



A partnership for a sustainable future



Agriculture Specialties

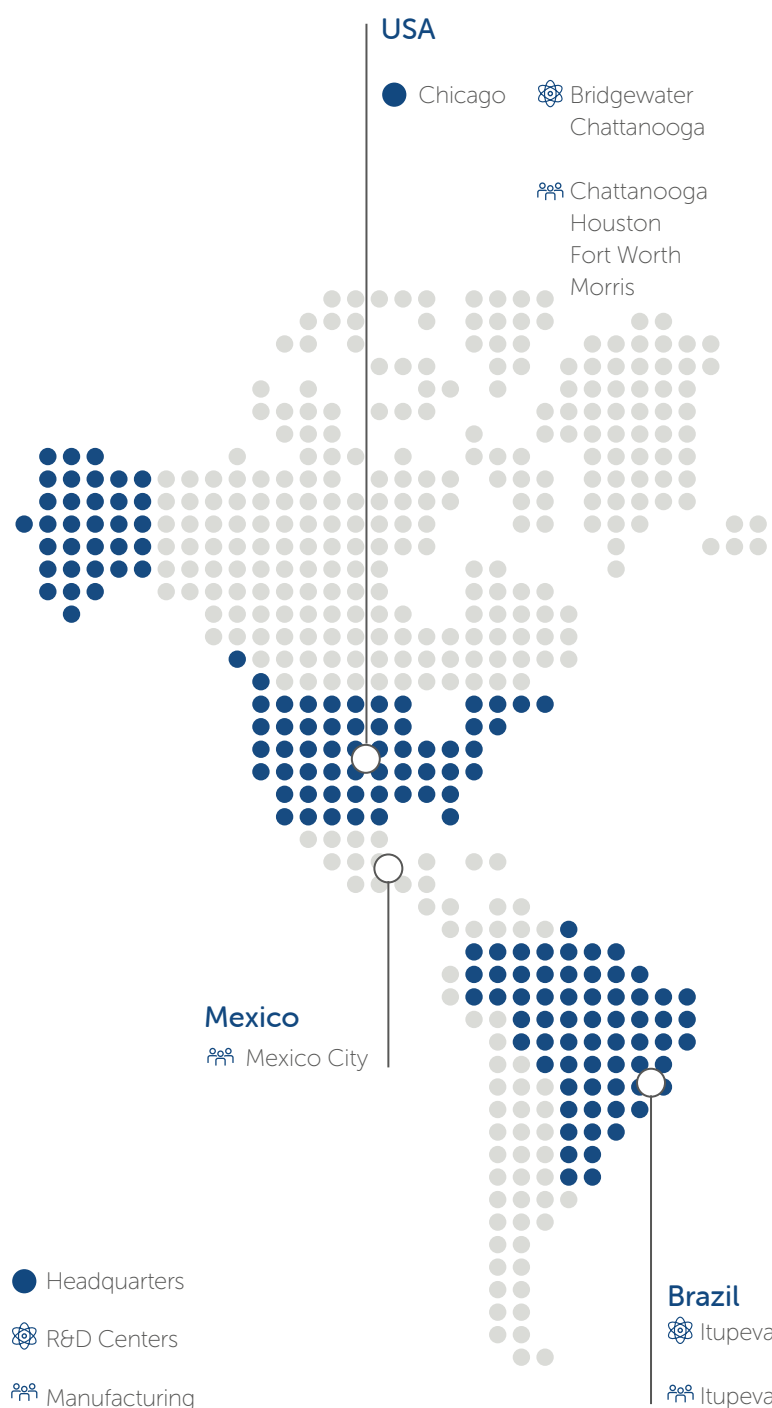
Nouryon

We design and supply solutions optimized for your needs

Today, and tomorrow

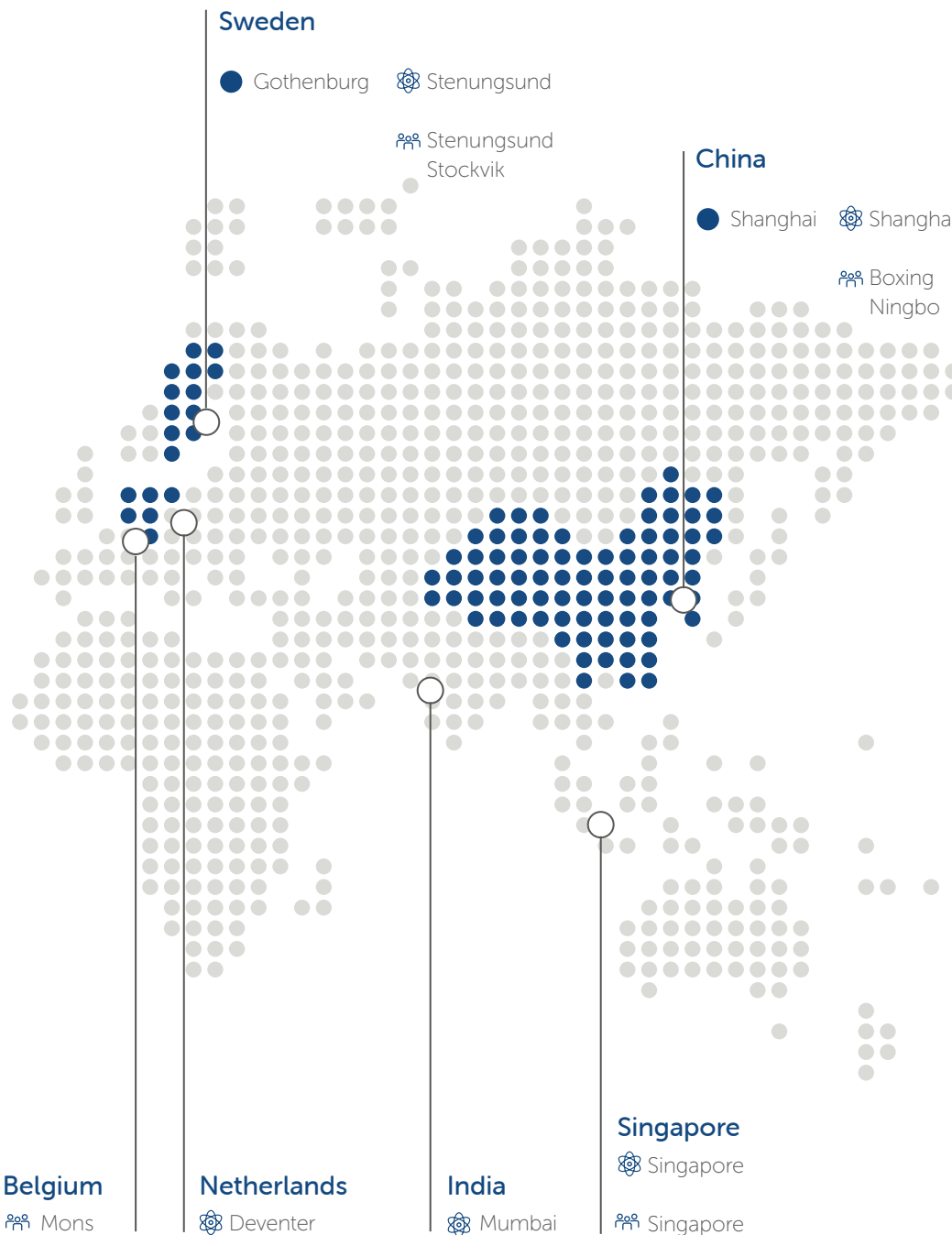
We are one of the world's leading specialty chemical manufacturers of surfactants, polymers and solvents within the agrochemical industry. Throughout the world, we provide innovative surface chemistry technologies for crop protection. We serve formulators and active ingredient producers with solutions that are environmentally safe, biodegradable and cost effective.

Markets worldwide rely on our essential chemistry in the manufacture of everyday products. Building on our nearly 400-year history, the dedication of our 10,000 employees, and our shared commitment to business growth, strong financial performance, safety, sustainability, and innovation, we have established a worldclass business and built strong partnerships with our customers. We operate in over 80 countries around the world and our portfolio of industry-leading brands includes Morwet, Adsee, Berol, Eka, Dissolvine and Trigonox.



Your future is our future

Caring about things like soil, crops, and animals is your core business. Enabling you to grow is ours. We have access to cutting edge surface chemistry technologies that are well suited for crop-protection. By focusing on your challenges we can combine our unique knowhow and technologies with your expertise. Working together to find optimal solutions for you will boost farmer's productivity and yield as well as reduce unnecessary energy consumption.



Adjuvants – Creative solutions for tough challenges

How do you combine increased productivity with the ambition to do more with less? This tough challenge can be met with optimized adjuvants. Adjuvants play an important part in improving efficiency and reducing loss of crop-protection agents in the field. With our world-class nitrile technology and ethoxylation capabilities, we have become a major supplier of adjuvants to the glyphosate industry. Today, our Adsee™ product portfolio contains a variety of solutions to increase bio-efficacy of herbicides, fungicides, insecticides and other products to improve retention and rain fastness as well as reducing drift.

Suitable wetting agents brings out the most of your formulation

Agrochemical formulations are often complex mixtures with multiple modes of action. Whether a dry or liquid formulation, it is crucial to have a suitable wetting agent that allows the active ingredient to dissolve, spread and quickly penetrate the plant. With our **Adsee™**, **Berol®** and **Morwet®** product range, we offer a selection of high performing wetting agents that will bring out the most of your formulation.




Dispersants – Providing you with innovative and reliable dispersants is what we do

With more than 400 years of innovation, 4000 scientists in 160 countries within the company, we are a trusted supplier of innovative and proven agrochemical dispersants. Among them you will find Morwet® and Agrilan®.

Morwet® Naphthalene sulfonates are a range of dispersants with best-in-class performance and value in use. They have adequate hard water tolerance and works equally well in liquid and dry formulations. Experienced formulators trust Morwet for its reliable performance and consistent high quality allowing farmers to enjoy enhanced productivity.

Agrilan® is our newest family member designed to solve your most complex challenges in suspension concentrates and granular formulations. Designed polyacrylate copolymers are available to provide your formulation with extreme stability, dispersability and avoid crystallization issues.





Our future depends on our ability to do more while using less. More innovation, less traditional solutions, more renewable energy and materials, less fossil-based, more value chain focus, less introvert thinking. We make it happen.

Emulsifiers and Solvents – Scientific expertise, smart solutions and continuous improvements

With our long history of developing surfactants, we have proven our ability of consistently producing high quality ingredients to meet your specific needs. Our **Berol®** or **Sponto®** emulsifier blends (nonionic/anionic) is provided with recipes (emulsifiable concentrates, oil in water emulsions, microemulsions) to speed up the development of your products.

The wide range of emulsifiers (**Agrilan®**, **Berol®**, **Emulpon®**, **Ethylan®**, **Lankrolpol®**, **Witconate®**) in our portfolio can be blended to match your perfect emulsion or to be used in oil dispersion formulations. Our **Armid®** products offers green solvent and co-solvent that will increase the solubility of the active ingredient and avoid crystallization when diluted or used at low temperatures. Armids can also replace solvents with regulatory issues, such as N-methylpyrrolidone.



Reliable processes, safe handling and sustainable products

Our core principles are safety, integrity and sustainability. We keep our commitments to you and our environment and strive to be best in everything we do, every day. And our unique formulation expertise, complete portfolio of proven solutions and superior global supply chain is ready to meet your seasonal and everchanging agro demand.

Benefiting from fatty amine chemistries and insights from polymer technologies

Based on our world-class nitrile technology, we develop, produce and supply amines, polymers, ethoxylates and sulphonates. We believe that partnering with our customers combined with a deep understanding of our chemistries are key parameters in delivering superior products.



Chemical toolbox examples

- Amines and amine derivatives
- Alkoxylates (alcohols, amines, castor oil)
- Natural polymers
- Phosphate esters
- Polyacrylate copolymers
- Naphthalene sulphonates
- Natural and synthetic polymers
- Glucosides
- Sulphosuccinates



A global organisation for your local need

Nouryon conducts business all around the world. We are proud to have dedicated teams that can support your regional and global regulatory questions for the use of our products in Agrochemical formulations.

Our global supply chain guarantee on time delivery of products with consistent quality to meet your demand. With local stock and technical service support we ensure that we can respond quickly to your specific and seasonal needs. Our responsive and proactive regional technical service team will come with practical, innovative and pragmatic solutions. We have fully equipped technical service laboratories with committed staff in various countries to provide timely and customized technical support.

Solving your needs is our top priority. Test us.

Unique formulation expertise, complete portfolio of proven solutions and superior global supply chain to meet seasonal agro demand. Working together for a sustainable future, boosting productivity and yields.

Lab equipment examples

- Wet milling, dry milling, granulation and spray drying
- Particle size analyzer's for SC's and drift measurement
- Penetration studies (Franz diffusion cell)
- Formulation robot
- Surface tension, interfacial tension, contact angle, QCM-D
- High resolution SEM images
- NMR, IR microscopy / IR imaging machine
- Chromatography equipment such as UPLC-TQD, SEC/GPC





Contact us directly for detailed product information and sample request
website | nouryon.com/markets/agriculture
email | agro@nouryon.com

Nouryon

Nouryon is a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such as personal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of more than 7,900 employees with a shared commitment to our customers, business growth, safety, sustainability and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands. Visit our website and follow us @Nouryon and on LinkedIn.

All information concerning our products and/or all suggestions for handling and use contained herein (including formulation and toxicity information) are offered in good faith and are believed to be reliable. However, Nouryon makes no warranty express or implied (i) as to the accuracy or sufficiency of such information and/or suggestions, (ii) as to any product's merchantability or fitness for a particular use or (iii) that any suggested use (including use in any formulation) will not infringe any patent. Nothing contained herein shall be construed as granting or extending any license under any patent. The user must determine for itself by preliminary tests or otherwise the suitability of any product and of any information contained herein (including but not limited to formulation and toxicity information) for the user's purpose. The safety of any formulations described herein has not been established. The suitability and safety of a formulation should be confirmed in all respects by the user prior to use. The information contained herein supersedes all previously issued bulletins on the subject matter covered.

Products mentioned are trademarks of Nouryon and registered in many countries.

nouryon.com