



# Mixing Technology

## for the Fertilizer Industry



## Choose MAP® mixers for the production of fertilizers, pesticides, solvents and plant-protection chemicals:

- We know how to mix quickly, without breaking up granules
- We can produce wet granulation using liquid binders to enhance the dispersion process
- We can mix products with high density variations and different particle sizes
- We know how to compact granules to keep their properties stable during transport and storage
- We know how to minimise dust in the product



Large inspection door meaning easy maintenance



Liquid injection wands and choppers



Spray nozzles



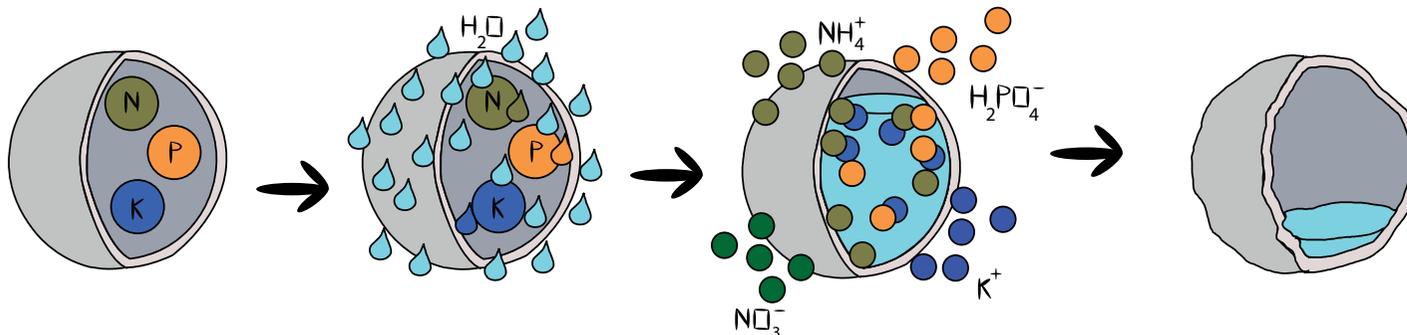
Temperature jacket

### Main technical solutions

- Granulation
- Coating
- Micro-component addition
- Spraying of liquid additives

### Main applications

- Fertilizer
- Solvents
- Pesticides
- Plant-protection chemicals



## With MAP® you can do it!

- Granulating products obtaining a specific grain size
- Achieving high efficiency with limited range of particle sizes
- Optimising shape of granules as well as their surface texture
- Providing coatings with dyes, gypsum or pigment blends
- Moistening with anti-agglomeration and water-repellent agents
- Applying odour-neutralising minerals such as zeolites and absorbents
- Agglomerating plant fibres and other additives
- Reducing product volatility

## Industry Expertise and Know-how

### Drying

We offer equipment for eliminating liquids, water and solvents from bulk materials. Our WBH Vacuum Drier is the ideal solution for handling materials in large batches while ensuring safety and process control.

### Mixing

We offer batch mixers in different sizes and configurations. The active ingredient is mixed with additives and fillers of various shapes and densities.

MAP® mixers and ribbon blenders meet the requirements of a wide range of processes with consistent mixing quality and variable batch volumes.

### Agglomeration

The final phase in the production of plant protection chemicals is the agglomeration of the material with the purpose of forming a water-dispersible granule (WDG).

Agglomeration consists of two stages, both of which can be handled by MAP® mixers.

MAP®'s WAH high-performance Continuous Ploughshare mixers achieve the wet agglomerate. They mix the ingredients in a turbulent environment to produce the classic raspberry shape of the WDG granules.

The second part of the agglomeration is the drying phase using the WBH Batch Mixer. Based on the principle of a mechanically generated fluid bed, the WBH dries and hardens particles to produce the final product: a dry, micro-granular, water-dispersible pesticide. This system produces agglomerates with particle sizes from 0.2 to almost 2mm.



### Decades of experience



Profound knowledge of the Fertilizer Industry enables MAP® to deliver the most suitable solution for virtually every application.

### In-house development and manufacturing



All our products are developed, tested, manufactured and installed by our own staff. Our aim is to provide comprehensive assurance in terms of quality and delivery time.

### Skills and competence



Laboratory tests prior to industrial production processes are a guarantee of optimum results for our customers.

### We solve problems



We are committed to providing product specialisations, accessories, options and specific process know-how that ensure solutions tailored to the user's needs.

### Our customers are our partners



We consider our customers as our partners. Teaming up with our clients in problem solving is crucial to MAP®.

### Global service network



WAMGROUP®'s global distribution network offers each and every MAP® customer professional advice, smooth order management and a 'round the clock' spares service.

### WAH



- Continuous single-shaft mixers
- Capacity from 2 to 1,000 m<sup>3</sup>/h

### WBH



- Batch-type single-shaft mixers
- Capacity from 20 to 20,000 litres per batch

### WBHT



- Bomb-bay discharge batch mixers
- Capacity from 150 to 11,000 litres per batch

### WBR



- Batch-type ribbon blenders
- Capacity from 50 to 8,800 litres per batch
- Optional bomb-bay discharge

### MESC



- Continuous twin-shaft paddle mixers
- Capacity from 3 to 80 m<sup>3</sup>/h

### MLH



- Laboratory mixers
- Capacity from 2 to 50 litres

[mixer.wamgroup.com](http://mixer.wamgroup.com)

# Fertilizer Industry