER, EASY DISPERSION IN EXTRUSION.
- COLOURABLE AND COLOURED FORMULATIONS.
- PERMANENT. NO BLOOMING
- NON LARGE DETERIORATION IN PHYSICAL PROPERTIES.

Vinyl Acetate content	EVASTAT 850 (phr)	Resistivity (MΩ)	Density (kg/m ³)
28	8	855	235
19	11	890	310
19 (not foam)	8	350	940

avanFREE FORMAMIDE

Avanzare Innovación Tecnológica

- Reducing formamide residues in EVA foam
- Banbury process
- Catalytic oxidation to CO₂, water and N₂
- Characteristics:
 - White powder easy to disperse
 - Non-toxic
 - Color formulation
- Dosage between 8 to 15 PHR.
- Allows to get less than 100 PPM of free formamide, according with CADS,

SAMPLE CODE 560-2020-00000732

Order Code: EUAA70-00005707
Reception Date: 30-Jan-2020
Analysis starting date: 3-Feb-2020
Analysis ending date: 5-Feb-2020
Sample described as: Un trozo de goma
 A piece of rubber



Information provided by the customer:

Client reference: EVA FREE A
Purchase Order Number:
Customer requirements:
Description:

CHEMICAL TESTS	RESULTS	LOQ
• YLK1T Formamide Formamide	94 mg/kg	50

Analysis ending date: 05/02/2020



For TPU/PU

Avanzare Innovación Tecnológica



Antistatic agents

avanPOLISH (antiburr)

avanION 39

Avanzare Innovación Tecnológica

- Based on a complex dispersion of ionic conductors in polyglycols.
- Colored formulations.
- Does NOT alter original material mechanical properties
- Typical dosage:
 - To achieve less than 100 Mohms → 1.25% over polyol
 - To achieve less than 35 Mohms → 2,50 % over polyol
- Polyester an polyether systems
- Hydroxyl content → 790 mg KOH/g in case to add more than 3.5% is necessary to adjust iso/pol ratio
- Does not affect to the hydrolysis test





TPU

Avanzare Innovación Tecnológica



Antistatic agents

avanSTATIC TPU MB

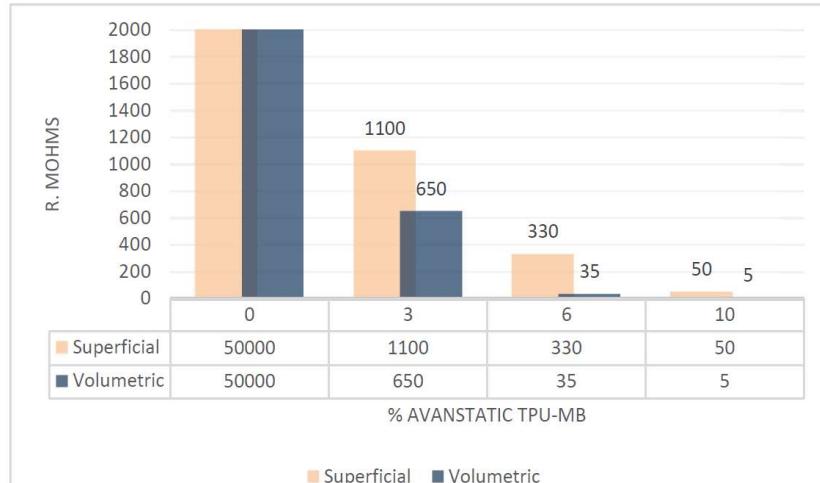
ANTI-BURRING AGENT

avanSTATIC TPU MB

Avanzare Innovación Tecnológica

- Mb ready to use
- Based on functionalized SiO₂ with ionic conductors
- Colored formulations
- Does NOT alter original material mechanical properties
- Typical dosage:
 - To achieve LESS THAN 100 Mohms → 6%
 - Dosage 1.5 to 15%

20344 to 20347 (occupational and safety shoes).



avanPOLISH

Avanzare Innovación Tecnológica

- Ready to use MB
- Powerful anti-abrasion/anti burr for TPU
- Prevents the appearance of burrs in the milling/sanding process
- Specifically made for TPU with less hardness than 80 SHORE A
- Dosage between 4 To 8%



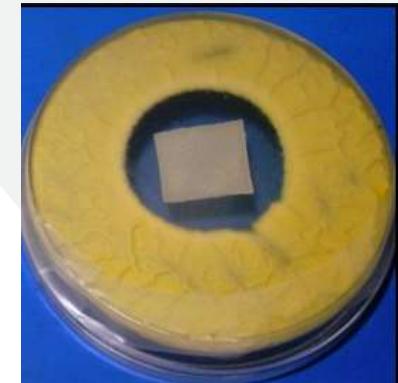


Biocide



Avanzare Innovación Tecnológica

avanZnO BAC is a powerful biocide agent, specially formulated to be introduced in plastics, rubbers and resins matrices.



Bacteria	Fungi	Algae
Escherichia coli	Aspergillus niger	Cladosporium
Staphylococcus aureus	Aureobasidium pullulans	cladosporioides
Streptococcus faecalis	Chaetomium globosum	Sclerotophoma pityophila
Klebsiella pneumoniae	Alternaria alternata	Trichoderma viride
Pseudomonas aeruginosa	Penicillium brevicaule	Chlorella pyrenoidosa
Salmonella typhimurium	Cladosporium cladosporioides	
	Sclerotophoma pityophila	
	Trichoderma viride	



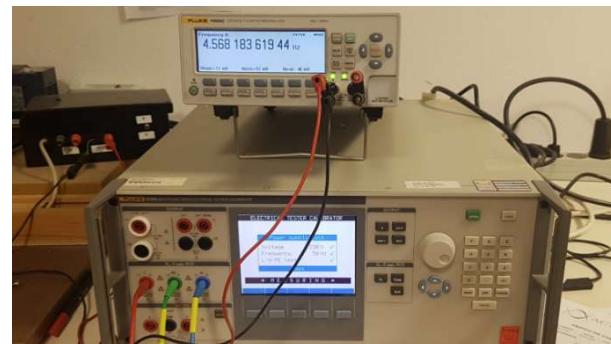
According to the European directive nº 1048/2005
(13/June/2005) and directive (CE) nº 528/2012
regulating the applications of biocides in the industry

➤ 99,9 %
elimination

➤ Ensayos ISO 22196

We have the capabilities to customize solutions according to customer needs and requirements

- Certification lab
- Pilot plant
- Customize solutions.



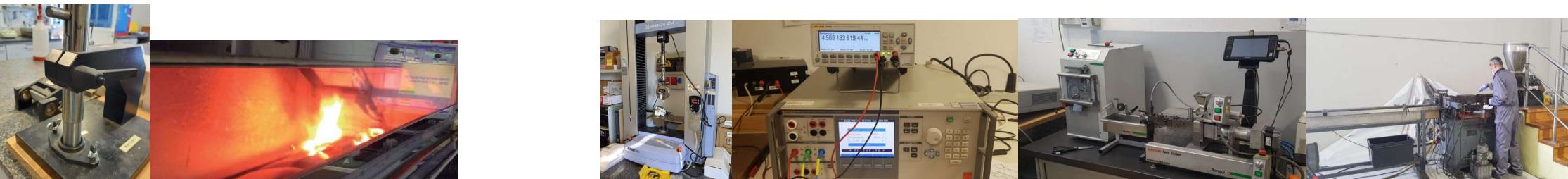
□ Technical capabilities

- ✓ 3.500 m² fully equipped laboratory
- ✓ 12 Chemistry PhDs.
- ✓ European accredited lab for customer trials
- ✓ Customized solutions (adjust recipes)



□ Equipment and Facilities

- ✓ Polymer pilot plant, Extrusion machines (singles and twin screw), Injection samples , R&D filament extrusion for 3-D
- ✓ R&D polymer lab (extrusion machine, injection, MFI analysis, FTIR etc
- ✓ Aging test, QUV, Xenon, UV-absorption, etc
- ✓ Chemical Characterization: EDAX, RAMAN, SEM, X-Ray, EEA, etc
- ✓ Mechanical Characterization: Impact, mechanical testing, etc
- ✓ Fire lab: radiant panel, Single burning item, Non combustibility test, etc
- ✓ ESD and Conductive area: Conductivity/resistance characterization instruments. (1 Ohms- 1 ^13 Ohms)



avanzare



Testing and Certification LAB.

Materials



Metrology and Calibration



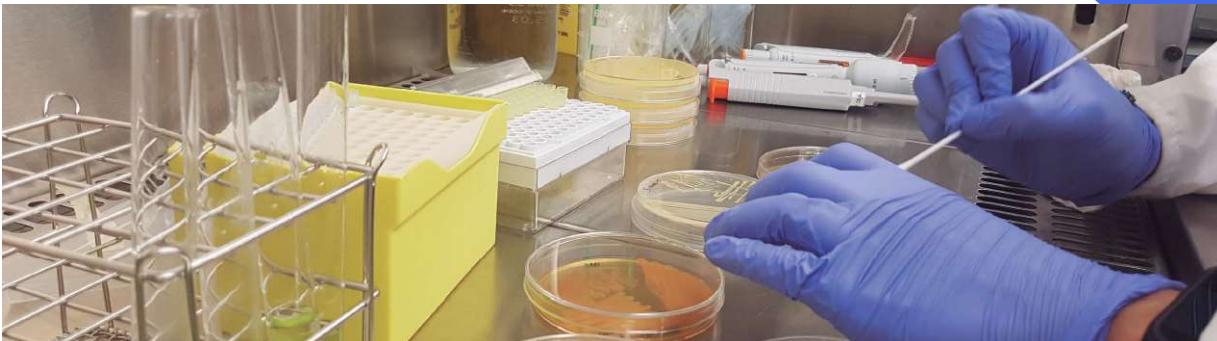
Fire



Enclosures



avanzare's capabilities microbiology



Technical capabilities (microbiology lab)

- 200 m² division microbiology)
- 2 PhD division microbiology
- European accredited lab for testing customer trials
- Customized solution (recipes adjust)



avanzare has a fully equipped laboratory of microbiology that allows us to analyze and test each of our products, increasing the quality criteria and comparing their efficiency and effectiveness against a large number of different microorganisms and tests.

- Standard Zone of Inhibition Test (Kirby Bauer Qualitative Test for growth Inhibition)
- Quantitative method for the determination of minimum inhibitory concentration of microbial growth
- Test for antimicrobial activity according Japanese Industrial Standard (JIS Z 2801)
- Measurement of antibacterial activity on plastics (ISO 22196:2011)
- Isolation and determination of microorganisms causing contamination
- Other biotechnological applications (on demand)



Avanzare Innovación Tecnológica

C/ENCINILLAS Nº. 18-20

26370 NAVARRETE (LA RIOJA) ESPAÑA

Office: +34 941 58 70 27

sales@avanzare.es

www.avanzarematerias.com

