# GFSInorganics

As a leading U.S. manufacturer of high purity inorganic compounds, GFS Chemicals has specialized in the production of rare earth salts and solutions in Columbus, Ohio since the 1950's.

GFS Chemicals understands the importance of a stable and reliable supply chain in the manufacture of rare earth compounds. Continued advancements in technology and operations allow our production team to utilize varying pathways to efficiently manufacture many rare earth products. Key raw materials are obtained from secure sources, including both domestic and international producers.

We use batch chemistry with glass lined and stainless steel production vessels ranging from 15-2,000 gallons to manufacture grades ranging from 99% to 99.999+% purity. While we specialize in 1-10 MT requirements we can support requests in excess of 100 MT for some products.

A sampling of the products we manufacture include:

- Ceric Ammonium Nitrate
- Ceric Nitrate
- Lanthanum Nitrate
- Lanthanum Chloride
- Cerium Based Etchants.
- Cerous Chloride
- Yttrium Nitrate
- Yttrium Chloride
- Ceric Sulfate

The Inorganics manufacturing division of GFS Chemicals focuses on developing and adapting core chemistries to meet our clients' unique and individualized specifications. Our technical staff continuously monitors the quality of these products while driving process improvements through quality control and automation.

Enjoy the benefits of a safe, competitive supply of rare earth salts and solutions with minimal interruptions.

### **Robert Kramer**

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Inorganic Manufacturing Division

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#### **ABOUT GFS CHEMICALS**

## Commitment to Quality

- Specialized chemistries with ultra-pure chemicals
- Custom manufacturing capabilities
- Facilities are ISO 9001:2015 certified

# Shipping

- Export to 80+ countries
- Handle a wide range of packaging configurations
- Navigate the complex shipping requirements of hazardous materials

### ? Service

- Tailored sizes, packaging and specifications
- Responsive customer service
- Expert technical & manufacturing personnel
- Quick turn-around of in-stock products

# GFSInorganics

# PROCESS-PERFECT INORGANIC CHEMICALS

Tighter metal specifications, single batch-charge packaging, and a technical team based at our production facility are just a few of the ways in which GFS Chemicals can support your business.

Is your supply chain as strong as it could be?

CATEGORY         PRODUCT-EXAMPLES         ITEM #           Cerium Salts         Ceric Ammonium Nitrate         13/768/2909/7683           Cerium Salts         Ceric Sulfate         24           Cerous Chloride         29/2901           Cerous Nitrate         30           Cerous Perchlorate         32           Cerium Solutions         Ceric Nitrate         1574/1575           Ceric Ammonium Nitrate         Various strengths available           Ceric Sulfate         25/716/1983           Gadolinium Salts         Gadolinium Chloride         A3186           Gadolinium Solutions         Gadolinium Perchlorate         525           Lanthanum Salts         Lanthanum Oxide         577/3579/3580           Lanthanum Chloride         633/A4065/A4068/A4069           Lanthanum Perchlorate         527/5139           Yttrium Salts         Yttrium Nitrate         1216/2250/2453/A9232           Yttrium Acetate         2970           Yttrium Perchlorate         5183           Yttrium Oxide         582/2252/1522           Neodymium Oxide         A5247/578/2223           Neodymium Chloride         A5247/578/2223		11 7	
Ceric Sulfate         24           Cerous Chloride         29/2901           Cerous Nitrate         30           Cerium Solutions         Ceric Nitrate         1574/1575           Cerium Solutions         Ceric Ammonium Nitrate         Various strengths available           Ceric Sulfate         25/716/1983           Gadolinium Salts         Gadolinium Nitrate         A3213/2216           Gadolinium Solutions         Gadolinium Chloride         A3186           Gadolinium Solutions         Gadolinium Perchlorate         525           Lanthanum Salts         Lanthanum Oxide         577/3579/3580           Lanthanum Chloride         633/A4065/A4068/A4069           Lanthanum Perchlorate         527/5139           Yttrium Salts         Yttrium Nitrate         1216/2250/2453/A9232           Yttrium Chloride         2249/2486           Yttrium Acetate         2970           Yttrium Oxide         582/2252/1522           Neodymium Salts         Neodymium Oxide         A5208/2221	CATEGORY	PRODUCT-EXAMPLES	ITEM #
Cerous Chloride         29/2901           Cerous Nitrate         30           Cerium Solutions         Ceric Nitrate         1574/1575           Ceric Ammonium Nitrate         Various strengths available           Ceric Sulfate         25/716/1983           Gadolinium Salts         Gadolinium Nitrate         A3213/2216           Gadolinium Solutions         Gadolinium Chloride         A3186           Gadolinium Perchlorate         525           Lanthanum Salts         Lanthanum Oxide         577/3579/3580           Lanthanum Chloride         633/A4065/A4068/A4069           Lanthanum Chloride         634/2218/A4042/A4043           Lanthanum Perchlorate         527/5139           Yttrium Salts         Yttrium Nitrate         1216/2250/2453/A9232           Yttrium Acetate         2970           Yttrium Perchlorate         5183           Yttrium Oxide         582/2252/1522           Neodymium Oxide         A5208/2221		Ceric Ammonium Nitrate	13/768/2909/7683
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Neodymium Nitrate A5232/2222		Neodymium Nitrate	A5232/2222
Neodymium Solutions Neodymium Perchlorate 528	Neodymium Solutions	Neodymium Perchlorate	528
Praseodymium Oxide 579/2232		Praseodymium Oxide	579/2232
Praseodymium Nitrate A6378		Praseodymium Nitrate	A6378
Praseodymium Praseodymium Perchlorate 529	Praseodymium	Praseodymium Perchlorate	529
Solutions	Solutions		

The above list is a small sampling of the chemicals GFS can manufacture. To view our full range of chemicals, scan the QR code and visit our Inorganics division home page.



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