

ADDITIVES FOR THE PAPER INDUSTRY



By courtesy of LPM GmbH Augsburg





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Additives for the Paper Industry



MÜNZING is a highly regarded, privately owned specialty additive company with headquarters in Abstatt, Germany. We have a presence in over 40 countries and are a technology driven organization with an extensive staff of highly experienced R&D and technical service personnel in Europe, the Americas and Asia. Our manufacturing plants in Germany, USA and China have broad synthesis and formulation capabilities in order to best serve our global customer base.

We are committed to creating value and improving our customers' formulations with our complete range of specialty additives. These additives, which include defoamers, dispersants, rheology modifiers, emulsifiers, wetting and leveling agents, micronized and coated

waxes as well as wax dispersions and emulsions have achieved worldwide recognition for their performance, quality and technical innovation.

For many decades MÜNZING develops and produces auxiliaries and additives for the manufacture and coating of paper and board as well as for water treatment. Our technical service team supports our customers regarding the use of our products by performing joint field tests on-site and continuous optimization in the application of our products. This brochure provides an overview of our standard products. Besides these auxiliaries and additives we also provide tailor-made products according to specific requirements of our customers.



Additives for paper production

DEFOAMERS FOR PAPER PRODUCTION

Product	Type	Graphic papers	Packaging papers
AGITAN 28-N	fa	●●	●●
AGITAN 30-N	fa	●●	●●
AGITAN 103	poa, e		
AGITAN 107	poa, e		●●
AGITAN 298	poa	●	●
AGITAN 299	poa	●	●
AGITAN 301	veg, fsi		
AGITAN 305	wo		
AGITAN 633	m		

fa = fatty alcohol
poa = polyoxalkylene

m = mineral oil
e = emulsion

wo = white oil
fsi = few silicone

veg = vegetable oil

Flocculants for paper production

FLOCLAIR **DMR** – amphoteric character

FLOCLAIR **PAR** – high cationic charge

- » aqueous solutions of low molecular polymers
- » dewatering acceleration
- » retention of fibres and fillers
- » neutralization of anionic charge
- » white water clarification
- » treatment of coated broke

Additives for paper production

Newsprint	Hygiene papers	Decor paper	Other papers
●			●●
	●		
	●		
	●	●●	●
	●	●●	●
		●●	
		●●	
		●●	

● recommended ●● highly recommended

Additives for coating colours and paper coatings

DEFOAMERS FOR COATING COLOURS, STARCH SOLUTIONS AND SIZING AGENTS

Product	Type	Emulsifiability		
		easy	fair	hard
AGITAN 103	poa,e	○		
AGITAN 107	poa, e	○		
AGITAN 109	veg, poa, e	○		
AGITAN 271	veg, poa			○
AGITAN 295	m		○	
AGITAN 298	poa		○	
AGITAN 299	poa	○		
AGITAN 301	veg, fsi		○	
AGITAN 305	wo	○		
AGITAN 350	poa			○
AGITAN 351	poa		○	
AGITAN 352	veg, poa		○	
AGITAN 361	veg	○		
AGITAN 381	wo, poa	○		
AGITAN DF 6686 W	veg, poa, e	○		
AGITAN DF 681 F	veg, poa, fsi		○	
AGITAN DF 999	poa	○		
AGITAN SN 777	m, poa, fsi	○		

poa = polyoxalkylene
veg = vegetable oil

m = mineral oil
fsi = few silicone

wo = white oil
e = emulsion

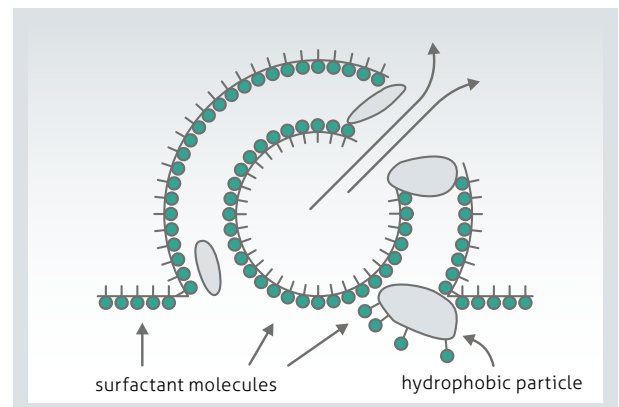


Figure | Foam lamella with surfactant double layer

Coating colours for offset print	Coating colours for gravure print	Starch and sizing agents	Matt ink jet coating colours	Glossy ink jet coating colours	Coating colours for thermal paper
●●		●●			●●
●●		●●	●●	●●	●●
●●	●●	●●	●●	●●	
●●	●●				
●●	●●		●●	●●	
●●	●●	●●			
●●	●●	●●	●●	●●	
●●		●●	●●		
●●	●●				
●●	●●	●●			
●●	●●	●●			
●●	●●	●●	●●		
●●		●●			●●
●●		●●			●●
●●	●●	●●			●●

○ applicable ●● highly recommended

Additives for coating colours and paper coatings

Additives for coating colours and paper coatings

Rheology modifiers

METOLAT **600**

METOLAT **610**

- » modified acryl-copolymers in aqueous solution
- » increase of water retention
- » low thickening effect
- » improvement of flow and leveling properties

TAFIGEL **AP 10**

TAFIGEL **AP 16**

- » aqueous emulsions of hydrophobic modified acryl-copolymers
- » thickening effect at pH 8–10
- » strong shear thinning behaviour
- » high water retention

TAFIGEL **AP 30**

- » anionic high molecular acryl-copolymer emulsified in white oil
- » strong thickening effect
- » very high water retention

Dispersing agents

EDAPLAN **516**

METOLAT **514**

- » salts of polycarboxylic acids
- » dispersants for inorganic pigments and fillers
- » reduction of coating colour viscosity
- » broadest compatibility
- » stabilization of pigment slurries

Special additives

OMBRELUB **CD**

- » fine dispersion of calcium stearate in water, 50% solid content
- » calendering agent
- » reduction of dusting at processing

UMBRELLIT **M 40**

- » chromium-III-fatty acid complex in aqueous solution
- » strong water-repellent agent for packaging board
- » Cobb₁₈₀₀-sizing feasible

Application technology

Laboratory equipment for paper production segment

- » Mütek Gas Analyzing System GAS 60 – Online measurement of gas contents in fibre suspensions
- » Mütek Particle Charge Detector PCD 02 – Particle charge detection
- » Brookfield Viscometer DV-I+ – Viscosity control of polymer solutions
- » Handsheet former – Preparation of paper sheets
- » Breaking length tester Hounsfield H5KS – Testing of breaking length

Laboratory equipment for paper coatings segment

- » Paar Physica Rotation Viscometer MCR 501 – Rheological profiles
- » Paar Physica Immobilization Cell TEK-IMC – Water retention
- » Haake Visco Tester 7R – Viscosity of coating colours
- » Emtec PDA-Coating – Interaction of base paper and coating colours
- » Emtec CDM Laboratory System – Preparation of coating colours and defoamer tests
- » SITA pro line t10 Tensiometer – Dynamic surface tension
- » Motor driven rod – Coating of paper sheets
- » Laboratory Calender – Calendering of paper sheets
- » Gretag Macbeth SpectroEye Spectral Photometer – Colour density, chromaticity coordinate, whiteness
- » Krüss EasyDrop – Surface tensions/energies of liquids and solid surfaces
- » Olympus Microscope BX 60 with digital camera – Optical control
- » various dispersing equipment

Measuring equipment for process control

- » Mütek Gas Analyzing System GAS 60 – Online measurement of gas contents in fibre suspensions at paper machines
- » Mütek Particle Charge Detector PCD 03 – Particle charge detection



Figure | Gas Analyzing System Mütek Gas 60



Figure | Defoamer dosage system

Additives for process and waste water treatment

DEFOAMERS FOR PROCESS AND WASTE WATER TREATMENT

Product	Type	Waste water treatment	Sludge dewatering with decanter	High temperature process water
AGITAN 28-N ⁽¹⁾	fa	●●		
AGITAN 30-N ⁽¹⁾	fa	●●		
AGITAN 105	poa, e	●		
AGITAN 108	veg, fsi, e	●●		
AGITAN 109	veg, poa, e	●●		
AGITAN 230	m	●		●●
AGITAN 232	m	●	●●	
AGITAN 299	poa	●		
AGITAN 301	veg, fsi	●●		
AGITAN 361	veg	●●		
AGITAN 526	si			●●
AGITAN 527	si	●●		●●
AGITAN DF 6686-W	veg, poa, e	●●		
AGITAN 731	poa, oms			
AGITAN 960-R ⁽¹⁾	fa, poa	●●		

poa = polyoxalkylene
veg = vegetable oil

m = mineral oil
fsi = few silicone

fa = fatty alcohol
si = silicone

oms = organic modified polysiloxane
e = emulsion

(1) For use in activated sludge tanks, please refer to separate dosage instructions.

(2) For AGITAN 28-N and AGITAN 960-R, please refer to separate dosage instructions.

Vacuum evaporation	Digester tower ⁽²⁾	Medium density fiberboard production	Cement fiberboard production
	●		●●
		●●	
	●●	●	
●		●●	
	●●		
		●●	
●			
●			
●●			
	●●		●●

● recommended ●● highly recommended



Additives for process and waste water treatment



Contact

MÜNZING CHEMIE GmbH

Münzingstrasse 2
74232 Abstatt
GERMANY
Phone +49 7131 987-0
Fax +49 7131 987-125
E-Mail info@munzing.com

MÜNZING CHEMIE Iberia S.A.U.

Carrer Temple, 15 1° derecha
ES08911 Badalona (Barcelona)
SPAIN
Phone +34 93 5722075
Fax +34 93 5722683
E-Mail iberia@munzing.com

MÜNZING

Micro Technologies GmbH

Dr.-Bergius-Strasse 16-24
06729 Elsteraue
GERMANY
Phone +49 3441 829 10-22
Fax +49 3441 829 10-20
E-Mail ceretan@munzing.com

MÜNZING North America

1455 Broad Street, Suite #3
Bloomfield
NJ 07003-3003
USA
Phone +1 973 279-1306
Toll Free +1 800 524-0055
Fax +1 973 338-0420
E-Mail info@munzing.us

MUNZING Mumbai Pvt. Ltd.

Raheja Chambers 2nd Floor,
233 DBS Business Center,
Nariman Point
Mumbai 400021
INDIA
Phone +91 982 0853126
E-Mail india@munzing.com

MÜNZING

International S.a.r.L.

23, rue Aldringen
L-1118 LUXEMBOURG
Phone +352 2627 1520
Fax +352 2627 1530
E-Mail benelux@munzing.com

MÜNZING Shanghai Co.Ltd.

Rm 1701B-1703A
No. 20, Lane 1228, ZRT Tower
Jiangchang Rd.
Shanghai 200072
P.R. CHINA
Phone +86 21 6149 1561
Fax +86 21 6149 1563
E-Mail info@munzing.cn

Visit our website for more information...
for international representatives...

www.munzing.com

