

ONE SOURCE INNOVATIVE SOLUTIONS











# **AGRI SOLUTIONS**

Crops are exposed to different kinds of threats worldwide. The agro industry provides various solutions for protection. For the production of such agricultural products, like special fungicides, insecticides, herbicides and biocides, nitriles are used. In many innovations our nitriles play an important role.

### **TYPICAL EXAMPLES**

NITRALZ® Benzonitrile	CAS No. 100-47-0
NITRALZ® Butyronitrile	CAS No. 109-74-0
NITRALZ® Isobutyronitrile	CAS No. 78-82-0
NITRALZ® o-Chlorobenzonitrile	CAS No. 873-32-5
NITRALZ® p-Chlorobenzonitrile	CAS No. 623-03-0
NITRALZ® 2,6-Dichlorobenzonitrile	CAS No. 1194-65-6
NITRALZ® 3,4-Dichlorobenzonitrile	CAS No. 6574-99-8

# **PHARMA**

Our NITRALZ® products are used as intermediates for API (active pharmaceutical ingredients) production. Via special distillation we achieve high quality and purity as an independent reliable western source.

#### TYPICAL EXAMPLES

NITRALZ® Isobutyronitrile	CAS No. 78-82-0
NITRALZ® o-Chlorobenzonitrile	CAS No. 873-32-5
NITRALZ® p-Aminobenzonitrile	CAS No. 873-74-5
NITRALZ® p-Bromobenzonitrile	CAS No. 623-00-7
NITRALZ® p-Chlorobenzonitrile	CAS-No. 623-03-0
NITRALZ® p-Tolunitrile	CAS No. 104-85-8
NITRALZ® Valeronitrile	CAS No. 110-59-8
NITRALZ® 2,4-Dichlorobenzonitrile	CAS No. 6574-98-7

# Your Benefit - Tradition meets Innovation



#### **OUR PRODUCT PORTFOLIO**

Broadest product range of aromatic and aliphatic nitriles. Through technology extension, we can also produce other molecules like ketones.



# **RELIABILITY & HIGH QUALITY**

"Made in Germany" – manufacturer outside China and European based supply chain.



#### **OUR CUSTOMER ORIENTATION**

High standard to service our partners, including technical support. Focus on long-term customer relationships.



# **ENVIRONMENT, HEALTH & SAFETY**

Eco-friendly production; safety initiative incl. accident analysis and safety award.



#### **OUR KNOW-HOW**

Based on more than 50 years of experience and competence in high temperature reactions and distillation.



#### INNOVATION

We have new ideas regarding advanced intermediates and efficient product development.



# 3 PRODUCTION LINES

With 2 technologies (ammoxidation, ammonolysis) → back-up safety.



# **IN-HOUSE CATALYSTS**

Development & production.

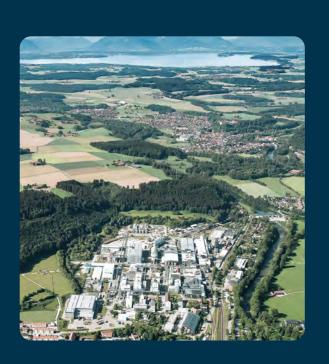




Nitriles are used in different industries as intermediates or solvents. Their application varies from UV-absorption to liquid crystals for displays. Nitriles are also applied as special high quality solvents for individual requirements, e.g. NITRALZ® Butyronitrile is used as advanced substitute for NITRALZ® Acetonitrile.

# **TYPICAL EXAMPLES**

NITRALZ <sup>®</sup> Benzonitrile	CAS No. 100-47-0
NITRALZ <sup>®</sup> Butyronitrile	CAS No. 109-74-0
NITRALZ® o-Chlorobenzonitrile	CAS No. 873-32-5
NITRALZ® p-Bromobenzonitrile	CAS No. 623-00-7





# **HIGH PERFORMANCE PIGMENTS**

Our NITRALZ® products are used as intermediates and for the following DPP Pigments, amongst others Phthalocyanine Pigments.

Characterization: high purity & low impurities

# **TYPICAL EXAMPLES**

PR 254	NITRALZ <sup>®</sup> p-Chlorobenzonitrile	CAS No. 623-03-0
PR 255	NITRALZ <sup>®</sup> Benzonitrile	CAS No. 100-47-0
PR 272	NITRALZ® p-Tolunitrile	CAS No. 104-85-8
PO 73	NITRALZ® 4-tert. Butylbenzonitrile	CAS No. 4210-32-6
PO-PR	NITRALZ® p-Bromobenzonitrile	CAS No. 623-00-7
PO-PR	NITRALZ® m-Chlorobenzonitrile	CAS No. 766-84-7
PB 15		
PG 7		
PG 36	NITRALZ® o-Phthalodinitrile	CAS No. 91-15-6
PY 139	o i includentino	
PY 185		

Alzchem operates a commercial plant dedicated to gas phase reactions. It consists of:

- · Fluidized bed gas phase reactors
- · Continuous and batch distillation columns
- · Packaging units

The different units are operated independently and can be flexibly combined to accommodate specific properties of raw material and products.

We produce "Green" - highly efficient and environmental friendly gas phase technology.

- In use for production of nitriles (NITRALZ®)
- Solvent free → atom-economy
- · Enables low emissions and waste

# **NITRALZ®**

# STANDS FOR HIGH QUALITY NITRILES **MADE IN GERMANY**

GOLD ecovadis Sustainability Rating

- Tank farm and container pool with flexible availability
- Various packaging sizes from drums to 20 ft. bulk container
- Good knowledge in handling of solids with high melting point



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