



AIM

Global Solder Solutions

Corporate Overview

October 2014

Excellence is more than a word... it's our passion

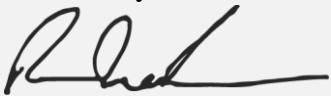
With roots in the world of metal stretching back over 75 years, AIM has evolved from humble beginnings into an international leader in the development, manufacture and application of electronics assembly materials.

Our mission is to offer the most innovative and reliable product solutions available to the electronics industry. At the same time, AIM is keenly focused on the need for customer support at every stage of the professional relationship. In fact, we consider our commitment to providing top-notch technical service to be just as important as our goal of producing market-leading materials.

The key to being a market leader in any industry today rests on the ability to provide customers with unmatched quality, consistency and value throughout the entire process, with products and services delivered locally, and yet still inspired by a global, environmentally-focused view.

We believe that our focus on creating excellence every step of the way is what sets AIM apart, and allows us to meet those challenges. We thank you for the confidence and trust that you have placed in us, and we look forward to continue working closely with you to help you achieve your goals.

Yours truly,



Rick Black
President, AIM



Solder plus Support

Introduction to AIM



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The AIM Advantage

- AIM is a subsidiary of American Iron & Metal
 - Founded in 1936 in Montreal, Canada
 - The group employs over 2000 people worldwide
 - A stable and financially secure company
- AIM is able to compete successfully with any solder company in the world by offering our customers a unique package of:
 - Innovative products
 - Leading technology
 - Unparalleled service
 - Competitive pricing
- AIM operates worldwide
 - Manufacturing locations located throughout the world
 - Global stocking locations to provide reliable supply of product
 - Global technical support and customer service
- AIM is a cradle-to-grave supplier in North America and throughout other parts of the world with dross and scrap reclamation services



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AIM is a Leading Global Manufacturer of Solder Assembly Materials



Products:

- ✓ Solder paste
- ✓ Bar solder
- ✓ Cored wire solder
- ✓ Solid wire solder
- ✓ Flux
- ✓ Cleaners
- ✓ Adhesives
- ✓ Underfills
- ✓ Ribbon
- ✓ Foil
- ✓ Preforms



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Advancement Timeline

- » Ramped up production of solder products for electronics industry
- » Became first company to sell materials to tier 1 EMS specifically for mass lead-free production
- » Became first company to open electronic solders manufacturing plant within Mexico
- » Won 2nd and 3rd SMT Vision Awards
- » Expanded U.S. headquarters and opened support branches in Hong Kong, Singapore and the UK
- » Expanded China headquarters
- » Developed SCAN alloy, a RoHS compliant, no-silver, no-bismuth, high-reliability solder
- » SMT Vision Award finalist in two categories
- » Bolstered the already extensive R&D laboratory with new state-of-the-art testing equipment
- » Opened offices in India and Philippines
- » Won two NPI Awards



- » Ramped up lead-free electronic alloy research
- » Developed first no-clean paste used by Nortel and DEC (Compaq)
- » Received the first patent in the industry for a Sn/Ag/Cu alloy
- » Won 1st SMT Vision Award
- » Began full-line manufacturing in China
- » Opened support branch in northern China
- » Chair IPC SPVC Lead-Free Committee
- » Developed new lead-free alloy with superior drop test results for BGAs
- » Licensed the SN100C lead-free alloy
- » Won fourth SMT Vision Award
- » Expanded Mexico headquarters
- » Opening production facility in Poland
- » Expanding Rhode Island facility



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Global Presence



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Americas



Canada

- Corporate headquarters located in Montreal, QC
- 400,000 square foot (45,000 sqm) state-of-the-art facility
- Full-line manufacturing
- Dross reclamation
- ISO 9001:2008 and ISO 14001:2004 certified

Houses:

- ✓ Research & development
- ✓ Process engineers
- ✓ Metallurgists
- ✓ Chemists
- ✓ Corporate manufacturing
- ✓ Production
- ✓ Quality control specialists



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Americas



USA

- USA Division, Cranston, Rhode Island
- US distribution center for full line of solder products
- Technical support
- Customer service
- Extension of AIM Montreal's Research and Development
- AIM's Specialty Materials/Indium Division
- 2014 expansion project doubled the size of the facility



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Americas



Mexico

- AIM's Mexican division, Soldadura de Mexico, located in Juarez, Mexico
- First domestic supplier of electronic grade solder pastes and fluxes in Mexico (Established in 1997)
- Relocated in 2013 to much larger and technologically advanced facility very close to the existing one
- Full-line manufacturing
- Dross reclamation
- ISO 9001:2008 certified
- Analytical laboratory

Applications Laboratory:

- ✓ Parmi solder paste inspection system
- ✓ DEK screen printer
- ✓ Yamaha placement machine
- ✓ Heller reflow oven
- ✓ Rework stations
- ✓ Technical Devices wave machine with spray fluxer



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Americas

Joint Venture Manufacturing



Brazil

- › Solder paste
- › Bar solder
- › Sales support
- › Technical support
- › ISO 9001:2008 certified



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Europe



Łódź, Poland

- Full-line manufacturing

- Solder paste
- Bar solder
- Cored and solid wire solders
- Liquid flux
- Cleaners
- Adhesives
- Underfills

- Sales support

- Technical support

- Scheduled to open 2014



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Europe

Joint Venture Manufacturing

Milan, Italy

- › Solder paste
- › Bar solder
- › Cored and solid wire solder
- › Quality control laboratory

Toledo, Spain

- › Bar solder
- › Liquid flux
- › Solid wire solder
- › Quality control laboratory
- › Technical support



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Asia



Shenzhen, China

- Full-line AIM manufacturing facility under the strict controls of corporate headquarters
- Supporting the Asia-Pacific region
 - Support offices and stocking locations throughout China
- ISO 9001:2008 and ISO 14001:2004 certified

Houses:

- ✓ Customer service
- ✓ Technical support
- ✓ Applications laboratory
- ✓ Analytical laboratory



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Asia

Hong Kong

- AIM's Asia-Pacific financial headquarters
- Houses:
 - Customer service
 - Technical support
 - Warehousing
 - Bar solder manufacturing

India

- AIM's applications support and sales office
- Houses:
 - Customer service
 - Technical support
 - Warehousing

Philippines

- AIM's applications support and warehousing
- Houses:
 - Technical support
 - Warehousing



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AIM Global Support & Sales Offices

▶ AIM has additional support offices located in:

- » Suzhou China
- » Shanghai China
- » Bangalore India
- » Singapore
- » Philippines
- » United Kingdom
- » Czech Republic
- » Germany

▶ AIM distributors located throughout the world:

- | | | | |
|-------------|-------------|----------------|----------------------------|
| » Australia | » Germany | » Malaysia | » Spain |
| » Austria | » Hungary | » Mexico | » Sweden |
| » Belgium | » India | » Morocco | » Tunisia |
| » Canada | » Indonesia | » Norway | » Turkey |
| » China | » Ireland | » Pakistan | » Ukraine |
| » Denmark | » Israel | » Poland | » United Arab Emirates |
| » Estonia | » Italy | » Russia | » United Kingdom |
| » Finland | » Korea | » South Africa | » United States of America |



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AIM Global Locations

MEXICO NEW STATE-OF-THE-ART FACILITY

POLAND NEW FACILITY OPENING 2014



AIM LOCATIONS

M Manufacturing

SS Sales Support

TS Technical Support

SL Stocking Location

Australia

Sydney M SS TS SL

Brazil

São Paulo M SS TS SL

Canada

Montréal, QC M SS TS SL

China

Shenzhen M SS TS SL

Hong Kong, SAR M SS SL

Suzhou SS TS

Shanghai SS TS

India

Bangalore SS TS SL

Mexico

Juárez M SS TS SL

Reynosa TS

Guadalajara SS TS

Philippines

Manila SS TS SL

Poland

Łódź M SS TS SL

Singapore

Sengkang SS TS

United Kingdom

Surrey SS TS

United States

Cranston, RI M SS TS SL

Anaheim, CA SS

Chicago, IL SS

Albany, NY SS

El Paso, TX TS



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Leading Technology

The background of the slide is a light gray. On the right side, there is a large, stylized globe. The globe is composed of numerous thin, golden-yellow lines that form a complex circuit board pattern. These lines curve and loop around the globe, creating a sense of depth and movement. The lines are more densely packed on the right side of the globe and become sparser towards the left.

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Focus on Technology

- AIM understands the importance of an aggressive R&D program that provides solutions to a rapidly evolving market
- Continuous laboratory upgrades and ongoing research and development enables AIM to develop innovative solutions for the manufacturing challenges of tomorrow



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Award Winning Technology

- ▶ AIM's innovative R&D team is strongly committed to product and process improvement
- ▶ Received several patents, including one for the CASTIN® lead-free soldering alloy
- ▶ Recipient of many prestigious SMT industry awards

1995 SMT Vision Award

- » Best New Solder Material of the Year, CASTIN Lead-Free Solder Alloy

2001 SMT Vision Award

- » Best New Material of the Year, Underfill 620

- 2012 Circuits Assembly NPI Award
- » Best Soldering Material, NC259 No Clean Lead-Free Solder Paste
- 2013 Circuits Assembly NPI Award
- » Best Flux Material, NC277 VOC-Free Liquid Flux



1997 SMT Vision Award

- » Best New Cleaning Material of the Year, Enviro-Wipes

2000 SMT Vision Award

- » Best New Solder Material of the Year, NC251 No Clean Solder Paste

2008 SMT Vision Award Finalist

- » Best Soldering Material, NC257 No Clean Lead-Free Solder Paste

2008 SMT Vision Award Finalist

- » Best Adhesive / Coating / Encapsulant / Underfill of the Year, One-Step Underfill 688



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Technology Roadmap



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AIM Timeline of Product Development			
Product Category	SHORT TERM	MID TERM	LONG TERM
Paste	RoHS2	01005 and Sub-Visual Components	No residue - No Silver - No Clean
	Print Idle Time	Expansion of Silver-Free SMT Paste Offering	Beyond Stencil Printing - Jetting? Solid Transfer? Graphine Conductors?
	Wetting/Hip	Solder Residue as Conformal Coating	Air reflow self-encapsulating residues
	Cleanable No Cleans	SPI Controlled Solder Volume Augmentation Materials	
	High Reliability/SIR	Residue interaction with signal spacing compared to current leakage	
	T4	Conformal coating compatibility	
	MX Apps Lab - New DEK		
Flux	VOC-Free	No Residue No Clean	
	Improved SIR	Ultra-High SIR/Signal Purity	
	Selective - Kruss Equipment	Nano Particle Activator Suspensions	
	Selective - Partnerships with Pillarhouse/ACE/Soltec		
Wire	Better Wetting	Sub .010 diameter for UPF Rework	
	Improved SIR		
	Reduced Residue		
	More Consistent Core		
	MX Lab and Coring Operation		
	R&D Focus		
Alloy	Tin Whisker Resistant Alloys	Expansion of Silver-Free Alloys with Dopants	Nano Powders
		Optimization of Powder Manufacturing to T5 and Smaller	Beyond Solder - Alternative Technologies for Component Attachment
	Lower Cost Silver-Free Alloys		
	High-Temp, High-Reliability RoHS Alloy		

The background of the slide features a stylized globe. The globe is composed of numerous thin, golden-brown lines that form a complex circuit board pattern. These lines are arranged in a way that suggests the curvature of a sphere, with some lines following the equator and others following the meridians. The lines vary in thickness and density, creating a sense of depth and connectivity. The overall color palette is a mix of light beige and golden-brown.

Research and Development Laboratories Around the World



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AIM Canada Research and Development Laboratory

➤ Partial equipment list

- Koh Young Solder Paste Inspection System
- Gen3 Wetting Balance
- Bono Testing
- DSC (Differential Scanning Calorimetry)
- TGA (Thermogravimetric Analysis)
- ICD
- Carl Fisher Coulometer
- Arc Spark
- AA (Atomic Absorption)
- Titration
- X-Ray
- SIR Testing
- Shelf Life and Dry Out Testing
- Shear Testing
- Cross-Sectioning
- Particle Distribution Equipment

➤ ISO 9001:2008 and ISO 14001:2004 certified



Staff
consists of:

- ✓ Process engineers
- ✓ Metallurgists
- ✓ Chemists



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AIM USA Research and Development Laboratory

► Partial equipment list

- » Aqua-Quick Water Cleaner
- » Olympus Digital Microscope with Imaging Software
- » Unitron Scope with Digital Imaging
- » Buehler Metallurgical Equipment for Solder Cross Sections
- » Chatillon TCM 201-ss for Mechanical Testing of Solder Joints



Staff consists of:

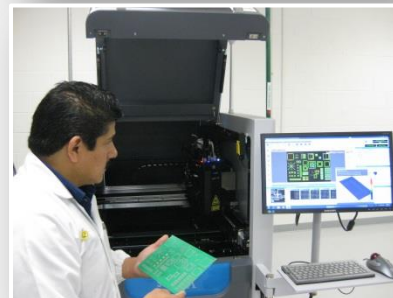
- ✓ Vice President of Technology
- ✓ Technical Marketing Manager
- ✓ Technical Service Engineers
- ✓ Support personnel



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AIM Mexico Research and Development Laboratory

- New state-of-the-art laboratory
 - » Full failure analysis laboratory
 - » Cross sectioning and magnification
 - » Partial equipment list
 - » Parmi Solder Paste Inspection System
 - » DEK Screen Printer
 - » Yamaha Placement Machine
 - » Heller Reflow Oven
 - » Rework Stations
 - » Technical Devices Wave Machine with Spray Fluxer
- ISO 9001:2008 certified



Staff
consists of:

- ✓ Technical Service Engineers
- ✓ Laboratory and testing personnel



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AIM China Research and Development Laboratory

- Partial equipment list
 - Fully Automated Wave Machine with Spray Fluxer
 - Cross-Sectioning Capabilities
 - XRF
 - Arc Spark
 - Rheometer
- ISO 9001:2008 and ISO 14001:2004 certified



Staff
consists of:

- ✓ Technical Service Engineers
- ✓ Laboratory and testing personnel



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Global Technical Support



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Unparalleled Global Technical Support

- AIM's global technical resources are available to customers remotely as well as through onsite support and training seminars
- Applications laboratories are used to replicate unique production conditions for product development and optimization, technical support and training purposes
- No matter the location, AIM's exceptional technical support team is available around-the-clock to assist our customers in reaching their manufacturing goals




Technical
support
staff
located in:

- ✓ United States
- ✓ Mexico
- ✓ Brazil
- ✓ Czech Republic
- ✓ China
- ✓ Philippines
- ✓ India



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Consistent Quality



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Always Consistent Quality

- ▶ AIM's corporate standards of equipment, manufacturing processes, environmental controls, and quality systems and contingency plans are replicated at each manufacturing facility around the world
- ▶ AIM customers are guaranteed to receive products made of consistent quality, no matter where in the world they are located
- ▶ ISO 9001:2008, ISO 14001:2004 certified facilities



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Global Quality Management System

- AIM produces, tests and inspects products to written external/ internal specifications AIM maintains a controlled list, electronic and hard copy of internal, customer and industry specifications
- AIM internal specifications are provided where customer and industry standards are unavailable, inappropriate or inadequate
- Customer specifications are reviewed to ensure AIM's capability to comply and maintained to verify compliance
- AIM produces material that meets or exceeds industry standards

Commonly referenced industry standards

✓ ASTM

✓ IPC

✓ JIS



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Global Quality Management System Inspection & Testing

› Metal

- ›› Tested for major and minor elemental components

› Solder Powder

- ›› Inspected for size, distribution of size, shape, oxide level, moisture content and chemical composition

› Paste Medium

- ›› Tested for corrosiveness, halides, visual, acid value, water content, fineness of grind

› Cored Wire Flux

- ›› Tested for corrosiveness, halides and visual

› Liquid Flux

- ›› Tested for corrosiveness, halides, visual, pH, acid value, specific gravity and non-volatiles

› Solder Paste

- ›› Inspected for metal percentage, viscosity, visual, solder balls, dry-out, paste transfer efficiency, tack, wetting, printing, etc.



Prominent Partners



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Prominent Partners

Honeywell



DELPHI



KOSTAL



DIEHL

BOSE



GENTEX
CORPORATION



SIEMENS

COOPER Bussmann



BOSCH



HARMAN



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Prominent Partners



Alcatel-Lucent

PHILIPS

Panasonic

ERICSSON

JABIL

LEVITON



Schneider
Electric



Celestica

FOXCONN

Raytheon



SAGEM



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Reclamation Services



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Reclamation Services

- Limits customer's environmental liability
- Closed loop, cradle-to-grave recycling
- Up-to-date and current with all local, state and federal regulatory requirements
- Costs based on current metals market
- Fast settlements
- Dross buckets provided at no charge



Materials for recycling:

- ✓ Solder pot metal
- ✓ Dross/skimings
- ✓ Solder paste/containers
- ✓ Circuit boards
- ✓ Anodes & anode scrap



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Reclamation Metals

- Reclaimed materials are not used in the electronics market



Reclaimed materials support industrial markets:

- ✓ Heat exchange
- ✓ Metals finishing
- ✓ Electrical
- ✓ Electrical/mechanical preforms
- ✓ Stained glass
- ✓ Spray metallization
- ✓ White metal castings
- ✓ Battery/automotive
- ✓ Aircraft
- ✓ Bearing
- ✓ Lighting



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Thank You



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