Fine Chemicals
for Research and Production

- Global Manufacturing
- Global Inventory
- Global Services

Alfa Aesar®
A Johnson Matthey Company

www.alfa.com
Part of the Johnson Matthey group of companies, Alfa Aesar is a leading manufacturer of fine chemicals and catalysts used for research and development in a wide span of applications.

Alfa Aesar is a trusted, service-oriented company. Product quality is of paramount importance, but production expertise is just the beginning. Factors such as product availability, packaging and delivery are just as crucial to meeting and exceeding your expectations. Our established quality process ensures a high level of service and a promise of continually striving for perfection.

Our dedicated teams, situated around the globe, are there to help you find the right products for your application when you need them. Our experience in manufacturing, sourcing and handling a wide range of chemicals enables us to respond quickly and efficiently to your needs.

**Global Inventory**
The majority of our 33,000 products are available in semi-bulk or bulk quantities from stock. Some are in regular production and are available in bulk for next day shipment. We also supply most products from stock in research and development quantities.

**Global Sourcing**
Knowledgeable chemical industry experts on our global sourcing team know what manufacturers match best to your needs. All Alfa Aesar vendors are assessed for quality and service to remain on our approved vendor list. We practice rigorous in-house product testing to ensure quality standards.

**Global Distribution**
Meeting the demand of our customers requires that we carry inventory for nearly all of our 33,000 products in one of our five global distribution centers and grow stocks through key distributors such as VWR in Singapore and Uni-Onward and Echo Chemical in Taiwan. In each region, through direct representatives or distributors, we employ experienced and knowledgeable sales representatives who are able to provide consultation and support to our customers.
Global Manufacturing
Fine Chemicals from Grams to Tons

Drawing on years of production experience and the shared intellectual resources across the Alfa Aesar and Johnson Matthey groups, our chemists have the skills and experience to deliver quality chemicals utilizing process routes from laboratory scale through pilot plant to commercial scale production.

Lab Scale Organics
Our research scale labs in Heysham, UK and Yantai, China employ dozens of PhD production chemists utilizing nearly 200 fume hoods and a broad variety of chemical reactions. Our teams are process oriented, developing routes that are both scaleable and efficient. Both the Heysham and Yantai teams are set up to handle projects in the 1kg to 100kg scale.

Semi-Bulk and Bulk Scale
At the brand new Alfa Aesar Synmax production labs in Yantai, China, an experienced team uses proven techniques and state of the art facilities to offer diverse production capabilities. The 2,100 square meter pilot plant building houses eight reactors ranging from 100L up to our two 2000L glass lined vessels. The pilot plant includes specialized equipment for distillation and low temperature chemistry.

Full Time Equivalents
Alfa Aesar Synmax also offers Full Time Equivalent (FTE) services for those customers not requiring GMP certification. A variety of packages are available utilizing our R&D labs, Kilo labs and the pilot plant. Contact an Alfa Aesar sales office for more details.

High Purity Inorganics
Known worldwide as a producer of high purity inorganic compounds, Alfa Aesar produces thousands of distinct materials to exacting standards for research, development and production applications. Custom production and packaging services are regularly offered from our high purity production plant in Royston, England.

cGMP and API Production
We now offer cGMP and API compounds in kilo scale to large capacity production. Riverside, our dedicated API manufacturing facility in Conshohocken, Pennsylvania, further expands our large scale operations. With a total reactor capacity of 140,000L and a 5,600m² production area, this facility is a scalable, flexible, multi-purpose production facility with highly automated, DCS recipe driven operations. Riverside is equipped to manufacture parenteral grade APIs (microbial/endotoxin environmental controls) and is licensed to produce DEA controlled substances in Schedules I and II.

Our experienced development and production teams can deliver a variety of products to meet the needs of customers in fields varying from pharmaceuticals to semiconductors, structural materials and imaging.

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Our team of chemists can produce an extensive range of organic and organometallic compounds, as well as high purity inorganic compounds.

**Organic Intermediates and Reagents**

Our involvement in a global research chemicals business means we have practical experience with almost every organic reaction. We offer the majority of our range of 33,000 molecules in catalog sizes, semi-bulk or bulk quantities from stock.

The following listings outline just some of our organic chemistry experience:

- Boronic Acids and Esters
- Fluorinated Intermediates
- Iodoaromatics
- Indoles
- Azodicarboxylates
- Pyridines
- Hypervalent Iodine Reagents
- Silylating Agents and Silanes
- Sulfonyl Chlorides
- Phase-Transfer Catalysts and Ionic Liquids
- Calixarenes
- β-Dicarbonyls
- Binaphthyls

**High Purity Inorganic Compounds**

Known worldwide as a leading manufacturer or high purity inorganic compounds, Alfa Aesar produces thousands of distinct materials to exacting standards for research, development and production applications.

Our brands are recognized for purity and quality and are backed by technical and sales teams dedicated to providing the best service.
Catalysts, Metals & Materials

Johnson Matthey has a long history in precious metals, and Alfa Aesar continues the tradition through our offering of pure elements, precious metal compounds and catalysts, and a variety of materials.

Metals & Materials

The manufacture of high purity specialty metals and elements for special applications has been a major activity of Alfa Aesar for many years. We have expertise in developing products of exceptionally high purity.

Pure metals and pure elements
Used in applications such as physical vapor deposition, fundamental materials research, photovoltaic technology, and the manufacture of sputtering targets, we offer a variety of forms: wires, foils, powders, and more.

Brazing alloys
With over seventy years of experience in the brazing and soldering industry, we offer a broad range of soldering and brazing alloys to meet most applications.

Thermocouple wires
Seven types of thermocouple wires are available from stock and cut to length for a variety of applications and temperature ranges. We carry certified type S, type R, type B, type J, type K, type T, and type E wires.

Engineering ceramics
A selection of ceramic products in a variety of shapes and materials is available, including high purity alumina (Al₂O₃), zirconia (ZrO₂) and other oxide, nitride and carbide materials.

Materials technology
We offer a variety of materials for coating, photonic, and electronic applications, including single crystal oxides, optical materials, superconducting powders, metal crystals, coating materials and semiconductor materials.

Precious Metal Compounds and Catalysts

Alfa Aesar offers a full range of precious metal salts and solutions manufactured to stringent specifications. Our homogeneous and heterogeneous catalysts can be used in a wide range of chemical transformations.

Alfa Aesar also offers a range of fuel cell catalysts, scavenger systems, specialty silver products, and proprietary organotitanates.
**Catalog**

This 2,900 page publication with 33,000 products is equal parts catalog and handbook. It features over 4,000 new products, many of which are novel fine organics, including over 800 new boronic acids and esters. Other products include aryl homopiperazines, zeolites, fluoroaromatic compounds, silica gels and more. Many of the new products are unique and exclusive to Alfa Aesar.

Alfa Aesar continues to extensively augment the technical content of the catalog with thousands of new and updated application notes, synonym listings and other specification details. Molecular structure diagrams are included for most chemicals, and the catalog is extensively indexed by Chemical Abstract Service (CAS) number, stock number and molecular formula. The product listings for all hazardous substances are also enhanced with hazard pictograms and newly implemented precautionary and hazard phrases in accordance with Globally Harmonized System (GHS) standards. In addition to chemical compounds, the catalog includes special sections listing pure elements, alloys, analytical products, and precious metal compounds and catalysts.

**Website**

Our website has been designed to extend to customers across the globe and features multi-region and multi-language support, enhanced product search and e-commerce platform, and up-to-the-minute news and product updates. Alongside a fresh design and user-friendly features, the site includes:

- Enhanced tools for product searches with intricate chemical terminology
- Molecular structure/substructure search
- Competitor product number search
- Alphabetical index
- Pure element search
- Platinum labware search
- MSDS search
- Certificate of Analysis search
- Quote request
- Technical inquiry

We continue to improve the online shopping experience with additional enhancements including quick order entry as well as a My Account page, where registered users have access to their favorites list, saved shopping carts, and order history and status. Our robust global inventory tracking feature provides accurate pricing and availability information and item detail pages have been complemented with expanded technical information, including literature references and links to related products.
Database Services
The Alfa Aesar product database is accessible in various file formats, which allows us to provide you with methods for locating the products or family of products to match your requirements.

Catalog Directories
Alfa Aesar products are listed in the Available Chemicals Directory (ACD), SciQuest, ChemFinder, Chemical Abstract Service and numerous other public databases and buyer’s guides.

Custom Synthesis
We offer flexible custom manufacturing services to produce quality products with the assurance of full confidentiality.

Customer Service
Our dedicated scientific and commercial teams offer the full service package, from concept to production, packaging and delivery. Our experienced customer service staff is well-equipped with systems enabling them to detail not only prices and availability, but also special handling and shipping factors that may affect your order. Product specialists in our inside sales team are well-versed in our production capabilities and key supplier strengths, enabling them to give you competitive prices and make sure your order arrives on time.

Technical Service
Clarification about product specifications can often help with your application or make a purchasing decision. Our technical Product Specialists are on hand and ready to help you with your technical questions and to help with your application.

Quality Control
We employ advanced quality control for both in-process and final testing phases. The high standard of modern quality control and assurance facilities is matched by the expertise of our experienced staff. Various ISO certifications are in place or pending at all Alfa Aesar production and distribution locations.

New Product Development
As a research chemicals business we strive to bring you a constant stream of new screening compounds, building blocks, novel materials and other hard to find items. Our new product development team works hand in hand with our production chemists and key supply partners to identify and bring to market the most cutting edge items. Hundreds of new products per month are added to supplement the catalog.