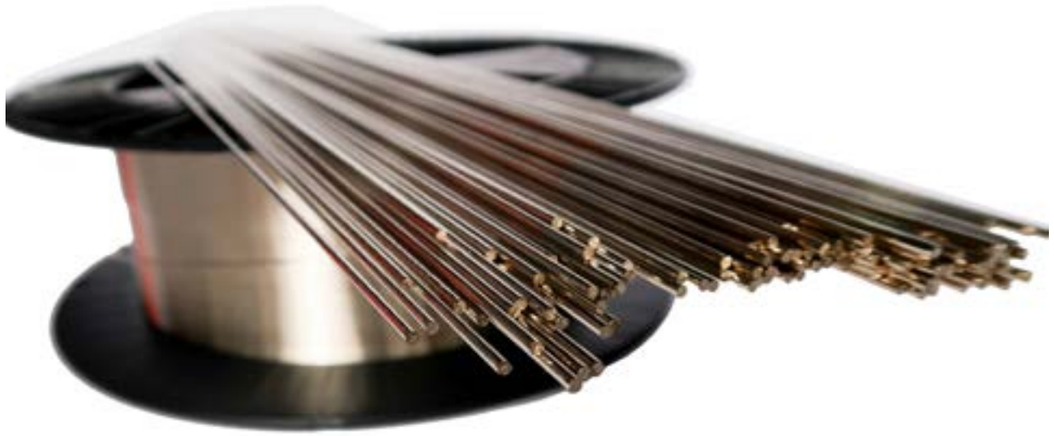
Meltolit

BRAZING CONSUMABLES



CONTENT

GENERAL

The company **5**
Brazing overview **6**

BRAZING ALLOYS

Silver alloys **8**
Silver alloys - hardmetal **10**
Silver alloys - Special **11**
Copper phosphorus alloys **12**
Brass alloys **13**
Aluminium - zink aluminium alloys **14**
Nickel alloys - high temp **15**
Copper alloys - high temp **16**
Brazing Fluxes and Stop-offs **17**

SOLDERING ALLOYS

Lead free solders **18**
Solder pastes **18**
SMD pastes **18**
Lead containing solders **19**
Fluxes for flux cored solders **19**
Aluminium solders **20**
Bearing metals / Babbit alloys **20**
Solder fluxes **21**

PRODUCT GUIDES

Packaging details **22**
Heating sources **23**
Flame types **23**
Joint designs **24**
Conversion tables **25**
Metals, chemical elements **25**
Density **25**
Applications **26**
Flux cored technology **28**
Notes **29**

THE COMPANY

Meltolit was founded in 1963. From the beginning there were only precious metals in the product range but this gradually included silver brazing alloys and copper brass. Eventually welding was included and we now offer a complete range of consumables for welding, brazing and hardfacing.

Our own Meltolit brand includes high quality products for production, repair and maintenance.
The company strength has always been quality, know how and flexibility.

We are situated in Gothenburg, Sweden with both main warehouse and head office from where we serve customers around the globe but with focus on Scandinavia.

BRAZING OVERVIEW

Brazing is a permanent bonding technique, excellent for all kinds of metals, where welding is not useable because of the high working temperature and its limitation when joining different base metals. The brazing filler metal (BFM) penetrates the joint by capillary action and diffuse the base metal. During brazing the base metal is only heated slightly above the BFM melting temperature. This temperature is always below the melting point of the base metals. In most brazing procedures, fluxes are being used either separately or integrated to remove oxides from the surfaces, to enable the BFM to wet. The flux and BFM are sucked into the joint by capillary action, filling the entire joint. Depending on brazing process time, base metal alloy and the BFM's melting range, different fluxes are available.
Brazing has a big advantage when it comes to joining hidden joints, when there is a risk of deformation of the base metal, temperature sensitive joints and from environmental aspects.

There are three categories of brazing; Soldering, hard brazing and high temperature brazing.

SOLDERING
Soldering is mostly used as sealing or creating permanent bonds with demands on conductivity. Soldering is being performed with a working temperature up to 450°C. Filler metals/solders being used are normally tin-alloyed with addition of copper, silver or lead and both with/without flux core.
Typical applications are: Electronic components, cables, roofing components, electrical componets etc.

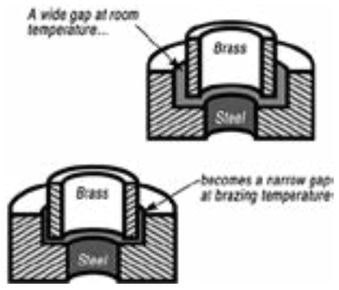
HARD BRAZING
Includes all joints performed at a working temperature from 450°C to 1000°C. Brazing filler metals commonly used are silverbased, silver-copper-phosphorus, aluminum, or brass(sometimes called weld-brazing). When the right joint design is made the joint becomes as strong as the base metal, and proof of Hydrogen and Helium. Typical applications: (see page 28; Applications)

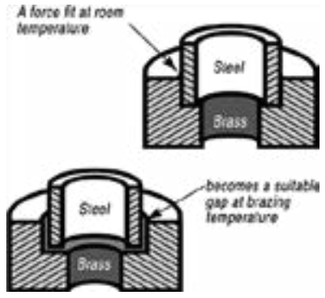
HIGH TEMPERATURE BRAZING
High temperature brazing includes all brazing performed over 1000°C. The high temperature brazing is done in controlled athmosphere in enclosed chambers where vacuum or protection gas prevents the parts from oxidizing so that no fluxes are normally not needed, and therefore requires no after treatment. A high temperature brazed joint will be stronger than the base metal. The filler metals are often copper and nickel based but special silver alloys without zink are also used. This type of brazing can join difficult to join materials like aluminium, titanium, zirkonium, superalloys and ceramics. Typical applications: Aerospace, automotive, turbines, medicinal equipment etc.

THE FUNDAMENTAL 7 STEPS OF BRAZING

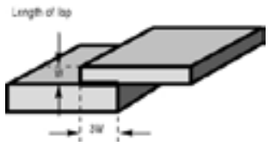
1. SELECTION OF FILLER METAL AND FLUX
This step is determined by what type of base materials to be joined, process requirements and the final parts exposure to different media.

2. CLEARANCES AND FIT OF THE JOINT
Since the BFM penetrates the joint by capillary action its important to have the right clearances and joint design
(see page24; Joint designs) so that the capillary action can work most effectively. If the gap is too tight the brazing filler metal cannot penetrate the joint and if the gap is too wide there will be no capillary action and the BFM will only plate the surfaces. Important also is to calculate the joints in brazing temperature and not room temperature. Different metals have different coefficient of thermal expansion. So if you join dissimilar metals in ex tubular designs this is most important to take this into consideration.





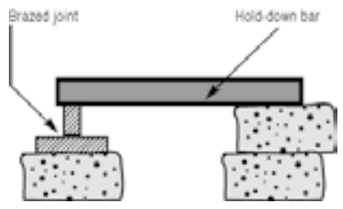
For the lap (lenght) of the bond area or the "joint lenght" you are normally safe to use the thickness of the thinner base metal times three. So if the thinnest pipe in the assembly is 1mm the lap of the joint gap should be 3mm. If you choose a shorter lap you will get a weaker joint and if you choose a longer lap you will may waste brazing filler metal without gaining lap strenght. You may use 4-6 times on special applications.

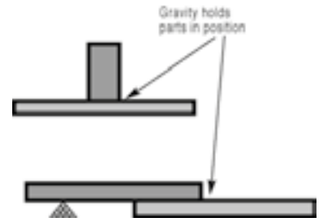


3. CLEANING OF BASE MATERIALS
In order to get a good brazing result the base metal surfaces need to be clean from dirt, oil, scale and other residues. These can be removed chemically or mechanically. Oil and grease first needs to be removed with a suitable degreasing solvent and if there is rust and scale this needs to be removed by abrasive materials. Here we have optimal cleaning cloths for this operation. After cleaning operation you should braze as soon as possible in order to not allow any new oxides to form on the surface of the base metal.

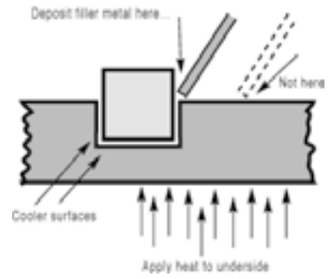
4. FLUX
Oxides form when heating the base materials combined with oxygen from the air. These oxides prevents us from wetting and bonding the surfaces proparly and to protect the surface against oxides we need to apply flux. Flux is used on all open athmosphere brazing operations. Besides from protecting the surface the flux is also used as a temperature indicator and to help the filler metal flow. Fluxes comes in following forms: Powder and paste, flux coating on rods/wires and flux inside rods/wires. The latter is the most recent development in brazing technology.
If you use too much flux you have a larger risk of flux inclusions inside the joint and if you use to little it may lead to not getting enough filler metal inside the joint.
This is why the flux cored technology is developed to make life easier for the operators. (read more on page 28; Flux cored technology)

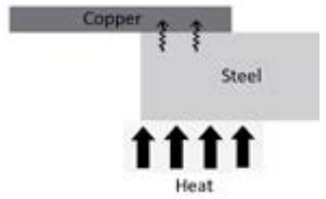
5. FIXTURING, ASSEMBLY
Next step is fixturing of your parts. Its important that they have a good alignment during the brazing cycle so that the clearances of the joint do not shift and the capillary action can work optimal. You also need to consider that no heat absorbing materials should have contact with the joint area. A good solution is to use ceramics or other low heat absorbing materials like inconel or non magnetic steels to avoid the heat from conducting away from the base metals. The easiest way is to use gravity to hold your parts together or add additional weight to hold the down.





6. HEATING METHOD - BRAZING TECHNIQUE
The most commonly used heating sources for brazed joints are: induction, torches, protection gas furnaces and vacuum furnaces. The different heating sources have different advantages depending on the quality of the joint. But the most common heating source is torch brazing. (See page 23; heating sources)
The goal is to have a uniform brazing temperature on both parts of the assembly. Larger parts require more heat than thinner, smaller material so if you have one large and one small component you can put the heat on the large one and the small one will absorbe this heat. Overheating the part for too long may cause cracks and poors in the joint as well as scaling to remove after brazing. When your material is heated enough you add the filler metal and see it flow into the joint.





7. CLEANING FLUX RESIDUES
After brazing is finished you can cool of the parts in water, this will also make the flux residues crack and easily remove. You can also use a wet cloth. The importance of cleaning is due to following resons: 1. If you have an unsuccessfull joint you may have too much flux residues inside the joint and this need to be removed in order to inspect the result.
2. The residues will lead to corrosion if they are not removed and come in contact with water.
3. If you have painting or coating as next step the residues will prevent them from sticking.

SILVER ALLOYS

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	DENSITY g/cm³	COMPOSITION (%) Ag	Cu	Zn	Sn	Si
56Sn	Bare rods & wires Flux coated rods Flux integrated rods Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag156 AWS A5.8 B-Ag7 DIN 8513: L-Ag56Sn	620	655	650	9,4	56	22	17	5	-
Excellent capillarity and offers the best performance of brazeability. High fluidity, low working temperature and good mechanical properties. Used with flame or induction heating. Applications: HVAC, automotive, food industry, medical instruments, compressors etc.											
55Sn	Bare rods & wires Flux coated rods Flux integrated rods Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag155 DIN 8513: L-Ag55Sn	630	660	660	9,3	55	21	22	2	-
Excellent capillarity and offers very good performance of brazeability. High fluidity, low working temperature and good mechanical properties. Used with flame or induction heating. Applications: HVAC, automotive, food industry, medical instruments, compressors etc.											
45Sn	Bare rods & wires Flux coated rods Flux integrated rods Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag145 AWS A5.8 B-Ag36 DIN 8513: L-Ag45Sn	640	680	670	9,2	45	27	25,5	2,5	-
Good capillarity and offers very good performance of brazeability. High fluidity, low working temperature and good mechanical properties. Used with flame or induction heating. Applications: HVAC, appliances, food industry, healthcare etc.											
44	Bare rods & wires Flux coated rods Flux integrated rods Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag244 DIN 8513: L-Ag44	675	735	730	9,1	44	30	26	-	-
Ternary alloy with 44% silver. Suitable where larger gaps cannot be avoided. Applications: HVAC, electrical industry											
40Sn	Bare rods & wires Flux coated rods Flux integrated rods Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag140 AWS A5.8 B-Ag28 DIN 8513: L-Ag40Sn	650	710	690	9,1	40	30	28	2	-
Good capillarity and brazeability. Good fluidity, low working temperature and good mechanical properties. Used with flame or induction heating. Applications: HVAC, appliances, food industry, healthcare etc.											
38Sn	Bare rods & wires Flux coated rods Flux integrated rods Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag134 DIN 8513: L-Ag38Sn	650	720	690	9,1	38	32	28	2	-
Good capillarity and brazeability. Good fluidity, low working temperature and good mechanical properties. Used with flame or induction heating. Applications: HVAC, appliances, food industry, healthcare etc.											
34Sn	Bare rods & wires Flux coated rods Flux integrated rods Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag134 DIN 8513: L-Ag34Sn	630	730	710	9,0	34	36	27,5	2,5	-
Good capillarity and brazeability. High performance and low cost alloy. Used with flame or induction heating. Applications: Refrigeration, automotive etc.											

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	DENSITY g/cm³	COMPOSITION (%) Ag	Cu	Zn	Sn	Si
35	Bare rods & wires Rings & preforms	ISO 17672 Ag235 AWS A5.8 B-Ag35	685	755	750	9,0	35	32	33	-	-
Ternary alloy containing 35% silver and lower fluidity than previous alloys. Used with flame or induction heating. Applications: Industrial applications											
30Sn	Bare rods & wires Rings & preforms	ISO 17672 Ag130 AWS A5.8 B-Ag37 DIN 8513: L-Ag30Sn	665	755	740	8,8	30	36	32	2	-
Good capillarity and brazeability. High performance and low cost alloy. Used with flame or induction heating. Applications: Refrigeration, automotive etc.											
25Sn	Bare rods & wires Rings & preforms	ISO 17672 Ag125 AWS A5.8 B-Ag37 DIN 8513: L-Ag25Sn	680	760	750	8,8	25	40	33	2	-
Medium fluidity and performance. Applications: Joining of steel, brass or copper parts.											
20	Bare rods & wires Flux coated rods Flux integrated rods Strips/foils Rings & preforms Powder & paste	DIN 8513: L-Ag20	690	810	810	8,4	20	45	35	-	0,1
Ternary alloy with 20% silver. Used where brass is not good enough. Applications: Steel parts etc.											

Original photos: EFD Induction

SILVER ALLOYS - HARD METAL

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	DENSITY g/cm³	COMPOSITION (%) Ag	Cu	Zn	Mn	Ni
49	Bare rods & wires Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag449 AWS A5.8 BAg-22	680	705	690	8,9	49	16	23	7,5	4,5
Silver brazing alloy with 49% Ag, Mn and Ni used specifically for brazing tungsten carbides on steel or stainless steel. Saw blades, drill bits, tools etc. Very good flow and excellent tensile properties. The addition of Mn and Ni improves wetting properties and corrosion resistance.											
49A	Strips/foils Preforms	-	670	690	690	8,9	49	27,5	20,5	2,5	0,5
Silver brazing alloy with 49% Ag, Mn and Ni used specifically for brazing tungsten carbides on steel or stainless steel. Saw blades, drill bits, tools etc. Very good flow and excellent tensile properties. The addition of Mn and Ni improves wetting properties and corrosion resistance.											
49 Trifoil	Strips/foils Preforms	ISO 17672 Ag449 AWS A5.8 BAg-22	680	705	690	9,2	49	16	23	7,5	4,5
3 layer sandwitch brazing alloy foil with 49% Ag and a copper core. Used specifically for brazing tungsten carbides on steel. Saw blades, drill bits, tools etc. The copper core works as a stabilizer against internal stress of the joint and will minimize cracks.											
50Ni	Bare rods & wires Flux integrated rods Strips/foils Rings & preforms Powder & paste	ISO 17672 Ag450 DIN 8513: BAg-24	660	705	700	8,4	50	20	28	-	2
Silver brazing alloy with 50% Ag and Ni used for joining of all metals but particularly for brazing tungsten carbides on steel or stainless steel. Saw blades, drill bits, tools etc. With low melting point and alloyed with Ni it increases wetting properties on difficult steels such as chromius, molybdenum etc.											
50Ni Trifoil	Strips/foils Preforms	ISO 17672 Ag450 DIN 8513: BAg-24	660	705	700	9,1	50	20	28	-	2
3 layer sandwitch brazing alloy foil with 50% Ag, 2% Ni and with copper core. Used specifically for brazing tungsten carbides on steel. Saw blades, drill bits, tools etc. The copper core works as a stabilizer against internal stress of the joint and will minimize cracks.											

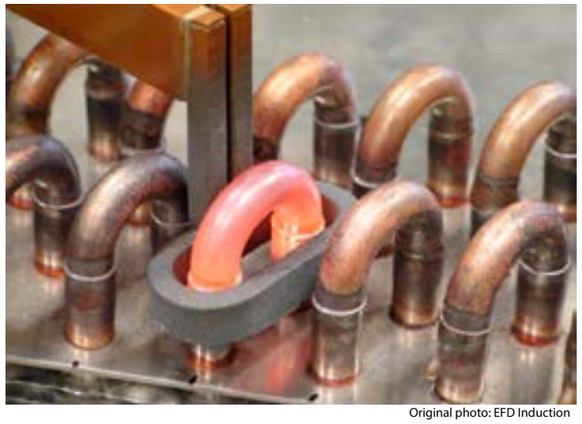
Original photo: EFD Induction

SILVER ALLOYS - SPECIAL

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	COMPOSITION (%) Ag	Cu	Sn	Mn	Au	Ti	In	Ni	Zn
56In	Bare rods & wires Powder & paste	EN 1044: AG 403 DIN 8513: L-Ag56InNi	610	710	720	56	27	-	-	-	-	14,5	2,5	-
Zn free In-alloyed silver brazing alloy with 56% silver. Meltolit 56In is for brazing of steel and stainless steel in both oven brazing as well as standard applications. Used when there are very high demands for corrosion free joint, ex shipping Industry and special heat exchangers.														
60Sn	Bare rods & wires Rings & preforms	EN 1044: AG 402 ISO 17672: Ag 272	600	730	740	60	30	10		-	-	-	-	-
Special alloyed silver brazing alloy with high silver content(60%). Used for nickel and nickel alloys, tungsten alloys and high alloyed steel. The filler metal is Zn-free and for brazing in vakuum or protective gas ovens.														
85Mn	Bare rods & wires Rings & preforms	EN 1044: AG 501 ISO 17672: Ag 485	960	970	980	85	-	-	15	-	-	-	-	-
High temperature brazing alloy with very good flow properties used to join copper, brass, steel or stainless steel. Specially used for stainless steels in wet environments and high risk of interfacial corrosion. Because of the lack of copper it is well suited for ammonia bearing environments. It can be brazed both with flame, induction or protective gas furnace.														
VTG 716	Bare rods & wires Strips/foils Rings & preforms Powder & paste		780	780	780	72	28	-		-	-	-	-	-
Eutectic alloy used for brazing copper, brass, steel or stainless steel. Since its an eutectic alloy it is well suited for furnace applications because there will be no liquidation or vaporization problems.														
70Ti	Powder & paste		780	800	810	70	28	-		-	2,25	-	-	-
Active brazing alloy used for brazing metallic and non metallic objects like ceramics, titanium, super alloys, PCD, CBN etc. Typical applications include vacuum tubes, wave guides in electrical industry and tooling applications involving tungsten. Used in high vacuum furnace or Argon athmosphere with low dew point.														
131	Bare rods & wires Strips/foils Powder & paste	AWS A5.8 BAu-4 AMS 4787	950	950	980	-	-	-		82	-	-	18	-
Can be used for any nickel or iron based heat resisting alloy. Typically used in jet engines. Because of low penetration in the base metal it is well suited to braze thin setions. Also used for nuclear applications.														
7228	Bare rods & wires Strips/foils Rings & preforms Powder & paste		710	730	740	72	-	-	-	-	-	-	-	28
A copper free silver brazing alloy. Used for copper, brass and steel. Because of the lack of copper it is well suited for ammonia bearing environments. It can be brazed both with flame, induction or protective gas furnace.														

COPPER PHOSPHORUS ALLOYS

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	DENSITY g/cm³	RM (MPa)	COMPOSITION (%) Ag	Cu	P
Nr 1	Bare rods & wires Strips/foils Rings & preforms Powder & paste	DIN 8513: L-Cu P2 ISO 17672: CuP 181	710	800	720	8,05	450	-	Rest	7
This alloy was primarily developed for oven brazing of copper. Not so common in Scandinavia where we have regulations for silver content in HVAC installations.										
Nr 850	Bare rods & wires Strips/foils Rings & preforms Powder & paste	DIN 8513: L-Cu P6 ISO 17672: CuP 179	710	840	730	8,1	520	-	Rest	6,4
This alloy was primarily developed for oven brazing of copper. Not so common in Scandinavia where we have regulations for silver content in HVAC installations.										
2P	Bare rods & wires Strips/foils Rings & preforms Powder & paste	DIN 8513: L-Ag2P ISO 17672: CuP 279	650	820	740	8,1	550	2	Rest	6,7
For copper to copper connections in HVAC installations.										
5P	Bare rods & wires Strips/foils Rings & preforms Powder & paste	DIN 8513: L-Ag5P ISO 17672: CuP 281 AWS A5.8: BCuP-3	650	810	710	8,2	650	5	Rest	6
Most common alloy and primarily used for brazing of copper pipes in HVAC installations and heat exchangers.										
5P+	Bare rods & wires Strips/foils Rings & preforms Powder & paste	DIN 8513: L-Ag5P ISO 17672: CuP 282 AWS A5.8: BCuP-7	650	770	710	8,2	600	5	Rest	7
Most common alloy and primarily used for brazing of copper pipes in HVAC installations and heat exchangers. Addition of phosphorus compared to 5P which lowers its melting point and increases the fluidity. No sparking alloy.										
15P	Bare rods & wires Strips/foils Rings & preforms Powder & paste	DIN 8513: L-Ag15P ISO 17672: CuP 284 AWS A5.8: BCuP-5	650	720	700	8,4	530	15	Rest	5
Very high fluidity and good brazing properties. Primarily used in the electrical industry for motors etc. Also used in HVAC for large installations or where a low melting point and excellent fluidity is required. It has high ductility and excellent resistance to vibration.										
18P	Bare rods & wires Strips/foils Rings & preforms Powder & paste	DIN 8513: L-Ag18P ISO 17672: CuP 286	645	645	650	8,4	480	18	Rest	7
Highest silver content of all CuP alloys. Used for brazing of copper and copper-brass pipes in combustible gas installations as well as for delicate work at low temperature.										



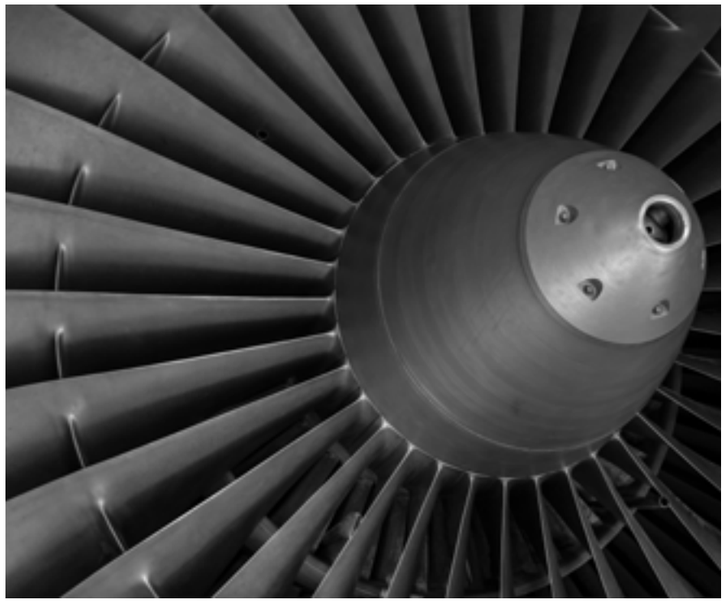
Original photo: EFD Induction

BRASS ALLOYS

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	COMPOSITION (%) Cu	Zn	Sn	Mn	Ni	Ag	Si
900	Bare rods & wires Flux coated rods *Others on demand	DIN 8513: L-CuZn39Sn ISO 17672: Cu 471	870	900	900	59	Rest	1	0,5	0,5	-	0,15
Copper and Zinc-based brazing alloy for joining steel, steel castings and some copper alloys. The deposit will be of brass colour and structure.												
850	Bare rods Flux coated rods *Others on demand	DIN 8513: L-CuZn39Sn ISO 17672 Cu 681	870	900	890	57,5	Rest	0,9	-	Ni+Fe 2,4	-	0,2
Copper and Zinc-based brazing alloy with nickel for higher fluidity and a bit higher mechanical strenght than our Meltolit 900. For joining steel, steel castings and some copper alloys. The deposit will be of brass colour and structure.												
ES942	Bare rods & wires Flux coated rods *Others on demand	DIN 8513: L-Cu58ZnAgSi	850	870	870	59	Rest	-	-	-	1	0,1
Copper and Zink-based bazing alloy with 1% Silver with very good fluidity. Used for brazing of steel, galvanized steel, copper and copper alloys.												
ES945	Bare rods & wires Flux coated rods *Others on demand	DIN 8513: L-CuNiZn42 ISO 17672: Cu 770	870	900	890	49	Rest	-	-	10	1	0,2
Copper and Zink-based bazing alloy with 1% Silver and 10% Nickel with extra godd mechanical strenght and good fluidity. Used for brazing of steel, galvanized steel, copper and copper alloys. This alloy is used in large extent with gliding rolls, bearings etc that are exposed to wear.												
NS95	Bare rods & wires Flux coated rods *Others on demand	DIN 8513: L-CuNiZn42 ISO 17672: Cu 770	890	920	910	49	Rest	0,9	-	10	-	0,2
Nickel-alloyed Zinc-based brazing alloy with high mechanical strenght and good fluidity. For joining steel, steel castings and some copper alloys. This alloy can with success be used to fill cracks in cast-iron and hardfacing machine parts.												

ALUMINIUM ALLOYS

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	DENSITY g/cm³	COMPOSITION (%) Al	Si	Zn
580	Bare rods & wires Flux integrated rods Strips/foils Rings & preforms Powder & paste	EN 1044: AL 104 ISO 17672: AL112	575	585	580	2,65	88	12	-
Most common aluminium brazing alloy with high fluidity due to its high Si-halt of 12%. Meltolit 580 has excellent properties when brazing capillary parts of aluminium. Applications: Automotive, refrigeration, heat exchangers, air conditioning, foundries repair parts, aluminum radiator repairs, electrical cabling, etc.									
Al-2 NC	Bare rods & wires Flux integrated rods Strips/foils Powder & paste	DIN 8513: L-ZnAl2	380	405	415	6,9	2	-	98
Zinc / aluminum containing a non-corrosive flux with cesium for brazing with flame or by induction a large part of industrial aluminum, steel, copper. Applications: Heat exchangers, air conditioners, condenser aluminum alloys, aluminum connecting pipes, aluminum radiator repairs, electrical cabling, dissimilar joints, etc.									
7822 NC	Flux integrated rods Rings & preforms Strips/foils Powder & paste		415	475	480	5,2	22	-	78
Zinc / Aluminum flux cored wire containing non-corrosive flux used with flame or induction for industrial aluminum and a large part of its alloys, steels, copper. Designed to obtain a highly fluid alloy for capillary brazing. Specially suited for repair jobs due to its long temperature intervall. Applications: Heat exchangers, air conditioners, condenser aluminum alloys, aluminum connecting pipes, aluminum radiator repairs, electrical cabling, dissimilar joints, etc.									



NICKEL ALLOYS

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	DENSITY g/cm³	COMPOSITION (%) Cr	B	Si	Fe	C	Ni	P	W	Co
BNi-1	Strips/foils Powder & paste	AWS A5.8 BNi-1 AMS4775/	977	1038	1120	7,8	14	3,2	4,5	4,5	0,7	Rest	-	-	-
High strength, heat resistant and stress resistant. Applications: Jet engine parts, turbine blades															
BNi-1A	Strips/foils Powder & paste	AWS A5.8 BNi-1a AMS4776	977	1038	1120	7,8	14	3,2	4,5	4,5	0,06 Max	Rest	-	-	-
High strength, heat resistant and stress resistant with lower carbon than BNi-1. Good for wide gaps. Applications: Jet engine parts, turbine blades, aircraft, missile, nuclear, food Processing.															
BNi-2	Strips/foils Powder & paste	AWS A5.8 BNi-2 AMS4777	971	999	1065	7,97	7	3,2	4,5	3,0	0,06 Max	Rest	-	-	-
High temperature & high stress resistant alloy for non-Ferrous alloys, steels, thin materials, heat exchangers, honeycomb etc. Low melting alloy for general applications.															
BNi-3	Strips/foils Powder & paste	AWS A5.8 BNi-3 AMS4778	982	1038	1040	8,13	-	3,2	4,5	-	0,06 Max	Rest	-	-	-
Alloy for general applications with tight joint clearances. Applications: honeycomb, missile guidance tubes etc.															
BNi-4	Strips/foils Powder & paste	AWS A5.8 BNi-4 AMS4779	982	1066	1120	8,38	-	1,9	3,5	-	0,06 Max	Rest	-	-	-
Alloy with a wide melting range suited well for large gap applications. Applications: Thin honeycomb, food industry, repair of cracks etc.															
BNi-5	Strips/foils Powder & paste	AWS A5.8 BNi-5 AMS4782	1080	1135	1190	7,65	19	-	10,2	-	0,06 Max	Rest	-	-	-
Heat and corrosion resistant alloy with no boron. Applications: Heat exchangers, honeycomb etc.															
BNi-6	Strips/foils Powder & paste	AWS A5.8 BNi-6 PWA36100	877	877	980	8,13	-	-	-	-	0,06 Max	Rest	11	-	-
Chromium free alloy good for marginal athmospheres. Applications: Aircraft compressors, spark plugs etc.															
BNi-7	Strips/foils Powder & paste	AWS A5.8 BNi-7	888	888	1065	7,9	14	-	-	-	0,06 Max	Rest	10	-	-
Low melting alloy for thin walled tube assemblies and honeycombs etc.															
BNi-8	Strips/foils Powder & paste	AWS A5.8 BNi-8 B50TF94	982	1010			-	-	7	-	0,06	Rest	-	Cu 4,5	Mn 23
Used for crack repairs in most alloys including Nickel, stainless steel, low alloyed steel etc.															
BNi-9	Strips/foils Powder & paste	AWS A5.8 BNi-9 PWA36962	1054	1054	1175	8,16	-	3,2	4,5	-	0,06 Max	Rest	-	-	-
Silicon free alloy good for high stressed parts like jet engines and nozzle assemblies.															
BNi-10	Strips/foils Powder & paste	AWS A5.8 BNi-10 PWA693	971	1160	1175	8,35	12	2,5	3,5	3,5	0,5	Rest	-	16	-
Very high strencght alloy in high temperatures. For metals containing cobalt, tungsten and molybdenum. Applications: Rocket engine turbine parts.															
BNi-11	Strips/foils Powder & paste	AWS A5.8 BNi-11	971	1093	1175	8,45	10	2,5	3,5	3,5	0,4	Rest	-	12	-
Very high strencght alloy in high temperatures. For metals containing cobalt, tungsten and molybdenum. Better flow than BNi-10. Applications: Thin walled combustion chambers															
BNi-12	Strips/foils Powder & paste	AWS A5.8 BNi-12	882	949	1065	7,9	25	-	-	-	-	Rest	10	-	-
Good strenght, heat and corrosion resistance. Applications: Thin walled tubes, honeycombs															
BCo1	Strips/foils Powder & paste	AWS A5.8 BCo-1 AMS4783	1121	1149	1175	7,87	19	0,8	8	-	0,4	17	-	8	51
High temperature strenght used for cobalt and other super alloys. Applications: Honeycomb, turbine parts etc															

COPPER ALLOYS

PRODUCT	DELIVERY FORMS	NORMS	SOLIDUS °C	LIQUIDUS °C	WORKING TEMP °C	DENSITY g/cm³	COMPOSITION (%) Cu	Ag	Ni	P
OF-CU	Bare rods & wires Strips/foils Powder & paste	ISO 17672 Cu110 AWS A5.8 BCu-1b	1083	1083	1120	9,4	99,9	-	-	-
Oxygen free copper alloy for joining of copper, steel and stainless steel. Used in furnace brazing with vacuum, pure dry hydrogen or inert gases, dissociated ammonia or nitrogen atmosphere -50°C dew point or drier.										
SF-Cu	Bare rods & wires Strips/foils Powder & paste	ISO 17672 Cu141	1083	1083	1093-1150	9,3	Rest	-	-	0,5
Oxygen free special copper alloy for joining of grey cast iron and steel as well as copper to copper. Used in furnace brazing with vacuum, pure dry hydrogen or inert gases, dissociated ammonia or nitrogen atmosphere -50°C dew point or drier.										

BRAZING FLUXES

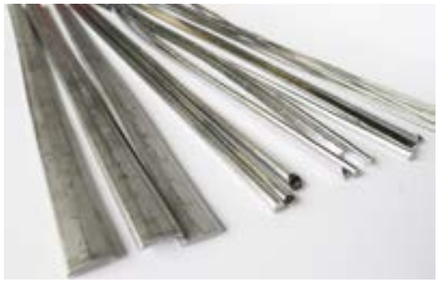
PRODUCT	DELIVERY	NORMS	TEMPERATURE RANGE °C	ALLOYS TO BE BRAZED	APPLICATION
580	Powder	EN ISO 17672 FL10	525-620	Al	Flux for aluminium brazing. Used with Meltolit 580.
580NC	Powder	EN ISO 17672 FL20	550-595	Al	Non corrosive flux for aluminium brazing. Used with Meltolit 580.
600	Powder Paste	DIN EN 1045 FH10 AWS A5.31 FB3A	550-750	Ag, CuP	Flux for silver brazing alloys with high silver. Fine grained particles.
750	Powder Paste	DIN EN 1045 FH10 AWS A5.31 FB3A	580-800	Ag, CuP	Similar to 770 but with shorter temperature intervall
770	Powder Paste	DIN EN 1045 FH10 AWS A5.31 FB3A	550-800	Ag, CuP	All purpose flux for brazing steel, nickel, copper and brass with flame or induction. Applications: Heat exchangers, electrical applications etc
770E Special	Paste	DIN EN 1045 FH12 AWS A5.31 FB3C	600-925	Ag	Suitable for brazing stainless steel and cemented carbides with both flame and induction. Applications: tool industry, automotive etc.
Handy A-1	Paste	AWS A5.31 FB4A	593-871	Ag	Handy flux A-1 is used for applications includes aluminium bronze, aluminium silicon and other ferrous and non ferrous alloys containing small amounts of aluminium or titanium.
Handy B-1	Powder Paste	DIN EN 1045 FH12 AWS A5.31 FB3C	600-925	Ag	Suitable for brazing stainless steel and cemented carbides with both flame and induction. Applications: tool industry, automotive
850	Powder Paste	DIN EN 1045 FH21	750-1100	Brass	Flux for brazing steel above 800 °C.
GASFLUX BRAZECO	Liquid		850-1100	Brass	For automated dispensing of flux through a gas flux machine. Used for brazing steel at high temperatures. Free from Methanol for a better work environment.
GASFLUX	Liquid		850-1100	Brass	For automated dispensing of flux through a gas flux machine. Used for brazing steel at high temperatures.

BRAZING AIDS

PRODUCT	DELIVERY FORMS	COLOUR	TEMPERATURE RANGE °C	DENSITY	
STOP-OFF 460	Paste	Pink	500-2000	1,9	Stop-off prevents the braze alloy from flowing into regions that have tolerances or aesthethic requirements where the braze alloy would do damage. It can also be used to guide alloys into unorthodox joint designs. Specially formulated for better adhesion to base metals where adhesion is most important. Applications may include dip brazing, induction and flame brazing with high velocity torches.
STOP-OFF 470	Paste	White	500-2000	1,98	Stop-off prevents the braze alloy from flowing into regions that have tolerances or aesthethic requirements where the braze alloy would do damage. It can also be used to guide alloys into unorthodox joint designs. Specially formulated for furnace and vacuum furnace brazing but can also be used for torch and induction. It is formulated to minimize post brazing cleaning. After brazing it is reduced to powder and should flake and/or rinse off easily in hot water or with minor agitation.

SOFT SOLDERS - LEAD FREE

PRODUCT	ISO 9453	SOLIDUS °C	LIQUIDUS °C	COMPOSITION (%) Sn	Ag	Cu	Zn	OTHER	DIMENSIONS FLUX CORED	MASSIVE
Sn99,3Cu0,7	Sn99,3Cu0,7	227	227	99,3	-	0,7	-	-	0,15-4,0mm	0,25-10,0mm
Sn100Ni+	Sn99,25Cu0,7Ni0,05	227	227	99,25	-	0,7	-	NiGe 0,05	0,15-4,0mm	0,25-10,0mm
9730	Sn97Cu3	230	250	97	-	3	-	-	0,15-4,0mm	0,25-10,0mm
P30	Sn97Ag3	221	224	97	3	-	-	-	0,15-4,0mm	0,25-10,0mm
Sn95,5	Sn95,5Ag3,8Cu0,7	217	217	95,5	3,8	0,7	-	-	0,15-4,0mm	0,25-10,0mm
Sn99,9	Sn99,9	232	232	99,9	-	-	-	-	-	0,25-10,0mm
ES217	Sn87Ag10Cu3	280	280	87	10	3	-	-	-	0,25-10,0mm
138SnBi	Bi58Sn42	138	138	42	-	-	-	Bi58	-	2,0-10,0mm
Sn90Zn10	Sn90Zn10	199	203	90	-	-	10	-	-	0,25-10,0mm
Sn92Cu8	Sn92Cu8	230	350	92	-	8	-	-	-	0,25-10,0mm
Sn90Zn7Cu3	Sn90Zn7Cu3	200	280	90	-	3	7		-	0,25-10,0mm
Sn99Ag+	Sn99Cu0,7Ag0,3NiGe	217	227	99	0,3	0,7		(NiGe)	0,15-4,0mm	0,25-10,0mm
Bi57Sn42Ag1	Bi57Sn42Ag1	139	139	42	1	-	-	Bi 57	-	1,0-10,0mm



METAL PASTES (CONTAINING FLUX)

PRODUCT	ISO 9453	SOLIDUS °C	LIQUIDUS °C	COMPOSITION (%) Sn	Pb	Ag	Cu	PACKAGE SIZE
9730	Sn97Cu3	230	250	97	-	-	3	100g, 250g
P30	Sn97Ag3	221	224	97	-	3	-	100g, 250g
Sn95,5	Sn95,5Ag3,8Cu0,7	217	217	95,5	-	3,8	0,7	100g, 250g
Sn99,9	Sn99,9	232	232	99,9	-	-	-	100g, 250g
BERA-FIX		183	238	40	60	-	-	500g
40Sn/60Pb	Sn40Pb60	183	190	60	40	-	-	100g, 250g
60Sn/40Pb	Pb60Sn40	183	190	60	40	-	-	100g, 250g
230AI	Sn97Cu3	230	250	97	-	-	3	100g, 250g

SMD PASTES

ALLOY	SOLIDUS °C	LIQUIDUS °C	METAL POWDER FORM	METAL CONTENT	GRAIN SIZES	VISCOSITY	FLUX "Active-Clear"
Sn99Cu0.7Ag0.3	221	227	ball-shaped	85-89%	3= 25-45 µm 4= 20-38 µm 5= 15-25 µm	Low = 680,000 mPas Standard= 780,000 mPas High= 880,000 mPas	EN ISO 9454,1222 DIN EN 61190-1-3 REL1 IPC J-STD-004B
Sn96.5Ag3Cu0.5	217	220					
Sn95.5Ag3.8Cu0.7	217	217					
Sn100Ni+/ Sn100C (Sn99.25Cu0.7Ni0.05)	227	227					

- LEAD CONTAINING

PRODUCT	ISO 9453	SOLIDUS °C	LIQUIDUS °C	COMPOSITION (%) Sn	Pb	Ag	Cu	Zn	OTHER	DIMENSIONS FLUX CORED	MASSIVE
50Sn/50Pb	Pb50Sn50	185	216	50	50	-	-	-	-	0,15-4,0mm	0,25-10,0mm
40Sn/60Pb	Pb60Sn40	183	238	40	60	-	-	-	-	0,15-4,0mm	0,25-10,0mm
60Sn/40Pb	Sn60Pb40	183	190	60	40	-	-	-	-	0,15-4,0mm	0,25-10,0mm
60Sn/38Pb/ 2Cu	Sn60Pb39Cu	183	190	60	38	-	2	-	-	0,15-4,0mm	0,25-10,0mm
60Sn/38P- b/2Sb	Sn60Pb38Sb2	185	240	62	38	-	-	-	Sb 2	-	0,25-10,0mm
Karosseritenn Body filler		188	250	27,5	71	-	-	-	Sb 1,5	-	20x5mm
63Sn/37Pb	Sn63Pb37	-	-	-	-	1,0	<0,1	<0,15	<0,15	0,15-4,0mm	0,25-10,0mm
LAG296	Pb93Sn5Ag2	296	301	5	93	2	-	-	-	0,15-4,0mm	0,25-10,0mm
70Pb/30Sn	Pb70Sn30	183	254	30	70	-	-	-	-	-	0,25-10,0mm
65Pb/35Sn	Pb65Sn35	183	245	35	65	-	-	-	-	-	0,25-10,0mm

FLUXES FOR FLUX CORED SOLDERS

PRODUCT	DIN EN 29454.1 DIN EN 61190-1-3	BASIS	SOLIBLE	ACTIVATION	APPLICATION	CLANING POST SOLDERING
RA	1.1.2.B ROM1	resin, rosin	Alcohol	Organic acid	Electronic mechanics	In rare cases
CLEAR	1.2.2.B REM1	modified resin	Alcohol	Organic acid Halide containing	Electronic	No
SP	1.1.2.B ROM1	organic	Water	Amine halide free	Copper, steel	Yes
KD	3.1.1.B	non organic	Water	Zinkchloride Ammoniumchloride	Copper, steel	Yes
VA	3.1.1.C	non organic	Water	Nonn-organic Halide containing	Stainless steel	Yes
EL	1.1.3.B ROL0	resin, rosin	Alcohol	Organic acid Halide free	Electronic	No
ELR	ORL0	organic	Alcohol	Organic acid Halide free	Electronic	No
AI	2.1.2.C	organic	Water	Amine	Aluminium	Yes
Laser-RA	REM1	modified resin	Alcohol	Organic acid Halide containing	Electronic mechanics	In rare cases
Kolo	1.1.2.B ROL0	rosin modified rosin	Alcohol	Resin	Copper, led	No

ALUMINIUM - ZINK SOLDERS

PRODUCT	ISO 9453	SOLIDUS °C	LIQUIDUS °C	COMPOSITION (%) Sn	Pb	Ag	Cu	Zn	OTHER	DIMENSIONS FLUX CORED	MASSIVE
230Al	Sn97Cu3	230	250	97	-	-	3	-	-	1,5-2,0mm	-
FD-Al	Sn60Zn40	200	340	99,25	-	-	-	40	NiGe 0,05	-	0,25-10,0mm
75Sn/25Zn	Sn75Zn25	200	325	75	-	-	-	25	-	-	0,25-10,0mm

BEARING METALS / BABBIT ALLOYS

ALLOY	DELIVERY FORMS
Sn89Sb7,5Cu3,5	8-10kg blocks, wires
Sn81,3Sb12Cu6Zn0,6Ag0,1 (MS^2)	8-10kg blocks, wires
PbSb14SnCuAs (WM9)	8-10kg blocks, wires
PbSb15Sn10 (WM10)	8-10kg blocks, wires
SnSb12Cu6Pb (WM80)	8-10kg blocks, wires

SOLDERING FLUXES

Meltolit

PRODUCT	DIN EN 29454.1	APPLICATION	PACKAGING UNIT
EFFEKTO 1	DIN EN 29454.1 3.1.1.A (F-SW 12)	Copper, alloys, steel, led, galvanized metal	1 l
Solder liquid	DIN EN 29454.1 3.1.1.A (F-SW 12)	Copper, steel	100ml, 500ml, 1000ml
Solder grease	DIN EN 29454.1 3.1.1.C (F-SW 21)	Copper alloys	50g, 70g, 100g, 250g
Solder grease Bera	-	Copper alloys, steel, stainless steels, roofing	70g
Z-fluss	DIN EN 29454.1 3.2.2.A (F-SW11)	Copper alloys, steel, stainless steels	100ml, 250ml, 500ml
Z-fluss Spezial	DIN EN ISO 9454-1 3241	High alloyed stainless steels	100ml, 250ml
ZD-Pro	DIN EN 29454.1 3.2.2.A (F-SW11)	Zink, Reinzink, Nedzink	100ml, 250ml
Lödgel allround	DIN EN 29454.1 3.1.1.A	Bright rolled metals in the roofing trade	500ml
Gelclean	-	Copper	125g
600 Al	DIN EN 29454.1 2.1.2.C (F-LW 2)	Aluminium alloys Mg content <1,2%, copper	30ml, 100ml, 500ml

PACKAGING DETAILS

	BARE SILVER RODS 1,0x500mm 268 rods/kg (56Sn) 1,5x500mm 119 rods/kg (56Sn) 2,0x500mm 67 rods/kg (56Sn) 2,5x500mm 43 rods/kg (56Sn) 3,0x500mm 30 rods/kg (56Sn) WIRES 0,5-3,0mm		FLUX CORED ALUMINIUM 1,6x500mm 2,0x500mm 3,0x500mm WIRES 1,0-3,0mm
	FLUX COATED SILVER RODS 1,5x500mm 2,0x500mm 3,0x500mm COATING THICKNESSES Standard Reduced Very reduced Super reduced		BRASS FLUX COATED & BARE RODS 1,5-3,0mm x 500-1000mm WIRES 1,0-3,0mm
	FLUX CORED SILVER RODS (IF) 1,6x500mm 155 rods/kg (56SnIF) 2,0x500mm 91 rods/kg (56SnIF) 2,5x500mm 61 rods/kg (56SnIF) 3,0x500mm WIRES 0,7-3,0mm		SOLDER RODS 1,5-10mm
	SILVER PHOS 1,5x500mm, round and square 2,0x500mm, round and square 2,5x500mm, round and square 3,0x500mm, round and square WIRES 1,0-3,0mm		SOLDER WIRES 0,15-4,0mm
	STRIPS 0,1-0,5mm thickness 2,0-80,0mm width TRIFOILS 0,2-0,5mm thickness 2,0-80,0mm		FLUXES 100g, 250g, 500g, 1kg, 2,5kg, 3,5kg, 10kg
	POWDER & PASTE Silver, CuP, Cu, Al, Brass, Ni Syringes: 30cc, 55cc Jars: 1,0-10kg		SB DISPLAY Small packs of most common brazing alloys. For more info on the range visit www.meltolit.se
	RINGS & PREFORMS Silver, CuP, Cu, Al, Brass, Ni Contact materials	Meltolit QUALITY WELDING AND BRAZING CONSUMABLES	

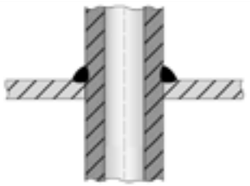
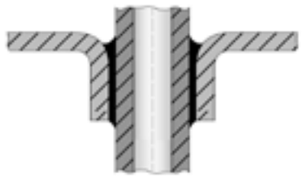
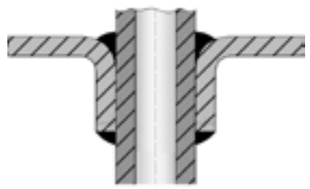
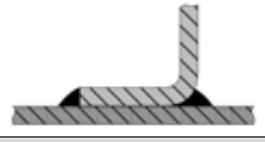
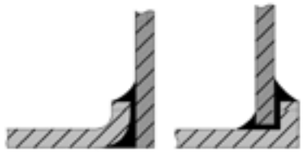
HEATING SOURCES

Meltolit

	FLAME BRAZING Most common used heating source with a mix of two gases, oxygen and acetylene. Also propane and drawn-in air is used sometimes for lower temperaure brazing. This type fits most applications and a flux is necessary to remove the oxides on the base material.
	INDUCTION Used where a controlled and rapid heating is required. Often the best solution for production where you can control the result every time. A flux is necessary to remove the oxides. Optimal to use together with flux cored brazing material to obtain consistant results for every brazed joint. Original photo: EFD Induction
	FURNACE BRAZING High temperature brazing in a controlled athmosphere where a protective gas is used to remove the oxygen and the oxides from the base metal. Used for moderate to high volume productions in a continious conveyor oven with separate chambers, (pre-heat, high heat and cooling) separated with flame or gas curtains in the start and finish. Fluxes can be added to braze difficult to braze materials like aluminium, titanium and zirconium. Typically used in automotive, heat exchangers etc.
	VACUUM BRAZING High temperature brazing for joining of complex details. Parts are placed in a closed vacuum furnace where they are not moving though the brazing process. Usually involves both thin and thick base materials as well as multiple joint at the same time. Used where high demands of strenght and density are present. Typical industries are aerospace, turbines, medicinal etc. Can also be used to join difficult to braze materials like ceramics, superalloys, titanium, zirkonium etc.
	SOLDERING IRONS Used for electronic soldering of circuit boars and cables. A flux is necessary to remove the oxides.

FLAME TYPES		
NEUTRAL	OXIDIZING	REDUCING
Equal amount of oxygen and gas. Used when a more concentrated and more hot flame is required. No blue feather in the flame.	More oxygen than the other types and the most hot flame. It produces a loud hissing sound. Rarely used in brazing, only on cast iron and oxygen containing copper. It does not reduce the oxides on the base metal.	More gas than oxygen. Creates a light blue feather. This flame is recommended for brazing. Its a slightly cooler flame and heats the part more evenly. Gives the best quality joints.

JOINT DESIGNS

WELDED JOINT	BRAZED JOINT	BRASS BRAZED JOINT
PIPE CAPPING		
PIPE JOINING		
PIPE JOINING SHEET METAL		
		
BUTT JOINT		
FILLET JOINT		
		
FILLET JOINT		
		

TECHNICAL DATA

DENSITY

ALLOYS	ALUMINIUM d : 2,7 g/cm³		TITANIUM d : 4,5 g/cm³		STAINLESS STEEL d : 7,85 g/cm³		COPPER d : 8,9 g/cm³	
Ø	g/m	m/kg	g/m	m/kg	g/m	m/kg	g/m	m/kg
0.6	0.76	1310	1.27	786	2.22	450	2.52	397
0.8	1.36	735	2.26	442	3.94	254	4.47	224
1.0	2.12	472	3.53	283	6.16	162	6.98	143
1.2	3.05	328	5.08	197	8.87	113	10.06	100
1.6	5.42	184	9.04	111	15.77	63	17.88	56
2.0	8.48	118	14.13	71	24.65	41	27.95	36
2.4	12.21	82	20.34	49	35.48	28	40.23	25
3.0	19.07	52	31.79	31	55.46	18	62.88	16
3.2	31.70	46	36.17	28	63.10	16	71.54	14
4.0	33.91	29	56.52	18	98.59	10	111.78	9
5.0	52.99	19	88.31	11	154.06	7	174.66	6

d : density, g/m : gram per meter, m/kg : meter per kg

CONVERSION TABLE INCH TO MM

1 Inch = 25,4mm		
Ø mm	Ø (inch)	Ø (inch)
0.6	1/44	0.0236
0.8	1/32	0.0315
1.0	1/ 26	0.0393
1.2	3/64	0.0472
1.6	1/16	0.0629
2.0	5/64	0.0781
2.4	3/32	0.0945
3.2	1/8	0.1259
4.0	5/32	0.1574

METALS

METALS	CHEMICAL ELEMENTS
Ag	Silver
Al	Aluminium
Au	Gold
Bi	Bismuth
Cd	Cadmium
Co	Cobalt
Cr	Chromium
Cu	Copper
Fe	Iron
Hf	Hafnium
In	Indium
Mg	Magnesium
Mn	Manganese
Mo	Molybdenum
Ni	Nickel
Nb	Niobium
P	Phosphorus
Pd	Palladium
Sb	Antimony
Si	Silicium
Sn	Tin
Ti	Titanium
Ta	Tantalum
V	Vanadium
W	Wolfram
WC	Wolfram carbide
Zn	Zink
Zr	Zirkonium

APPLICATIONS

HEATING AND VENTILATION

APPLICATIONS

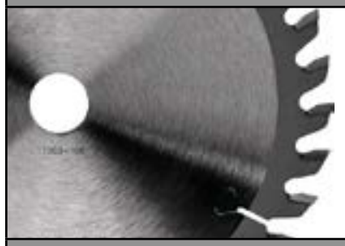
Heat exchangers, radiators, plumbing, boilers, heaters, condensers, evaporators etc

AUTOMOTIVE

APPLICATIONS

Fuel pipe systems, AC systems, break systems, radiators etc

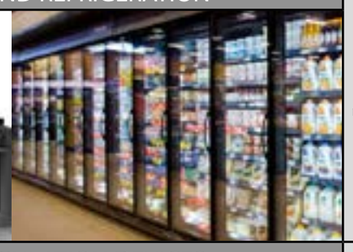
CARBIDE TIPPED TOOLS



APPLICATIONS

Sawblades, diamond rock tools, drillbits, cement cutting tools, wood cutting tools, knives etc

AIR CONDITIONING AND REFRIGERATION



APPLICATIONS

Household appliances, evaporators, condensors, refrigerators, refrigeration systems, fans, AC systems etc

MEASURING AND REGULATION DEVICES

APPLICATIONS

Thermostats, measuring devices, regulation devices, manometers etc

SOLAR PANELS

APPLICATIONS

Thermal solar panels, heaters, windmills etc

ELECTROMECHANICAL CONSTRUCTIONS

APPLICATIONS

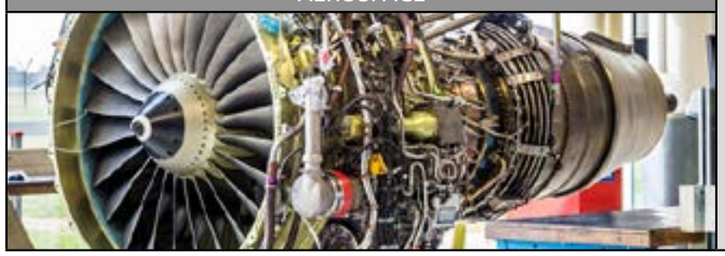
Power generators, transformers, electrical motors, switches, relais etc

TUBULAR STRUCTURES

APPLICATIONS

Bicycles, frames, chairs, wheel chairs, furniture, lamps etc

AEROSPACE



APPLICATIONS

Engines, turbines, compressors, fuel systems etc

FLUX CORED TECHNOLOGY

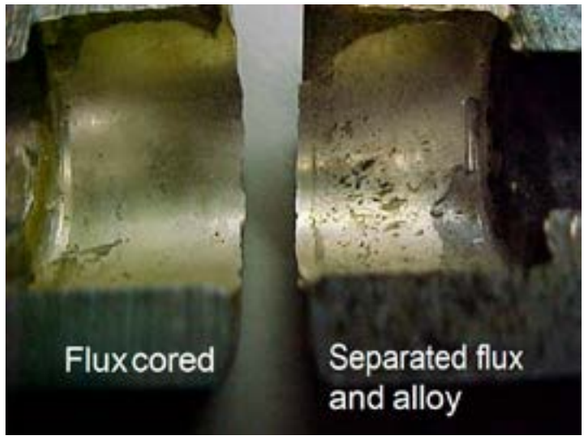
The flux cored concept introduces flux inside a brazing wire for one single product ready to use.

ADVANTAGES

- Simplifies the brazing process by eliminating separate flux and increases productivity.
- Produces stronger joints of higher quality due to concistent application of alloy and flux and enhances process control.
- Reduces flux residues in the production facility and post cleaning due to minimal flux exposure. Flux residues are between 4 to 10 times less than separate flux operation but still enough to give a high quality joint. Gives less contamination on parts, machines and fixtures that will lead to cost savings in maintanace.
- Less mass to heat compared to solid material, leads to shorter melting time, better productivity and base material is less affected by the temperature.
- Less filler metal is used (typically 20%)
- Optimal use together with induction heating system to get the most optimized brazing result every time

Environmetal advantages
- No resine(binder) inside compared to flux coated material leads to less fumes for the operator. 100% flux inside.
- Flux inside the rod - no more pfysical contact with chemicals by the operators
- No more flux waste and residues on machines, fixtures and other equipment, production facility will be cleaner and healthier

Equal joints brazed by separate alloy and flux as well as flux cored material shows us there is less voids and flux inclusions. Ultra sound tests have also been made to confirm that flux cored material will give >5% better degree of filling. This can be of extra importance if the depth of the joint is too big. This is common in some industries where a standardized part is used.



RANGE

- The range of filler metals include most silver brazing alloys as well as 4 different aluminium brazing alloys
- Different types include wires, rods, rings and wire segments/preforms (flat, round and oblong)
- Standard dimensions from 1,0-3,0mm, others on requests
- Various types of inside flux depending on application

NOTES

NOTES

NOTES

For welding and
hardfacing consumables
see our other catalogues
or visit www.meltolit.se

J A Gahms gata 4, S-421 31 Västra Frölunda
Tel. +46 (0)31- 748 52 25 Fax +46 (0)31- 28 64 65
info@meltolit.se www.meltolit.se