

CHANNELFLUX®

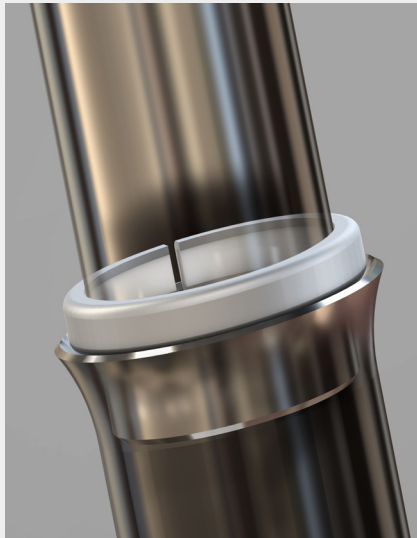
U.S. Patent #7,858,204

Advanced Technology for Brazing Aluminum



ChannelFlux® Advantages

- Integrated Flux System - Alloy and non-corrosive flux in a flexible, yet durable, matrix.
- Improved Performance - Flux activates in advance of alloy. No overflow of material.
- Superior Design - Flux in direct contact with base metals. No hidden flux or voids.
- Less Contamination - No powder to contaminate equipment or the working air environment
- Patented Technology - Offers limited options in alloys and flux systems



ChannelFlux® Alloy Options

ChannelFlux® is Bellman-Melcor's patented family of brazing alloys with flux integrated into the material.

Product	Composition	Flux System	Temperatures	Applications	Flux Content
4047 (#718)	88% Aluminum 12% Silicon	KA1F & CsA1F-based Polymer System CAS #60304-36-1 CAS #138577-01-2	Melt: 1070F (577C) Flow: 1080F (582C)	<ul style="list-style-type: none"> • Automotive and residential HVACR components where process temperature control is established 	22%
ZA-1	78% Zinc 22% Aluminum	Cesium-based Polymer System CAS #138577-01-2	Melt: 826F (441C) Flow: 905F (471C)	<ul style="list-style-type: none"> • HVAC components including copper to aluminum • Aftermarket repair of damaged evaporator coils • Automated applications with wire feed systems • Misc. aluminum applications including transformers 	16%
ZA-2	98% Zinc 2% Aluminum	Cesium-based Polymer System CAS #138577-01-2	Melt: 715F (379C) Flow: 725F (385C)	<ul style="list-style-type: none"> • For hand braze repair of evaporator coils in the production environment 	14%
ZA-3*	Proprietary Zinc Alloy	Cesium-based Polymer System CAS #138577-01-2	Melt: 788F (420C) Flow: 824F (440C)	<ul style="list-style-type: none"> • General purpose alloy • Very low porosity • Excellent for copper to aluminum 	14%



CHANNELFLUX® WIRE REFERENCE CHART

Wire Size	Solid Wire Equivalent	Flux Core Equivalent
.035 x .065	.040	.047
.040 x .090	.053	.062
.045 x .118	.062	.076
.060 x .125	.070	.090
.065 x .140	.093	N/A



CHANNELFLUX® AVAILABLE FORMS

Forms
Rings
Slugs
Specialty
Cut to Length Rod
Level Layer Wound Spools

BELLMAN-MELCOR (P&I) KEY DIFFERENTIATORS

Technical Support

Engineering and technical support are critical components to building trustworthy and highly collaborative partnerships with our customers. Our Engineering and Technical departments strive to provide the best support in the metal joining industry.

Our Technical Support services include joint design assistance, preform design, alloy selection, heat source considerations (torch, vacuum, atmosphere, induction, etc.).

Unsurpassed Inventory

We maintain an extensive inventory of brazing and soldering alloys for metal joining applications.

Alloys are available in various forms and sizes including but not limited to wire, rod, strip/ribbon, rings, and custom preforms. Most alloys are available for same day shipping.

Bellman-Melcor has specialized in aluminum, copper, phosphor copper, silver, and soft solder alloys as well as flux and channel flux braze products since 1962. Bellman was acquired by Prince & Izant Company in November 2018.

Prince & Izant Company provides precious metal and brazing alloy solutions to our global customers, helping them create diverse products used throughout the world. We are committed to investing in the equipment, talent, and other resources necessary to provide our customers with a world-class experience.



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