

PIONEER OF THE
BRAZING INDUSTRY

SUN KWANG

BRAZING FILLER METAL CO., LTD.

SUN KWANG BRAZING FILLER METAL CO., LTD. is a brazing specialist that creates only the best products with the best technology. Based on its excellent human resources and top tier production facilities, SUN KWANG BRAZING FILLER METAL CO., LTD. places the highest priorities on quality, cost and delivery in order to maximize customer satisfaction.



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Greeting

Sun Kwang opens a new future
by developing groundbreaking
technologies

Since its founding, Sun Kwang Brazing Filter Metal Co., Ltd. has strived to develop new materials, such as aluminum and special welding materials.

While recent industrial expansion and economic growth have been followed by problems, such as depletion of fossil fuels and environmental pollution, lightening of parts has become a critical topic in the industry. For example, many parts in the automobile and electronics industry traditionally made of steel are being replaced with parts made of aluminum.

Especially in the automobile industry, parts are being replaced increasingly by aluminum parts, a practice known in the industry as “lightweighting.” In response to this global trend, Korea is leading the lightweighting trend through development of new technologies. Sun Kwang has devoted itself to developing aluminum-related technologies, and is in the limelight as it successfully developed and produced aluminum parts using a clean method.

Sun Kwang will continue its efforts to develop technologies involving aluminum materials



Myeong Jin Kim / CEO

Sun Kwang has grown **with its customers.**

Since its founding 35 years ago, customer satisfaction has been the top priority of Sun Kwang. We have been paving the way for a big leap forward with our customers.



History

1980's

- 1982. 11 Founded as Sun Kwang Metal Industry Co.
- 1984. 04 Built factory in Euijeongbu
- 1989. 09 Installed dry metal powder production facility

1990's

- 1990. 03 Installed wet metal powder production facility
- 1992. 08 Designated as a “Technology Leading SME” by the Ministry of Commerce and Industry.
- 1993. 08 Designated as a “Promising Advanced Technology Business” by the Ministry of Commerce and Industry.
- 1994. 12 Installed an electric contact point material production facility.
- 1995. 05 Developed AgSnO2 electric contact point material production method (patented in Japan and Korea).
- 1995. 08 Developed a method of manufacturing metal fiber using metal powder (patented).
- 1996. 01 Incorporated as Sun Kwang Metal Co., Ltd.
- 1996. 09 Developed a method of preprocessing metal plates for kitchen utensils (patented).
- 1998. 08 Relocated to newly built Pocheon factory (Land area: 2,900 pyeong, floor space: 800 pyeong).

2000's

- 2000. 02 Obtained ‘good venture capital certificate’ (Small and Medium Business Administration).
- 2000. 12 Obtained ISO-9000 and QS-9000 certification (certificate no. K-QA-QS00029)
- 2000. 12 Developed ring-type brazing material and production method (patented in USA).

2000's

- 2001. 05 Developed metal powder and flux mixed brazing material and the production method (patented).
- 2001. 05 Selected as an ‘outstanding enterprise’ (Mayor of Gyeonggi-do)
- 2001. 12 Patented brazing material and the production method in Japan.
- 2003. 05 Developed the low-temperature brazing material containing flux (patented).
- 2003. 06 Obtained the KS certificate (certification no. 034240)
- 2003. 09 Renamed to “Sun Kwang Brazing Filler Metal Co., Ltd.”.
- 2004. 11 Established a branch in USA (SKA. INC., Cincinnati, OHIO)
- 2006. 03 Obtained ISO/TS 16949: 2002 certificate (certification no.: KQA-TS060025).
- 2007. 03 Developed seamless core-type brazing material
- 2008. 01 Established branch in Shanghai (PRC)
- 2008. 05 Developed seamless Al brazing material containing flux and the production method (patented)
- 2008. 09 Built office building in the factory (Floor space: 200 pyeong)

2010's

- 2010. 02 Appointed as a member of the Korea Chamber of Commerce & Industry.
- 2010. 02 Patented low-temperature brazing material containing flux in Japan.
- 2010. 09 Patented low-temperature brazing material containing flux in China.
- 2010. 12 Patented low-temperature brazing material containing flux in India.
- 2011. 03 Built 2nd factory in Pocheon (Floor space: 500 pyeong).
- 2011. 05 Registered as a primary partner of LG Electronics.
- 2011. 08 Extended factory to 11,200 pyeong (Land area).
- 2015. 07 Established an affiliated R&D center.
- 2016. 03 Designated as root technology specialist.

About Company >>

Sun Kwang opens the future of aluminum materials.

We will continue our efforts to understand the needs of customers and to surprise them. We will do our best to develop technologies, to ever enhance our quality system, and to reduce costs in order to win the everlasting trust and respect of our customers

+ Vision

Innovating the brazing industry through development of new technologies and quality management.

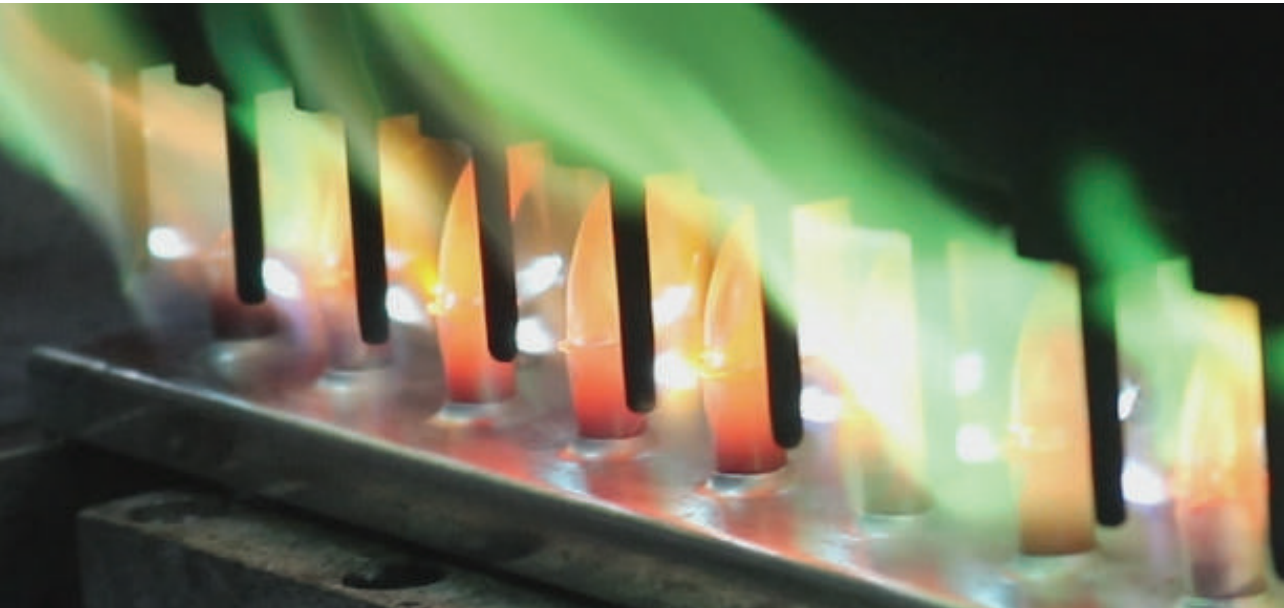
+ Organization Chart



Concept of Brazing >>

Sun Kwang leads the brazing industry.

Our low-temperature brazing materials, which have passed strict tests of major companies of Korea, bring a great innovation to the brazing industry. Spurred by this success, Sun Kwang will continue to focus its capabilities on further developing new brazing materials.



Definition of brazing

Brazing is a method of metallurgical binding of metals using a filler metal with a lower melting point (aka “interfacial bonding”) than the parent metals being joined. According to the ISO, binding work using a filler metal with a melting point of 450°C or higher is designated as “brazing” while 450°C or lower is “soldering.”

Concept of brazing

- Because the work is conducted at a lower temperature than that of the parent metal, brazing minimizes the change of characteristics of the parent metal.
- You can easily bind heterogeneous metals (multiple metals).
- You can apply this method to micro parts or complicated parts.
- You can give conductivity and air tightness to the connection.
- You can bind multiple parts at the same time.
- Brazing provides superior automation capacity and productivity.

Selection of filler metal

- **Economic feasibility** : In order to select the brazing material that enables you to perform the work at a low cost you should analyze the brazing work thoroughly and review the components, use and conditions of the parent metals before selecting the material.
- **Characteristics of brazing material** : You should understand the characteristics of the equipment (or device) in which the parent metals are used, such as use, work conditions, range of heating, and whether oxidation occurs.
Ex) You should not use a brazing material containing cadmium for equipment which will in any manner be used for any type of food/beverage processing or storage.
- **Characteristics of parent metal** : The operating temperature of the brazing material must be lower than the melting point of the parent metal. You should carefully consider the method of use if flux is used as well as the work conditions.
- **Mechanical characteristics** : You should select the brazing material that satisfies the characteristics of the parent metal, such as tensile strength, shearing strength, range of temperature change, corrosion-resistance and acid-resistance. You should also consider the influence of the welding design.

Product >>

Sun Kwang will contribute to the aluminum material industry with differentiated technology.

Focusing its capabilities on the development of brazing materials, Sun Kwang leads the industry through rigorous quality control and continuous innovation. Guided by its motto of pursuing innovation, Sun Kwang will continue its efforts to develop various types of materials.

Materials for aluminum brazing

SKA series

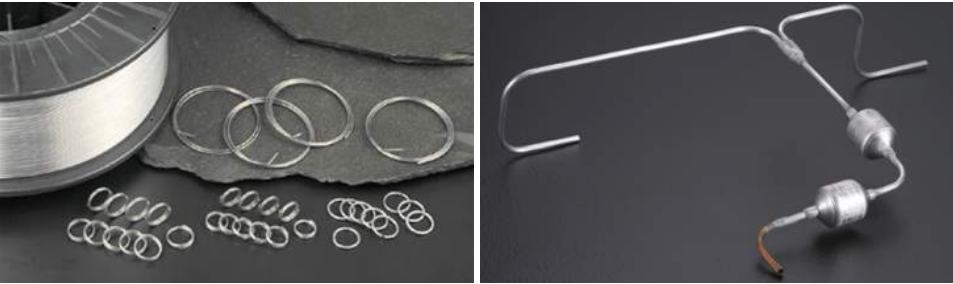
This product is made using the optimum size of a uniform aluminum powder. This material minimizes oxidation of the product while maximizing weldability.



ITEM			COMPOSITION		Application	Brazing temperature
			Alloy	FLUX		
SKA	TA	200	Al-12Si(Al4047)	Non-Corrosive (KAIF4 / CsAlF4 / CsKAIF4)	A1000, A3000	545-598
		2002s			A1000-A7000	530-598
	TB	200	Al-10Si(Al4045)		A1000, A3000	545-598
		2002s			A1000-A7000	530-598
	TL	200	Al-7Si(Al4343)		A1000, A3000	545-620
		2002s			A1000-A7000	530-620

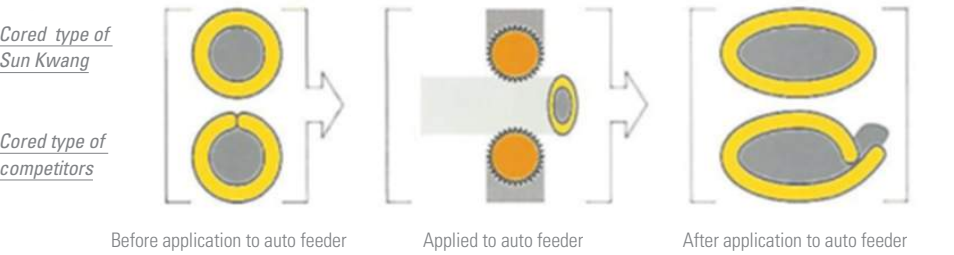
SU series

SU series is designed to supplement softness, which is the weakness of the SKA series. This product can be applied to wire auto-feeding brazing work, brazing of heterogeneous metals (Al-Cu, Al- BRASS, Al-STS) and low-temperature brazing (450℃ ~490℃). This series supplements the weakness of the cored type completely, and improves brazing performance.



Aluminum brazing material

ITEM			COMPOSITION		Application	Brazing temperature
			ALLOY	FLUX		
SU	TA	200	Al-12Si(Al4047)	Non-Corrosive (KAIF4 / CsAlF4 / CsKAIF4)	A1000, A3000	545-598
		2002s			A1000-A7000	530-598
	TB	200	Al-10Si(Al4045)		A1000, A3000	545-598
		2002s			A1000-A7000	530-598
	TL	200	Al-7Si(Al4343)		A1000, A3000	545-620
		2002s			A1000-A7000	530-620
	TC	150	Al, Si, Zn, Cu, Sn, Mg		A1000-A7000 Al-Cu, Al-Brass, Al-Steel	425-490



- The aluminum brazing material solves the problem of wire auto welding, such as bursting or bending of the welding wire.
- The aluminum brazing material completely prevents leakage or scattering of flux, maintaining clean work conditions and preventing workers from being exposed to a harmful environment.
- The new manufacturing method maximizes the role of flux at brazing, increasing fluidity of the filter metal.
- SU-TC (IC) 150 operates at low temperature (425℃~490℃), and supports binding of heterogeneous metals (Al-Cu, Al-Brass, Al-STS).

Repair kit

With the repair kit you can fix small leaks caused by cracks or blow holes formed in aluminum heat exchangers.



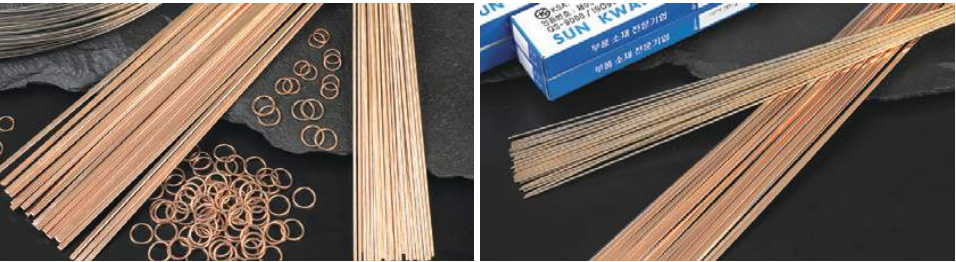
Paste

You can use the paste to braze aluminum boards, heterogeneous metal boards, or parts with complicated shapes such that you cannot use wire or ring type brazing.



BCup, BA_g brazing materials

BCup
BCup is a copper alloy made with Cu-P or Cu-Ag-P. It's widely used as the welding material for copper or copper alloys. Copper-phosphorus welding material provides high electrical conductivity, mechanical characteristics and resistance against sulfuric acid.



BA_g
Silver brazing filler is a brazing material comprised mainly of silver (Ag). It's used for brazing of stainless steel and steel parts. It's also used for brazing of nonferrous metals, such as tungsten alloys, titanium alloys, hard metals, diamonds, precious metals and brass.



Powder

Powder
Powder material is used in work conditions (welding design) where it's difficult to use welding rods, wires or plates. Welding powder is widely used for welding of curved parts, complex parts or a wide area, and for low-temperature welding, high-frequency welding, resistance welding, precision welding (electric/electronic parts), and fine welding (precious metals, ornaments, etc.).



FLUX material

FLUX
Flux melts at a lower temperature than the welding material by approximately 50°C, forming a film at the gap between the parent metals, preventing oxidation of the parent metals and increasing the fusing effect. When mixed with Sun Kwang's welding powder and applied to the welded part, the pin-hall effect and overheating of the parent metal is prevented, thus providing a weld of superior quality.

Classification	Status	Application
For Copper	White	BCuP, Copper, Copper alloy
For low temperature Brazing	White cream	Bag, Copper alloy, Hetero type metals
For high temperature Brazing	White cream	Bag, Copper alloy, Hetero type metals

Assurance >>

“Best” is a synonym of Sun Kwang.

Guided by its management philosophy to respect people, strive for customer satisfaction, continually develop technology, seek technical innovation, and explore overseas markets, Sun Kwang always does its best to produce top-quality products.



Quality certificates



Quality management system certificate (KQA-TS060025)

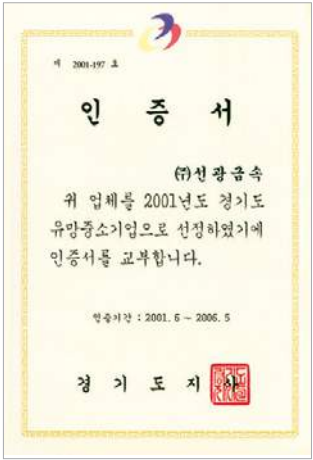


Quality management system certificate (KQA-Q062071)

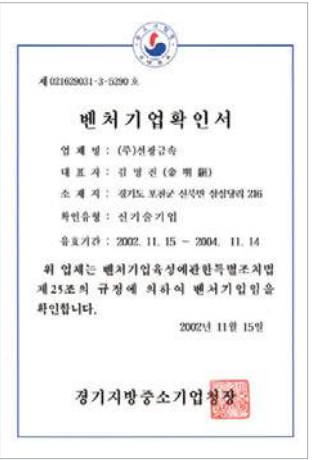


KS mark certificate

Government certificates



Gyeonggi-do's promising small and medium business certificate



Venture capital certificate



Part-material specialized business certificate