



Solutions for **Sustainable Success**

ASKCHEMICALS
We advance your casting



WE ADVANCE YOUR CASTING

When developing any solution for our customers, we always keep a sharp eye on measurable returns that add value.

We provide premium products and services alongside technical application specialists positioned globally – all of which reflects our distinct passion for quality and awareness towards environmental and safety issues. In this way, we actively carry-out our claim: We advance your casting.

STRONG PARTNER

With an international workforce of approximately 1,500 people, ASK Chemicals ranks among the largest foundry consumable and tailored consultancy service providers in the industry.

Our company produces a wide breadth of auxiliaries and chemicals for the foundry industry and its various manufacturing processes. In addition, our technical services and sales teams provide support to the market in order to fine-tune our solutions to customer's specific processes. These services are performed on-site, as well as within our many research & development facilities.

Our product portfolio includes binders for all core and mold manufacturing methods, coatings, additives, feeders, filters, release agents and metallurgical products such as inoculants, Mg treatment wires, inoculation wires and pre-alloys for iron casting. Our

portfolio is rounded off with core production, prototyping and simulation services. Our business line, "resins and specialized products," offers high-quality solutions in the fields of paints and coatings, fertilizer coatings, friction pads and composite manufacture.

Working closely with our customers, we apply our specialized knowledge, our expertise, and our know-how to develop customized solutions that specifically meet our customers needs.

GLOBAL PRESENCE

Thanks to our global network and strong local presence, all of our customers have access to our industry-leading technological expertise regardless of their location.

SUSTAINABILITY COUNTS

The global foundry market is facing growing environmental concerns, specifically towards the reduction of emissions. Foundry production processes must become more environmentally-friendly while still maintaining their profitability. Of course, this is easier said than done.

Fortunately, ASK Chemicals is developing progressive technology that achieves both.

With solutions like INOTEC™ (inorganic binder systems), MIRATEC™ (waterborne coatings) and ECOCURE™ (high efficiency, eco-friendly Cold Box binder systems) ASK Chemicals is offering environmentally-friendly products that are highly efficient and provide long-term added value to our customers.

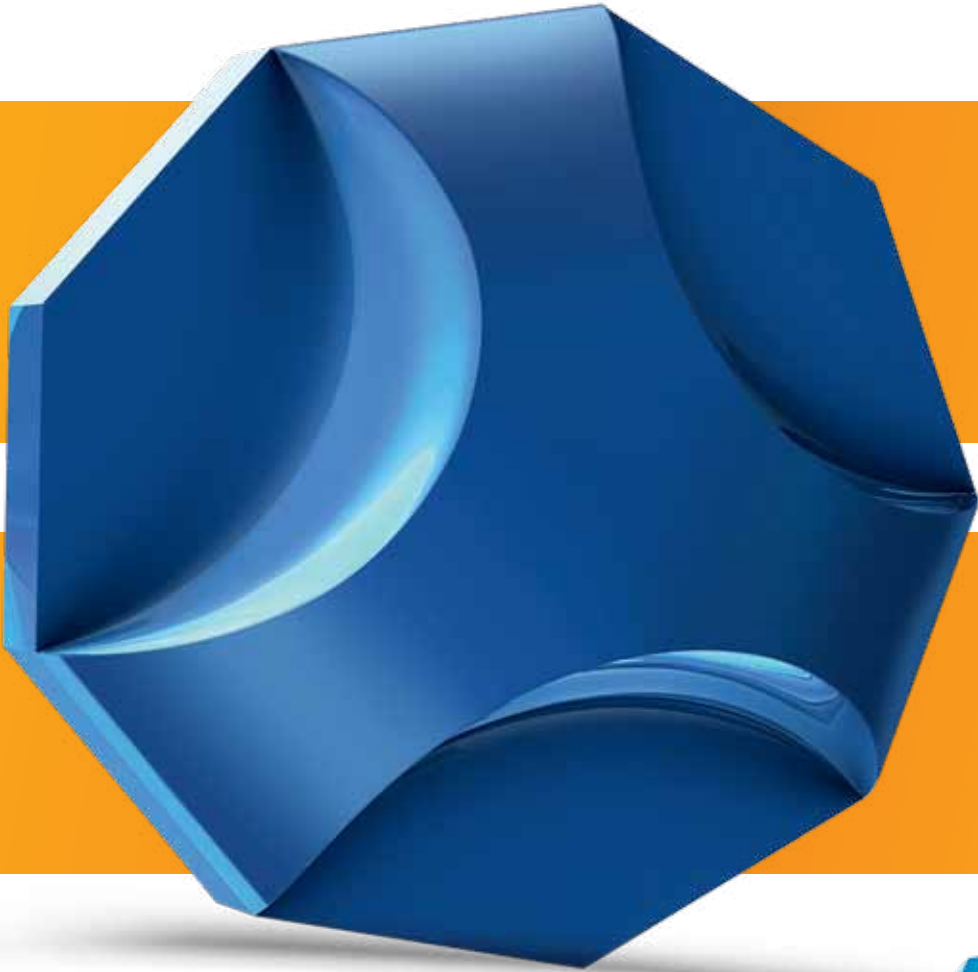
PRODUCT PORTFOLIO

Binders, coatings, additives, auxiliaries, release agents, feeders, filters, metallurgical products, design services, contract core manufacturing, resins and specialized products

R&D LOCATIONS

R&D centers in Germany and the USA, and application laboratories at eleven other locations





WORKFORCE

Approximately 1,500
employees worldwide

GLOBAL PRESENCE

In 25 countries

FOUNDRY EXPERTISE HAND-IN-HAND

Our experienced foundry specialists are highly qualified engineers with comprehensive expertise in product applications and in production processes.

Our sales and technical service teams provide additional support for the customer and our ASK specialists in the regions. They also interface between R&D and product management.

At ASK Chemicals we believe in working closely with our customer. As partners, we develop solutions together that meet the growing complexities found in today's foundry production processes: Improved quality, improved costs, improved efficiencies and improved eco-friendly solutions.

Technical sales

- Foundry process and product know-how
- Intuitive recognition of customer needs
- Account management
- Many years of foundry industry experience

Technical services

- Own pilot foundries
- High level of interdisciplinary expertise
- Highly qualified team
- Identification and solutions to complex process problems

R&D, product management

- Two research centers
- Innovative and customer-driven
- Metallurgical analysis
- Sand labs
- Comprehensive foundry expertise





Our in-house research foundries are a key added value for us and our customers.

PILOT FOUNDRIES

ASK Chemicals runs fully equipped pilot foundries at its locations in Hilden (Germany) and in Dublin, Ohio (USA).

Within our pilot foundries we use modern core shooters to help us simulate our customers' processes and find solutions to their problems. Furthermore, we use these tools, as well as others, to develop new technologies and products.

In our pilot foundries we are capable of executing a complete production process in-house for inorganic mold manufacturing.

We have the capacity to melt up to 100 kg of gray iron and ductile iron, as well as 160 kg of aluminum.

Our pilot foundries are an integral constituent of our value-adding services. This allows us to gain precise knowledge of the processes on-site at the customers' location and create optimized solutions.

DESIGN SERVICES FOR PERFECT CASTING RESULTS

ASK Chemicals offers foundry-based simulation services for complete process optimization. From the original design concept to its validation and the eventual manufacturing of the cast part prototype, ASK Chemicals manages every step with full documentation.

Our design services team provides the right combination of design, production, and simulation know-how to achieve optimal results. They also manage development projects together with external partners to ensure perfection every step of the way.

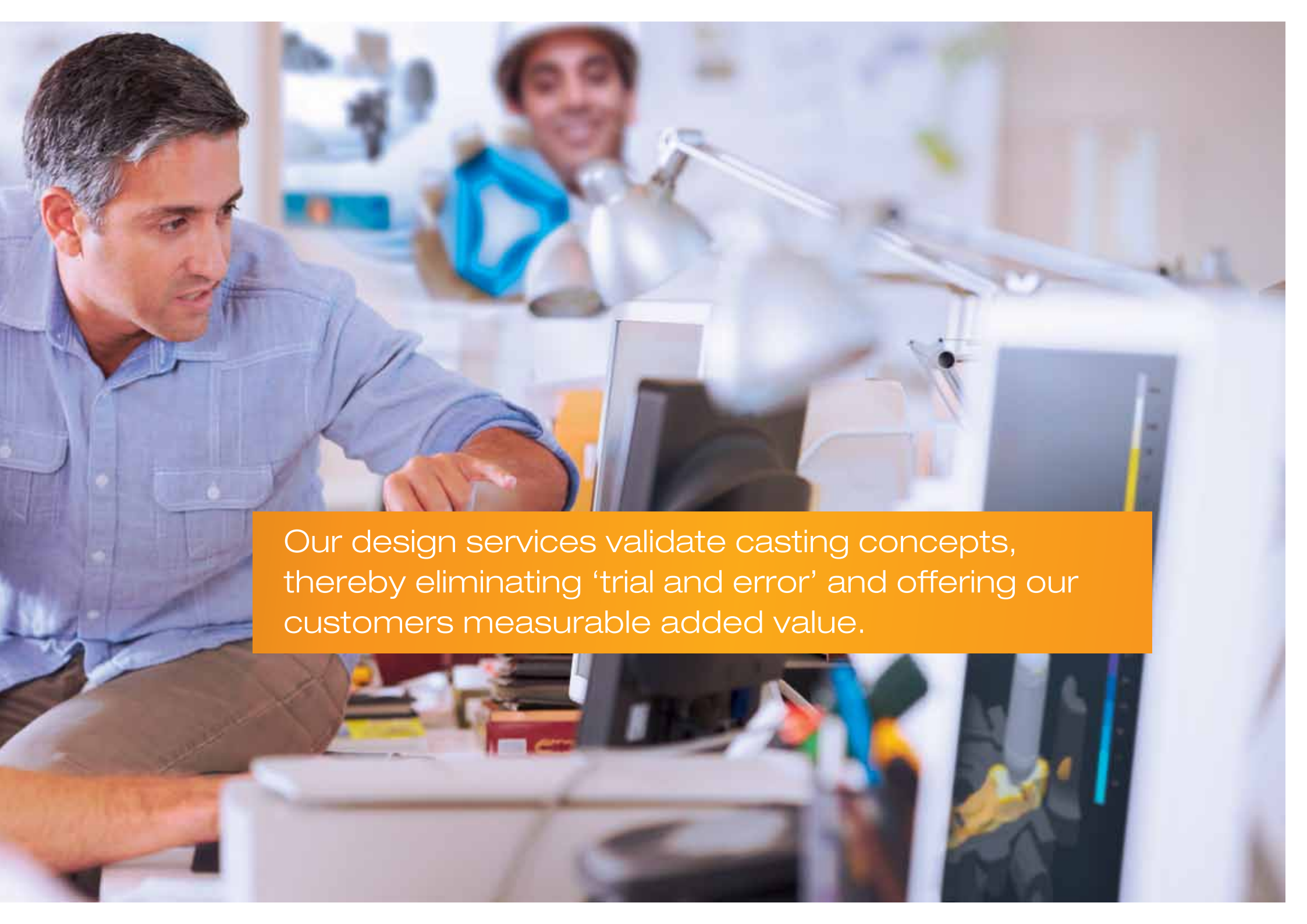
Simulation of foundry processes helps provide the foundryman with relevant information for designing a die-cast or sand-cast mold. Pouring systems, overflows, vents and risers can all be optimized in this way. A precise representation of these aspects, by taking not only cooling and heating measures but also cycle times into account, enables such problems as shrinkage cavities, veining and many other casting defects to be avoided.

The simulations software used are: MAGMA®, NovaCast, FLOW 3D and Arena-Flow®.

Systematic development process

Idea >> Concept >> Simulation >> Development of cores/molds >> Core and cast prototyping >> Series production >> Success





Our design services validate casting concepts, thereby eliminating 'trial and error' and offering our customers measurable added value.

INNOVATIVE AND CLOSE TO THE CUSTOMER

Our R&D department performs both innovation-driven groundwork, as well as market and customer-driven development. Interaction between these three areas is of fundamental importance in terms of offering our customers technologically sophisticated products and efficiency-enhancing solutions at all times.

Through close cooperation and the constant exchange of ideas with our application technology and technical sales specialists, R&D at ASK Chemicals is always in tune with the market and also maintains a presence on the customer's own premises.

Thanks to our global presence and many years of experience in the sector, our R&D workforce have in-depth knowledge of the regional sand types and the technological requirements – indispensable prerequisites for the development of innovative product solutions.

Experimental foundries

- Fully equipped experimental foundries
- Mold manufacture, mold/core package assembly and casting
- Field-aligned depiction of foundry processes

Metallurgical analyses

- Extensive analyses of the graphite structure and metal matrix
- Generation of an informative metallurgical report

Sand laboratory

- Testing and characterizations of product properties
- Testing of mechanical properties with state-of-the-art equipment
- Characterizations of sand and analyses

Product development/ technical support

- Analysis of casting defects
- Wide range of analytical methods to determine product properties and ensure quality standards
- Development of products, processes and test methods



A male scientist with short brown hair and blue safety glasses is smiling at the camera. He is wearing a white lab coat over a dark blue polo shirt. On the left side of his chest, there is a blue rectangular patch with the text "ASKCHEMICALS" and a logo. He is holding a glass Erlenmeyer flask with both hands, which contains a bright yellow liquid. The flask has volume markings at 50, 75, and 100. The background is a blurred industrial setting with large pipes and structural elements, suggesting a chemical plant or refinery.

Our R&D never loses sight of
efficiency-enhancing solutions for
our customers.

PRODUCT SOLUTIONS FOR FOUNDRIES

Our product portfolio offers a wide and innovative range of foundry consumables like binders, coatings, risers, filters and release agents, as well as metallurgical products like inoculants, filled wires and pre-alloys for iron casting.

True to our claim, we develop our products for the continued benefit of our customers. The crucial factors shaping our products and applications are flexibility and speed, quality and sustainability and cost-effectiveness.

On the strength of our extensive services and consultancy expertise, ASK Chemicals has become a strategic partner in the foundry market.

Together with our customers, our expert sales team, technical services team, and design services team develop individual solutions based on their specific requirements and process parameters. This gives rise to new products and applications that are geared to the current market trends.



Coatings



Riser, riser sleeves
and caps

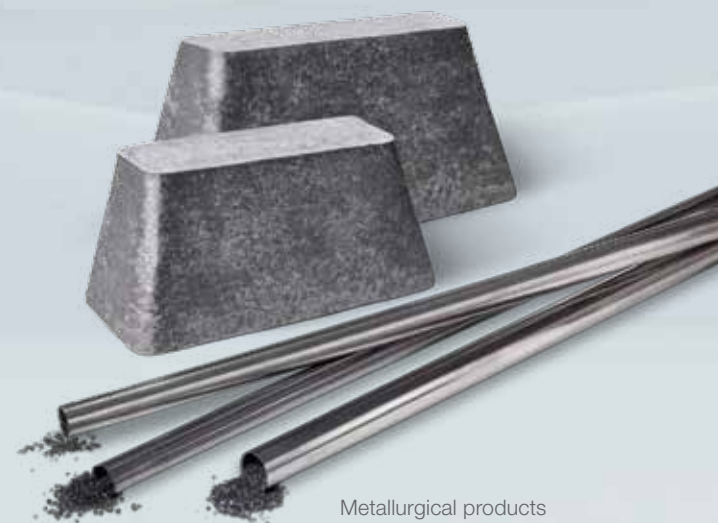


Binder systems

In close cooperation with our customers, we design individual solutions for their requirements and process parameters.



Filters



Metallurgical products

RESINS AND SPECIALIZED PRODUCTS

This business line offers innovative binders for coatings and paints, composites and linings.

One of our top priorities is the development of environmentally-friendly solutions. Our NECOWEL™ alkyd emulsions for coatings and varnishes are solvent- and VOC-free. They meet all occupational health and safety requirements.

Our patented ASKOCOAT™ resins feature a high percentage of renewable raw materials, eg. natural oils. ASKOCOAT™ resins are designed for the cost-efficient production of long-term fertilizers.

Competent sales partners in 30 countries guarantee real-time responses to customer's needs and speedy delivery.



ASKOFEN™ phenolic resins for the coatings industry



Environmentally-friendly industrial coatings with NECOWEL™



ASKOCOAT™ for fertilizer coatings

We combine outstanding
product solutions with
individual customer needs.



NECOWEL™ for environmentally-friendly stain-blocking paints



Environmentally-friendly wood stains, wood
impregnations and wood care with NECOWEL™



www.ask-chemicals.com/locations

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