

**INDUSTRIAL SPECIALITIES**

# PULP AND PAPER

Information and product range



**ZSCHIMMER & SCHWARZ**

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## Information and product range

The pulp and paper industry is an important economic sector worldwide. All of us come into contact with the products made by this industry in our daily lives without giving thought to the complex manufacturing process: be it when we read the daily newspaper or other publications, during personal hygiene or in the form of product packaging.

Analyses are predicting a continued increase in the global pulp and paper production, with the composition of the product range being subject to constant change: the importance of packaging papers is increasing strongly, while the demand for graphic papers, e.g. for office applications, is stagnating and the demand for newsprint paper continues to decline.

One of the characteristic hallmarks of paper production is the increasing use of secondary raw materials for the purpose of advancing a sustainable development. The desire to close the still existing gap in a closed cycle of materials also plays an important role. This is why companies that desire to sharpen their competitive edge in this industry rely on continuously improving the efficiency of input materials and energy. The implementation of higher environmental standards, e.g. with regard to water consumption and wastewater quality, also calls for new approaches in the use of chemical additives.



# 38.1

The European pulp and paper industry produced around 38.1 million tonnes of pulps in 2019.



## OFFERING SOLUTIONS

Zschimmer & Schwarz offers a wide range of products for the pulp and paper industry. We thereby support the user in achieving ambitious goals to increase quantity and quality. Our main focus is on applications like fibre production, packaging, tissue and graphic papers, as well as the chemical treatment of the supporting infrastructure, e.g. water cycles and wastewater. In these areas, we are cooperating with service companies worldwide who assure a smooth local process for the production of pulp and paper, but are also in direct contact with our customers.



# 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.

## ANTISCALANTS

As a result of supersaturation in aqueous media, sparingly soluble salts form deposits in a variety of production and processing steps. Depending on the process, these deposits can be very different and range from calcium carbonate to alkaline earth sulphates, oxalates and phosphates.

Zschimmer & Schwarz offers tailor-made antiscalants that prevent precipitations with a very high threshold activity. They interfere with the crystal growth processes and thereby inhibit the agglomeration of these crystals and create mobile particles that can easily be discharged.

## COMPLEXING AGENTS

Various heavy metal ions or transition metal ions, such as manganese, copper or iron, have a catalytically decomposing effect on hydrogen peroxide as an ecological bleaching agent. If these metals remain unbound, it leads to an uneconomically high consumption of bleaching agents as well as fibre damage resulting from the radical attack by active oxygen generated in situ. Our complexing agents are the solution to both problems in a single product.

The product range is comprised of specific formulations for different degrees of water hardness. Contrary to aminopolycarboxylates like EDTA or DTPA, our complexing agents do not remobilise heavy metals bound in the sediment and can be virtually completely eliminated in wastewater treatment plants.



**Since 1991, the production of packaging paper and board increased by 13.5%.**

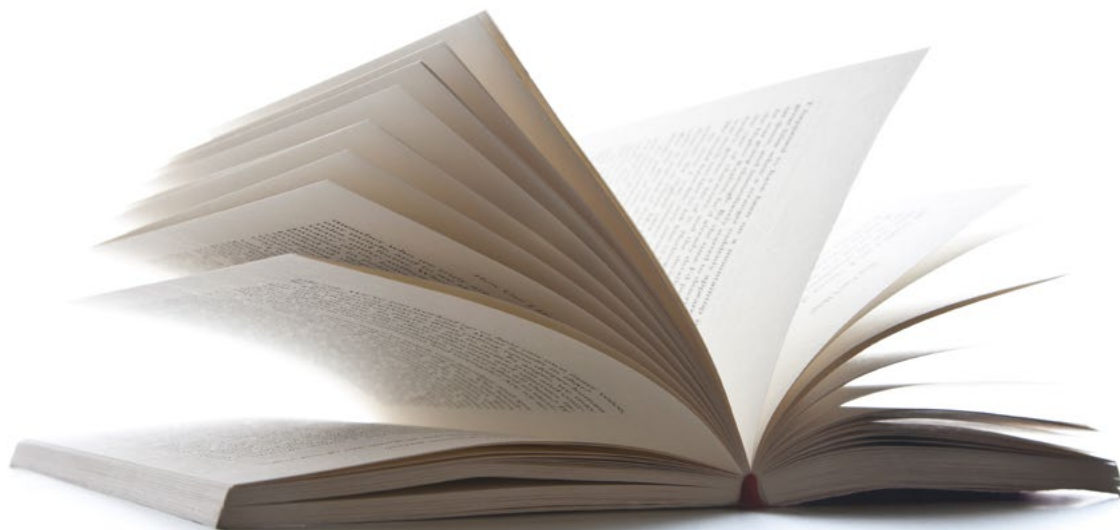




## DISPERSANTS

Inorganic pigments or fillers require additives that facilitate processes in aqueous systems, save water, and prevent these substances from quickly sedimenting. Additionally, they must also be capable of restoring aged pigment formulations to a condition that allows for them to be recycled.

For these varied applications, Zschimmer & Schwarz offers a range of polymer or molecular dispersants that enable you to master all challenges in an economically and environmentally efficient way.





72%

The European paper recycling rate was 72% in 2019.

### DEFOAMERS AND DEAERATORS

Foam on the surface or tiny air bubbles inside a liquid phase can cause malfunctions in the production process or quality problems in the production of papers. Foam also causes big problems in bleaching, the processing of used paper and wastewater treatment.

Depending on the specific application and task at hand, the defoamers from Zschimmer & Schwarz offer highly effective solutions on the basis of long-chain fatty alcohols, alkoxyates and esters, as well as mineral oils and silicone compounds.

## STICKY CONTROL ADDITIVE / STICKY AGGLOMERATES

The increasing use of recycled paper and resinous woods leads to higher loads of impurities in the manufacture of pulp and paper products. These impurities often take the form of sticky agglomerates that can cause problems during the further processing of the material.

The additives from Zschimmer & Schwarz are based on water-soluble novolak condensates and water-soluble polycarboxylic acids and can assist in finely dispersing the problematic agglomerates.

## WETTING AGENTS

The transformation from used paper back into a reusable raw material (pulp) requires a number of chemical additives. Among the most important ones are organic wetting agents, which serve the purpose of expediting and simplifying the recycling process.

The wetting agents from Zschimmer & Schwarz warrant a rapid penetration of the paper raw material with the other required additives – with an extremely low concentration of chemicals.



## Z&S PRODUCTS FOR PULP AND PAPER APPLICATIONS (EXAMPLES)

APPLICATION	SUITABLE STRUCTURE	PRODUCT EXAMPLES
Antiscaling (Kraft process)	Phosphonic acids/salts (chloride-free) Acrylic acid based polymers	CUBLEN DNC 450 CUBLEN PAA 40 TN CUBLEN NCD 732
Bleach stabilization	Phosphonic acid salts	CUBLEN D 4217 CUBLEN D 3217 N CUBLEN MD 70 N
Dispersing	Phosphonic acids/salts Acrylic acid based polymers	CUBLEN A 4015 CUBLEN MD 20 N CUBLEN PAA 50 TN
Defoaming	Mineral oil based Silicon based Nonionic surfactant based	CONTRASPUM WN 1010 CONTRASPUM W CONC. CONTRASPUM A 4050



## 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