

INDUSTRIAL SPECIALITIES

AGROCHEMICALS

Information and product range



ZSCHIMMER & SCHWARZ

AGROCHEMICALS

Information and product range

Since 1900 the world population has almost quadrupled and it continues to grow rapidly. Today, there are more than seven billion people on earth. It is expected that by the end of the century, this number will rise to between nine and 11 billion. Feeding this growing population will become a major challenge.

In order to meet the increased demand, it will be necessary to achieve higher yields and to reduce the considerable losses that occur for example throughout the entire food system. This is where agrochemicals - understood as fertilisers and regulators of diseases and pests - and their performance as well as the way they are used will play a fundamental role. With its products and services, Zschimmer & Schwarz wants to make an important contribution to solving this problem.





RANGE OF PRODUCTS

Explore our wide range of efficient and eco-friendly additives which are tailored to your requirements and benefit from our flat hierarchies as well as cross-disciplinary collaboration. Our team will assist you in finding the right products for every challenge.

In the process of formulating products for the agrochemical sector, a series of chemical additives are used to achieve the desired appearance of the final formulation. In addition to improving their appearance, these products or additives are also used to increase performance.

DISPERSANTS

An active matter which performs the required function needed for fertilizers or pesticides, must be integrated into the product, so that it is cohesive with the environment in which the product in question will be used. Both in solid and liquid form, dispersants help to dissolve the active matter, so that, it integrates quickly and homogeneously on contact with the water in the application. These properties ensure that the product retains its properties evenly over the entire application period and allow the concentration of the product to be increased if necessary.

WETTING AGENTS

The correct distribution and penetration of agrochemicals on the plants is crucial for a formulation to be effective. In this case, wetting agents are surfactant products, which means that they act on the surfaces of the products by reducing their surface tension. On one hand, this interaction allows the solids in the formulation to be completely wetted by the vehicle with which they will be applied to the crop. On the other hand, when the final products come into contact with the leaves, they completely wet it, thus achieving greater penetration. Therefore, the performance of the formulation increases, as the contact surface of the plant with the active substance increases.

EMULSIFIERS

Most formulations in the agrochemical sector, whether they are fertilisers or pesticides, are marketed in emulsion format: for example as water emulsions, oil emulsions, micro-emulsions or suspoemulsions. For these products to be effective, emulsifying agents are used. They are added to the formulation so that the non-polar (oils and many active ingredients) and polar (water) components are mixed and result in a homogeneous mixture. In the Z&S Group, we have a wide range of chemical specialities that are used as emulsifiers.





SPECIAL APPLICATIONS

One of the most common methods to apply the active matter to the plants is foliar application. Thereby, one particular physical-chemical property plays a key role: the surface tension. At Zschimmer & Schwarz, we can help you achieve the desired surface tension in your products, so that when applied to the leaves, the yield can be increased by achieving a homogeneous wetting of the targeted leaf. To this end, analyses are carried out and it is determined which functional additives can be used to achieve the optimum reduction in surface tension.

TECHNOLOGIES

At Zschimmer & Schwarz, we have extensive knowledge of technologies that are widely used in the manufacturing of agrochemical formulations. Among these, we would like to highlight the following:

- dispersion (used in concentrated suspensions and suspoemulsions)
- emulsion (used in the whole range of emulsifiable formulas)
- coating (used for example in the treatment of seeds, or the encapsulation of active ingredients)

The correct use of these technologies makes it possible to develop formulations that are stable over time, guaranteeing their effectiveness throughout the product's lifespan.

Z&S PRODUCTS FOR AGROCHEMICAL APPLICATIONS (EXAMPLES)

APPLICATION	CHEMICAL BASE	PRODUCTS
Dispersants	Alkyl sulfosuccinate, polymers, polymer blends	PRODUKT DA 101, PRODUKT DA 110
Wetting agents	Alkyl polyglycol ether, fatty alcohol polyglycol ether EO/PO block copolymers, alcohol alkoxylates	PRODUKT WA 210, PRODUKT WA 221, PRODUKT WA 222, PRODUKT WA 223
Emulsifiers	Sorbitan esters, sorbitan polyoxyethylene ethers, triglyceride alkyl polyglycol ethers amine polyglycol ethers	PRODUKT E 310, PRODUKT E 341, PRODUKT E 354
Rheology modifiers	Modified organoclays, polysaccharides, cellulose derivates, organic polymer blends, organic synthetic resins	PRODUKT RM 401, PRODUKT RM 410, PRODUKT ERM 420
Functional additives		PRODUKT FA 501, PRODUKT FA 511, PRODUKT FA 520, PRODUKT FA 530





Chemistry tailor-made

► EUROPE

Zschimmer & Schwarz
Mohsdorf GmbH & Co. KG
Chemnitztalstrasse 1
09217 Burgstaedt | DE
T +49 3724 67-230 | F +49 3724 67-207
industrial@zschimmer-schwarz.com
zschimmer-schwarz.com

Zschimmer & Schwarz
France S.A.S.
115, avenue de Paris
94160 St. Mandé | FR
T +33 1 41 79 15 90 | F +33 1 43 65 14 95
industrial@zschimmer-schwarz.com
zschimmer-schwarz.com

Zschimmer & Schwarz
Italiana S.p.A.
Via Angelo Ariotto, 1/C
13038 Tricerro (VC) | IT
T +39 0161 808 111 | F +39 0161 801 002
info.zsi@zschimmer-schwarz.com
zschimmer-schwarz-italiana.it

Zschimmer & Schwarz
GmbH & Co KG Chemische Fabriken
Max-Schwarz-Strasse 3-5
56112 Lahnstein | DE
T +49 2621 12-0 | F +49 2621 12-407
info@zschimmer-schwarz.com
zschimmer-schwarz.com

Zschimmer & Schwarz
Interpolymer Sàrl
6 rue Marie Curie
67160 Wissembourg | FR
T +33 3 88 54 96 96 | F +33 3 88 54 96 99
info.zif@zschimmer-schwarz.com
zschimmer-schwarz.com

Zschimmer & Schwarz
España, S.L.U.
Ctra. CV-20, km. 3,200. Apdo. 118
12540 Vila-real (CS) | ES
T +34 964 626 365 | F +34 964 626 092
info.zse@zschimmer-schwarz.com
zschimmer-schwarz.es

► AMERICA

Zschimmer & Schwarz, Inc.
70 GA Highway 22 W
Milledgeville, GA 31061 | US
T +1 478 454 1942 | F +1 478 453 8854
info.zsus@zschimmer-schwarz.com
zschimmer-schwarz.com

Zschimmer & Schwarz
Argentina S.A.
Calle 7 N° 279
B1629MXA Parque Industrial Pilar /
Buenos Aires | AR
T +54 230 4529 050 | F +54 230 4529 060
zsa@zschimmer-schwarz.com.ar
zschimmer-schwarz.com

Zschimmer & Schwarz
do Brasil Ltda.
Estrada Geral Morro do Paula 546
Distrito Industrial – Bairro São Borja
93032-530 São Leopoldo RS | BR
T + 55 51 3566 1666 | F + 55 51 3566 2003
zsb@zschimmer-schwarz.com.br
zschimmer-schwarz.com

► ASIA

Zschimmer & Schwarz
Chemical (China) Co., Ltd.
No. 16, Kaiyuan Road
Datang Industrial Park
Sanshui, 528143 Foshan, Guangdong | CN
T +86 757 8727 0601 | F +86 757 8727 0609
zsc@zschimmer-schwarz.cn
zschimmer-schwarz.com