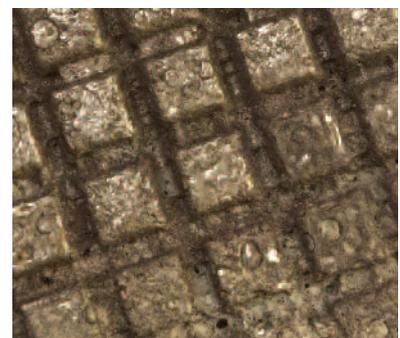


# *Milward*

*Aluminum & Copper Master Alloys*

- Aluminum-Based Master Alloys
- Copper-Based Master Alloys
- Phosphorus-Copper
- Precision Additives
- Custom or Non-Standard Alloys



# Quality, Innovation & Excellence Since 1948

**M**ilward Alloys, Inc., is a manufacturer of hardeners, grain refiners, modifiers and deoxidants for the aluminum and copper melting industries. Milward's master alloys are precisely combined, melted, and packaged additives, made of primary metals and chemicals, designed to satisfy contemporary metallurgical needs.

Headquarters for our manufacturing facilities and corporate offices are in Lockport, New York, where a technological marvel - the "Flight of Five" series of Erie Canal locks - first raised and lowered commercial boats above and below the Niagara Escarpment in 1825.

Our location is central between two Great Lakes and near the industrial regions of Buffalo, Niagara Falls, and Southern Ontario, including Toronto, Canada. Major population centers along the east coast and Midwest are readily accessible. Modern transportation logistics make shipments nationwide and worldwide efficient and economical.

**ISO 9001:2008 Certified**

## Quality Assurance

Milward is certified to ISO 9001: 2008 practices and systems to ensure compliance with customer requirements for quality in metallurgical properties and performance characteristics. Under this internationally recognized standard, quality is monitored at every stage - from the input of raw materials to delivery of the finished product.



## Environmental Control

We believe that melting metals in today's world must be done under adherence to strict environmental regulations. Major investments have been made throughout our history to uphold this belief.



## Facilities & Operations

Milward Alloys operates a 73,000 sq. ft. complex that includes: alloy development and testing; copper alloy production and aluminum alloy production; aluminum direct-chill (DC) casting; extrusion; and administrative, warehousing and shipping facilities.

## Research & Development

Sophisticated industrial research is essential to one's playing a leading role in today's competitive metals market. Milward is committed to an ongoing emphasis on targeted research and continuous product development that enables us to bring state-of-the-art alloy technology to our customers.



## Milward's Total Quality Assurance Process

Milward Alloys manufactures aluminum and copper-based master alloys for industries that melt and cast aluminum and copper metals. We are dedicated to being at the cutting edge of technology to help ensure the highest quality in the metallurgical properties and performance characteristics of our customers' products. Adhering to International Standard ISO 9001: 2008 for quality systems, Milward has a comprehensive program for quality assurance.



## Employee Training & Assessment

All employees of Milward Alloys, beginning with the President, receive formal training in the concepts and implementation of quality improvements. The management team meets weekly to assess progress, address problems, and determine appropriate positive actions.

## Purchasing Practices & Supplier Standards

Our purchasing practices dictate that suppliers must demonstrate a commitment to their own quality improvement programs. All incoming shipments are inspected, analyzed, and statistically controlled in accordance with our specifications. Only acceptable materials are allowed into the process area. Suppliers are audited for their quality assurance programs.

## Technical Procedures & Support

Highly qualified, degreed personnel, supported by state-of-the-art computer and laboratory equipment, adhere to strategies of ISO 9001:2000 for quality program implementation. This includes Advanced Product Quality Planning (APQP), Process Control Planning, and the seven phases of Statistical Process Control (SPC):

- Process Charting to identify materials and steps
- Ishikawa Diagram to identify all factors that influence the process
- Failure Mode and Effect Analysis (FMEA) to rate potential problems and the seriousness of each
- Critical Factor Identification to analyze the FMEA results
- Evaluation Testing
- Shewhart Charting, which allows advance operator control and warning
- Closing the Loop to identify preventive steps and ensure quality



In addition to SPC, five other quality-assurance techniques are employed:

- X-Ray Fluorescence Spectrometry (XRF) - PPM level/99.9% composition level
- Plasma Emission Spectroscopy (DCP) - PPM level/10% composition level
- Quantitative Metallography
- Electron Microscopy
- Process Emulation employing laboratory-scale induction and resistance furnaces



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***Milward***  
*Aluminum & Copper Master Alloys*

## Mission Statement

As a world-class supplier of aluminum- and copper-based master alloys and additives, Milward Alloys recognizes that it is of primary importance to anticipate and fulfill the needs of its customers...and to continuously improve by integrating quality, innovation and excellence into our processes, products, service and technology.

## Corporate Values

### **Quality, Innovation & Excellence**

Milward Alloys is committed to continuous quality improvement. We value innovation and strive for excellence to increase the worth of our company for our customers, suppliers, employees and shareholders.

### **Customer Appreciation**

Milward Alloys appreciates the opportunity to supply our customers and strives to form partnerships that are mutually beneficial.

### **People**

Our team of people is fundamental to our success. We value every employee and do our best to recognize the importance of each individual's contributions.

### **Safety, Health & Environment**

Milward Alloys is committed to conducting its operations in a safe, healthy and environmentally sound manner.

### **Honesty & Corporate Responsibility**

All employees at Milward will be honest in dealing with customers, suppliers, ourselves, and the community in which we reside. Milward Alloys is a responsible corporation, accountable for its actions.

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### **Milward Alloys, Inc.**

500 Mill Street • Lockport, NY 14094-1712 USA

Phone: 716-434-5536

Fax: 716-434-3257 • Toll-Free: 1-800-833-6600

E-Mail: [milward@milward.com](mailto:milward@milward.com) • [www.Milward.com](http://www.Milward.com)