



JO FLUX[®]

BRAZING FLUX SOLUTIONS



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About us...

Jo flux® is **20 Year-Old** organization engaged in providing one stop solution in welding, brazing & soldering fluxes. We deliver customized, industry - based solution for metal joining process in refrigeration & air conditioning, tool making, automotive, plant construction & plumbing industry.

Jo flux® is committed to providing the highest quality products and services in the brazing and soldering industry.

It is our policy not to simply recommend and supply suitable fluxes-but also to advise you on how to construct your work piece so that it is suitable for brazing / soldering process. We can also advise on selection of brazing/soldering consumable, brazing machines & furnaces.

In 1993

Started as distributors (trading unit) for non - ferrous brazing alloys in the Indian market.

In 1999

Jo flux sets up in Bhosari, Pune region (about 15 km from Pune city) with the new building to manufacture industrial soldering fluxes..

In 2003

Sets up State-of-the-art laboratory and R & D Division.

In 2006

The industrial soldering flux range is expanded to new products in electronic soldering flux & brazing flux, Thanks to R & D Division.

In 2010

Sets up new plant in Khadakwasala, Pune region (about 12 km from Pune city) with the new building to manufacture inorganic chemistry base raw material (chemicals) required in manufacturing brazing & soldering fluxes.

In 2013

Bhosari plant starts exclusive production of electronic soldering fluxes (organic based chemistry).

In 2019

Started manufacturing of new generation brazing fluxes , free of boric acid & borax.

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BRAZING FLUX SOLUTIONS

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Brazing Flux Applications

- Aircraft equipment
- Air-conditioning equipment
- Automobile parts
- Brewery equipments
- Bicycle frames
- Chemical plants
- Compressors
- Carbide tips
- Diamond cutting tools
- Diamond Segments
- Diamond drills
- Diamond tipped saw blades
- Cooking utensils
- Dairy equipment
- Diesel engine
- Electric appliances
- Electric apparatus
- Fire arms
- Fire extinguishers
- Fixtures
- Fishing equipment
- Gaskets
- Gauges
- Heating elements
- Imitation jewellery
- Instruments
- Kettles
- Laundry equipment
- Locomotive
- Machineries
- Mining equipment
- Marine equipment
- Oil coolers
- Optical frames
- Paper cutting knives
- Pipe and fittings
- Refrigeration
- Telecommunication
- Plumbing & Sanitary Facilities
- Renewable Energy, Solar Panels



Overview...



Product Advantages...

The purpose of the brazing flux is to promote the formation of sound brazed joints by protecting both the Base metal and filler metal from oxidation continually during the brazing cycle and preventing further oxidation from contact with the atmospheric oxygen. The brazing flux also serves to remove surface Oxides and therefore reduce the surface tension to promote freer flow of filler metal.

Why JO FLUX® series of fluxes will produce a better braze joint because:

- Reduce the surface tension of the filler alloy & the base metal.
- The formation of oxides is prevented and will not burn the work.
- Brazing alloy flow easier, faster, and more smoothly.
- Is fully & completely active during brazing operation.
- Has the right consistency for easy application.
- Contains no coarse crystals or solid partials.
- The braze joint will be clean, which means fewer rejects.

Flux Selection

While selecting a flux for any particular application the following points need to be considered

- Selected heating method
- Base metals
- Selected filler alloy
- Clearance and joint design
- Heating cycle time
- Acceptable working temperature
- Production quantities
- Flux removal

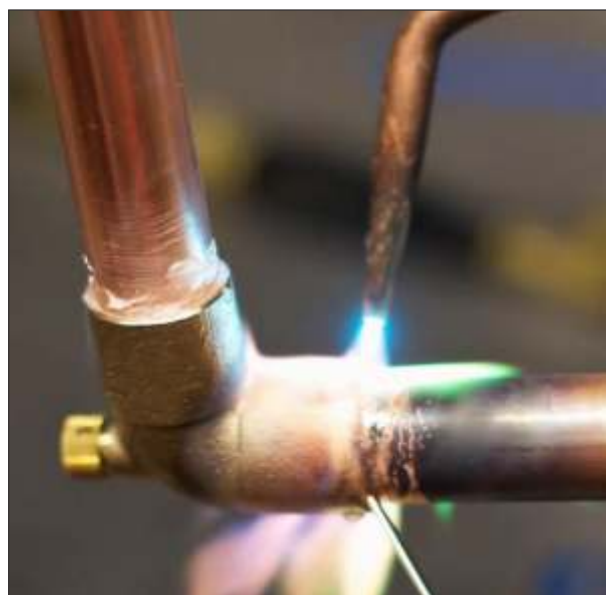
The most important technical property of fluxes is their active range. This property is indicated by two temperatures: the lower one is the temperature at which flux starts to be active, the upper one is the temperature at which the flux is exhausted and will not perform its deoxidant and protective function.

It is a good rule to choose flux in such a way so that the lower temperature is at least 50°C lower than the solidus temperature (melt) of the brazing alloy to be used, and the upper temperature is at least 50°C higher than the liquidus temperature (flow) of the alloy. Many different types of fluxes are available, each with different

chemical composition, activity temperature range and properties, that may be used with different alloys, different range products and for different applications. For example when reference is made to EN 1045 FH10 or AWS TYPE FB3-A, many fluxes are given the same classification, yet they have different properties and characteristics.

The fact that fluxes are proprietary formulations often causes problems if one wants to change from one Manufacturer's product to another's. Operators will say that the flux does not work as well. This could be the case, but in many cases what the operator is saying is that it works differently, or perhaps more likely that it reacts differently when heated. This is too expected, as each formulation will result in a flux with different characteristics. What must be assessed is whether the difference is good, bad, or indifferent and whether the joints produced are of acceptable quality.

Rather than just selecting one flux from JO FLUX® range, it could be well be worth testing two or three that appears to be suitable, to see which provides the best 'on-the-job' performance..



Flux selection is determined by the base metal and the filler metal alloys working temperature. The working temperature and melting range of the filler alloy must match the flux's active range.

Silver Brazing Fluxes Lomelt® Series - General Purpose

Lomelt® A Flux Powder



Recommended for :

- Used for brazing of steel, copper, copper alloys, nickel & nickel alloys.
- Dissimilar metals in the above metal group can be easily brazed.
- Ideal for working with a hot rod.
- Activity range : 500°C - 800°C

Description & Flux characteristics :

- Lomelt® A is a general purpose silver brazing powder flux.
- Excellent capillary & Fluidity.
- High activity medium life flux.

General information :

- Based on specification : EN 1045 FH10. For use with BAg and BCuP group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from brazed joint area. After brazing clean flux residues from the brazed joint by soaking and then brushing under a hot water.

Lomelt® 58 Flux Paste



Recommended for :

- Used for brazing of steel, stainless steel, copper, copper alloys, nickel & nickel alloys.
- Dissimilar metals in the above metal group can be easily brazed.
- Most suitable for production work with flame & induction brazing.
- Activity range : 565°C. - 870°C.

Description & Flux characteristics :

- Lomelt® 58 is an all - purpose white silver brazing paste flux.
- Excellent wetting and heat resistance properties.
- Good capillary and Fluidity.
- High activity medium to long life flux.

General information :

- Based on specification : AWS A5.31M : TYPE FB3-A. For use with BAg and BCuP group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water.
- Standard Packing : 250 gms, 500 gms, 1000 gms.

Silver Brazing Fluxes Lomelt® Series - Low Temperature

Lomelt® Flux Powder



Recommended for :

- Used for brazing of steel, stainless steel, copper, copper alloys.
- Induction heating.
- Fast heating cycles.
- Most suitable for tight fit joints.
- Activity range : 450°C - 750°C.

Description & Flux characteristics :

- Lomelt® is a low-temperature silver brazing powder flux.
- Excellent capillary & Fluidity.
- High activity short to medium life flux.
- Can be mixed with water to make a paste.

General information :

- Proprietary flux formulation. Used with BAg (High silver content alloys) group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues from brazed joint by soaking & and then brushing under a hot water.
- Standard Packing : 500 gms.

Lomelt® 50 Flux Paste



Recommended for :

- Used for brazing of steel, stainless steel, copper, copper alloys.
- Application by brushing or dipping of components.
- Activity range: 500°C - 775°C.

Description & Flux characteristics :

- Lomelt®55 is a low-temperature silver brazing paste flux.
- Spreads more over the surface of the parts to be brazed.
- Will give smooth fillets & fine joint appearance.
- Good capillary & Fluidity.
- Very high activity medium life flux.

General information :

- Proprietary flux formulation. Used with BAg (High silver content alloys) and BCuP group alloys.
- Flux removal Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues from the brazed joint by soaking & and then brushing under a hot water.
- Standard Packing : 250 gms, 500 gms.

Lomelt® Silver Brazing Fluxes – Medium Temperature

Lomelt® 55 Flux Paste/powder

**Recommended For :**

- Used for brazing of steel, stainless steel, copper, copper alloys, carbides, nickel & nickel alloys.
- Suitable for tight fit joints as well as loose fit joints.
- Induction & flame brazing.
- Activity ranges 550°C - 800°C.

Description & Flux Characteristics :

- Lomelt® 55 is a general purpose medium temperature silver brazing flux
- Excellent resistance to overheating.
- Good capillary and fluidity.
- High activity medium life flux.

General Information :

- Based on specification : EN1045 FH10. For use with BAg (high to medium silver content alloys) and BCuP group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from brazed joint area. After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water.
- Standard packing : 500, 1000 gms.

Lomelt® 59 Flux Paste

**Recommended For :**

- Used for brazing of steel, stainless steel, copper, copper alloys, nickel & nickel alloys.
- Used with medium to low silver content brazing alloy.
- Special formulated flux for high-temperature stability.
- Activity range: 565°C - 870°C.

Description & Flux Characteristics :

- Lomelt®59 is a medium temperature silver brazing paste flux.
- High oxide removal property.
- Work well with extend heating cycle.
- Medium to long life flux.

General Information :

- Based on specification: AWS 5.31m: type FB3-A. For use with BAg (medium to low silver content alloys) BCuP group alloys.
- Flux removal : flux residues left by this flux are corrosive and must be removed from brazed joint area. After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water.
- Standard packing : 500, 1000 gms.

Lomelt® B Flux Powder

**Recommended For :**

- Used for brazing of steel, stainless steel, copper, copper alloys, nickel & nickel alloys.
- Dissimilar metals in above group can be easily brazed.
- Ideal for working with hot rod.
- Activity range : 600°C - 870°C.

Description & Flux Characteristics :

- Lomelt® B is a medium - temperature silver brazing powder flux.
- Excellent capillary and very high fluidity.
- High activity medium life flux.

General Information :

- Based on specification : AWS 5.31m : type FB3-F. For use with BAg(high to medium silver content cadmium free brazing alloys) BCuP group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from brazed joint area. After brazing clean flux residues from brazed joint by soaking then brushing under a hot water.
- Standard packing : 500 gms.

Lomelt® Silver Brazing Fluxes – High Temperature

Lomelt® 60 Flux Paste

**Recommended For :**

- Used for brazing of steel, stainless steel, copper, copper alloys, carbides, nickel & nickel alloys.
- Most suitable for furnace and induction brazing.
- Most suitable where higher working range flux is needed such as with medium to low silver content filler metals.
- Activity range : 565°C - 870°C.

Description & Flux Characteristics :

- Lomelt® 60 is a high-temperature silver brazing paste flux.
- Excellent temperature and time stability at the top of its activity range.
- High capillary long life flux with wide working range.

General Information :

- Based on specification : AWS A5.31m: type FB3 – A. For used with BAg (medium to low silver content alloys having liquidus temperature more than 750°C) BCuP group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from brazed joint area. After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water.
- Standard packing : 1000, 500 gms.

Silver Brazing Fluxes Oxiflux® series For Tungsten Carbides

Oxiflux® Silver Brazing Fluxes For Tungsten Carbides And Tungsten Carbide Backed Poly Crystalline Diamond (pcd).

Oxiflux® Flux Powder



Recommended for :

- Used for brazing of tungsten carbide, tungsten carbide backed PCD and certain grades of cast iron .
- Suitable for flame and induction brazing.
- Activity range: 570°C - 870°C.

Description & Flux characteristics :

- Oxiflux® is a special purpose silver brazing white powder flux. Perfect wetting action.
- Wide active range.
- High activity medium to long life flux.

General information :

- Based on specification: AWS A5.31M: TYPE FB3-F. For use with BAG (High to medium silver brazing alloys containing nickel and manganese) group alloys.
- Flux removal: Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues by mechanical removal methods & soaking in hot sodium hydroxide solution and followed by brushing under a hot water.
- Standard packing : 500 gms, 4 kg.

Oxiflux® 600 Flux Paste



Recommended for :

- Used for brazing of cemented tungsten carbide, tungsten carbide backed PCD, stainless steel and hard metals.
- Suitable for flame and induction brazing.
- Activity range : 550°C - 850°C.

Description & Flux characteristics :

- Oxiflux® 600 is a special purpose silver brazing brown paste flux.
- Content elemental form boron metal powder.
- Effective on refractory oxides
- High activity Medium life flux.

General information :

- Based on specification : EN 1045 FH12. Used with BAG (High silver brazing alloys containing nickel and manganese) group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues by mechanical removal methods & soaking in hot sodium hydroxide solution and followed by brushing under a hot water.
- Standard Packing : 500 gms.

Oxiflux®630 Paste Flux



Recommended for :

- Used for brazing of cemented tungsten carbide, tungsten carbide backed PCD, stainless steel, hard metals & certain grades of cast iron. Refractory metals.
- Good temperature – Time stability.
- Suitable for rapid heating (induction brazing) methods.
- Activity range: 565°C - 925°C.

Description & Flux characteristics :

- Oxiflux®630 is a special purpose silver brazing brown paste flux.
- Content elemental form boron metal powder.
- Perfect wetting of brazing alloy.
- High activity long life flux.

General information :

- Based on specification: AWS A 5.31M : TYPE FB3-C. -Used with BAG (High to medium silver brazing alloys containing nickel and manganese) group alloys.
- Flux removal: Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues by mechanical removal methods & soaking in hot sodium hydroxide solution and followed by brushing under a hot water.
- Standard Packing : 500 gms.

Oxiflux®650 Powder Flux



Recommended for :

- Used for brazing of cemented tungsten carbide and tungsten carbide backed PCD.
- Suitable for flame and induction brazing .
- Activity range: 550°C - 850°C.

Description & Flux characteristics :

- Oxiflux®650 is special purpose silver brazing powder flux.
- Content elemental form boron metal powder.
- Most suitable where low to medium temperature is required for cutting tool manufacturing.
- Medium life flux.

General information :

- Based on specification : EN1045 FH12. Used with BAG (Low temperature high silver brazing alloys containing nickel) group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water.
- Standard Packing : 500 gms.

Silver Brazing Fluxes – Desinged For Specific Metals

Lomelt® 57 Flux Paste

**Recommended for :**

- Used for brazing of low and mid alloyed steel, stainless steel, brass, nickel, nickel alloys, carbide and heat resistant alloys.
- Especially for ferrous metals.
- Activity range : 550°C - 800°C.

Description & Flux characteristics :

- Lomelt® 57 is excellent smooth general purpose silver brazing paste flux.
- High oxide dissolving properties.
- High capillary medium to long life flux.

General information :

- Based on specification: EN1045 FH10. For use with BAg (High to medium silver content alloys) BCuP group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water.
- Standard Packing : 250, 500 , 1000 gms.

Free Flow Flux Powder

**Recommended for :**

- Used for brazing of stainless steels and brass.
- High fluoride gives excellent fluxing activity on stainless steel and brass.
- Most suitable flux for dental tools and dairy equipments & stainless steel food utensils.
- Activity range : 550°C - 775°C

Description & Flux characteristics :

- Free Flow is special grade silver brazing powder flux for stainless steel and brass.
- Prevents refractory oxides while brazing operation.
- Good capillary and high fluidity.
- Very High activity medium life flux.

General information :

- Based on specification : proprietary formulation. For use with BAg (High silver content) group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water.
- Standard Packaging : 500, 1000 gms.

Alumbronze Flux Paste

**Recommended for :**

- Used for brazing of copper – aluminum alloys and Bronze – aluminum alloys with 2 to 8% aluminum.
- Activity range: 550°C - 775°C.

Description & Flux characteristics :

- Alumbronze is a special grade silver brazing paste flux for copper-aluminum and bronze – aluminum alloys.
- Very high cleaning properties'.
- Medium life flux.

General information :

- Based on specification: Proprietary formulation.
- Used with BAg (High silver content alloys) group alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water.
- Standard Packaging : 1000 gms.

High Temperature Gas Welding / Brazing Fluxes For Copper Based (Brasses, Low Fuming Bronze, Nickel Bronze And Manganese Bronze) Welding / Brazing Alloys.

Bronze Flux : Flux Powder



Recommended for :

- Used for Gas welding / Brazing of low, mild steel & copper.
- Most suitable for small to medium size automobile ferrous components.
- Used with copper based (brass and low fuming bronze) filler metals.
- Activity range : 800°C - 1100°C

Description & Flux characteristics :

- Bronze Flux is a high-temperature bronze welding / brazing white powder flux.
- Easy removal of flux residues.
- Good fluidity with medium to long life flux.

General information :

- Based on specification : EN 1045 FH21. For used with RBCuZn Group alloys.
- Flux removal : Flux residues left by this flux are non - corrosive. After brazing / welding clean flux residues by mechanical removal methods & soaking in hot sodium hydroxide solution and followed by brushing under a hot water.
- Standard Packing : 500 gms, 4kg.

Braze Flux : Flux Powder



Recommended for :

- Used for Braze welding of copper, brass and bronzes and brazing of copper and steel etc.
- Suitable for flame and induction brazing.
- Useable in either powder or paste form.
- Activity range : 750°C - 1100°C.

Description & Flux characteristics :

- Braze Flux is high-temperatures universal braze welding applications white powder flux.
- Sodium free High activity long life flux.
- More effective at medium to higher working temperature.

General information :

- Based on specification : EN 1045 FH21. For used with RBCuZn (low fuming bronze, nickel bronze & manganese bronze) group alloys.
- Flux removal : Flux residues left by this flux are non - corrosive. After brazing / welding clean flux residues by mechanical removal methods & soaking in hot sodium hydroxide solution and followed by brushing a under hot water.
- Standard Packing : 500 gms, 4 kg.

Brass Flux : Flux Powder



Recommended for :

- Used for brazing of steel and copper.
- Most suitable for silicon brasses and low silver content brazing alloys.
- Useable either in powder or paste form.
- Suitable for flame and induction brazing heating.
- Activity range : 750°C - 1100°C.

Description & Flux characteristics :

- Brass Flux is high-temperature brazing white powder flux.
- Active early in its working range.
- Promotes good fluidity.
- Medium to long life flux.

General information :

- Based on specification : EN 1045 FH 21. For used with BAg (Low silver content brazing alloys) and RBCuZn (Silicon brasses and Low fuming bronze) group alloys.
- Flux removal : Flux residues left by this flux are non-corrosive. After brazing / welding clean flux residues by mechanical removal methods & soaking in hot sodium hydroxide solution and followed by brushing a under hot water.
- Standard Packing : 500 gms.

HT Flux Flux Paste



Recommended for :

- Used for brazing / welding of copper, copper alloys, mild & low alloyed steel and tungsten carbide.
- Most suitable for induction brazing application.
- Good choice for brazing of tungsten carbide tools.
- Activity range : 750°C - 1200°C.

Description & Flux characteristics :

- HT Flux is high-temperature brazing white paste flux.
- More effective at higher working temperature.
- High activity long life flux.

General information :

- Based on specification : EN 1045 FH 21. For used with RBCuZn and Copper based high-temperature (containing cobalt, nickel & manganese) group alloys.
- Flux removal : Flux residues left by this flux are non-corrosive. After brazing / welding clean flux residues by mechanical removal methods & soaking in hot sodium hydroxide solution followed by brushing a under hot water.
- Standard Packing : 1000 gms.

Aluminum Gas Welding / Brazing Fluxes

Aluweld Flux Powder

**Recommended for :**

- Used for welding of Aluminum and its alloys.
- Used with pure aluminum filler rod.
- Use full fusion technique with neutral flame.
- Activity range : 550°C - 650°C.

Description & Flux characteristics :

- Aluweld is gas welding powder flux.
- Suitable for joining of pure aluminum castings not containing zinc.
- Leaves water soluble (corrosive) flux residues.
- High activity with good fluidity.

General information :

- Based on specification : AWS A5.31 M: FB1-A. For use with AL1188(pure aluminum) filler rod.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the weld/ brazed joint area. After the welding / brazing clean flux residues by dipping in dilute nitric acid followed by cold water rinse then a hot water rinse.
- Standard Packing : 500 gms.

Alubraze Flux Powder

**Recommended for :**

- Used for welding of aluminum and (Aluminum – Mg & Aluminum – Si) its alloys.
- Versatile flux used primarily with gas- oxygen torches (flame) but also in selected induction and furnace application.
- Activity range : 550°C - 650°C.

Description & Flux characteristics :

- Alubraze is all purpose chloride-fluoride based powder flux for brazing / welding of sheet and cast aluminum.
- It dissolves all oxide coated on base metal, eliminate porosity and promotes strong joint.
- Leaves water soluble (corrosive) flux residues.

General information :

- Based on specification : AWS A5.31 M : FB1 – A. For use with AL1188 (pure aluminum), AL4043 (5%Silicon) and AL5356 (5% Magnesium) group aluminum filler alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from weld/brazed joint area. After the welding / brazing clean flux residues by dipping in dilute nitric acid followed by cold water rinse then a hot water rinse.
- Standard Packing : 500 gms, 20 kg.

Fixal Flux Powder

**Recommended for :**

- Used for brazing of aluminum and its alloys (Max 1.5%Mg / Max 1% Si) and dissimilar joining of aluminum – stainless steel.
- Used with primarily with gas-oxygen torches (flame) but also in selected induction & furnace brazing application.
- Activity range : 500°C - 650°C.

Description & Flux characteristics :

- Fixal is active chloride-fluoride based aluminum brazing powder flux.
- Most suitable for brazing of radiators, air conditioning, household appliances, electrical appliances, electrical heating systems and transformer bus bar.
- Used neutral to slightly carburizing flame.
- Leaves water soluble (corrosive) flux residues.

General information :

- Based on specification : EN1045 FL10. For use with AL4047(12% silicon) aluminum filler alloy.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues by dipping in dilute nitric acid followed by cold water rinse and then a hot water rinse.
- Standard Packing : 250 , 500 gms.

Fixal – L Flux Powder

**Recommended for :**

- Used for brazing of aluminum and its alloys (Max 1.5%Mg / Max 1% Si).
- Used with Flame and selected induction brazing systems.
- Activity range: 450°C - 600°C.

Description & Flux characteristics :

- Fixal – L is an active chloride –fluoride based low temperature powder brazing flux.
- Excellent capillary and fluidity at very low melting point.
- Ensures complete spread of brazing alloy in and around the joint.
- Leaves water soluble (corrosive) flux residues.

General information :

- Based on specification : Proprietary flux formulation. For use with AL4047(12%silicon), AL4045(10% silicon), AL4145(9 to 11% silicon and 3 to 5% Cu) aluminum filler alloys.
- Flux removal : Flux residues left by this flux are corrosive and must be removed from the brazed joint area. After brazing clean flux residues by dipping in dilute nitric acid followed by a cold water rinse and then a hot water rinse.
- Standard Packing : 250 , 500 gms.

Soft Soldering Fluxes

Soldaflux

Recommended for :	Description & Flux characteristics :	General information :
<ul style="list-style-type: none"> Used for soldering of copper and brass radiators and heat exchanges. Activity range : 165°C - 350°C. 	<ul style="list-style-type: none"> Soldaflux is liquid type soldering flux. High activity non-chelating less corrosive flux. High temperature stability. Less smoke and odor. 	<ul style="list-style-type: none"> Proprietary flux formulation. For use with tin-lead, tin- silver soldering group alloys. Flux removal : After soldering clean flux residues from soldered joint by rinse in a cold water followed by brushing under a hot water. Standard Packing : 20 liters and 50 liters polyethylene containers.

Soldaflux Stain Gel

Recommended for :	Description & Flux characteristics :	General information :
<ul style="list-style-type: none"> Used for soldering of stainless steel, carbon steels and copper base alloys. For flame and induction soldering. Activity range : 165°C - 350°C. 	<ul style="list-style-type: none"> Soldaflux stain gel is a semi fluid soldering paste flux. Highly reactive flux dissolves the chromium oxide layer to promote improved wetting of soldering alloy. 	<ul style="list-style-type: none"> Proprietary flux formulation. For use with tin-lead and tin-silver soldering group alloys Flux removal : After soldering clean flux residues from soldered joint by rinse in a cold water followed by brushing under a hot water. Standard Packing : 500, 1000gms.

Flxal - S Gel / Liquid

Recommended for :	Description & Flux characteristics :	General information :
<ul style="list-style-type: none"> Used for low temperature soldering of aluminum and aluminum alloys. Effective on soldering of aluminum to copper, aluminum to brass and aluminum to plated terminals. Can be used with all soldering techniques, including soldering gun, flame, furnace and dip soldering. Activity range: 160°C - 325°C. 	<ul style="list-style-type: none"> Flxal - S is low temperature soft soldering flux available in gel and liquid form for particular applications. Gel form ideal for soldering of aluminum and aluminum alloys radiators and condenser. Liquid form ideal for dip soldering of aluminum wire to copper wire which provide low electrical resistance contact surface. Conductive and low-corrosive flux residues. 	<ul style="list-style-type: none"> Proprietary flux formulation. For use with tin-silver, tin-lead and zinc-aluminum soldering group alloys. Flux removal : After soldering clean flux residues by a rinse in a hot water. In application where water cannot be used, methyl or isopropyl alcohol can be used to remove post-solder residues. Standard Packing : 250, 500 gms.

- Special brazing flux formulations are available for titanium , ceramics and cast iron.
- We can formulate fluxes according to the customers specification.
- Kindly contact us for the correct flux in the correct form....

Basic Steps For Successful Brazing

1. Joint design

2. Pre cleaning

3. Fluxing the parts

4. Assembly for brazing

5. Heating the joint and applying the filler alloy

6. Cleaning the brazed joint

1. Joint design : A comparison of the different joint designs used in welding and brazing is shown below :

the most common type of joint used in brazing is the lap joint in the case of tubular components.

To design a good lap joint, two criteria should be considered: **A** the joint gap **B** the degree of overlap. It is these two parameters determine the ultimate joint strength, and not the properties of the filler metal. The joint clearance between parts should not be too tight nor should be too loose. An optimum clearance is about 0.4 mm.

2. Pre cleaning : All grease, rust or plain dirt must be thoroughly removed chemically or the most common type of joint used in brazing is the lap

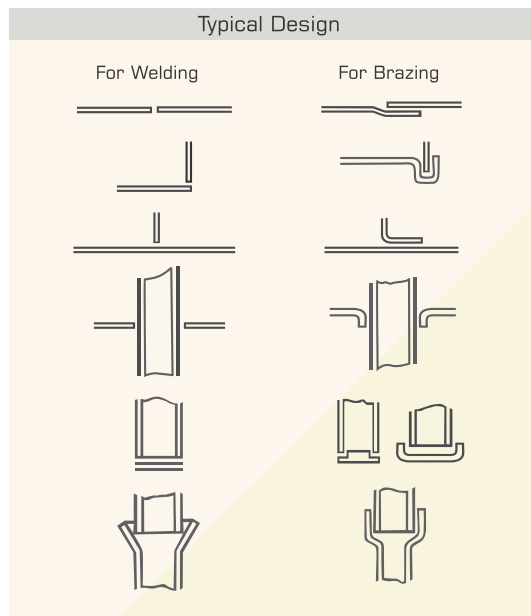
joint in the case of tubular components. To design a good lap joint, two criteria should be considered : **A** the joint gap **B** the degree of overlap. It is these two parameters determine the ultimate joint strength, and not the properties of the filler metal. The joint clearance between parts should not be too tight nor should be too loose. An optimum clearance is about 0.4 mm.

3. Fluxing the parts : Apply paste flux with a brush on the joint surface and filler alloy before heating. This will prevent oxidation of parts during heating resulting in free flow of brazing filler metal. A flux powder should be mixed to a creamy consistency with water and few drops of detergent.

4. Assembly for brazing : Parts should be securely held in position (proper jig and fixture) during brazing.

5. Heating the joint and applying the filler alloy : When heating a joint for brazing it must be essential that slowly and evenly heated to the brazing temperature. Apply brazing alloy when the flux is molten. Continue heating until the molten filler alloy smoothly flows around joint surface.

6. Cleaning the brazed joint : After brazing clean flux residues from brazed joint by soaking and then brushing under a hot water. When alloy is solidified the joint can be quenched in water to help remove flux residues. Quenching should only be carried out when it will not damage the properties of the parent metal or cause cracking because of stresses caused by the thermal shock.



Flux Properties Technical Considerations

- Be capable of dissolving the oxides of the base metals on which it is used.
- Retain low viscosity to permit its ready displacement from capillary gaps by brazing material.
- Melt at a lower temperature than the melting point of brazing material to be used with it.
- Mix readily with water to form a smooth paste free from coarse crystals.
- Retain its paste form for a reasonable time and be capable of being re-mixed if it dries out.
- Wet the work to which it is applied as an aqueous paste.
- Cover the work adequately while in the stage of heating.
- Remain on vertical surface when fused.
- Have a reasonably sufficient life without tiring when brazing operation are prolonged.
- Have a residues which are easy to remove.



Brazing Alloys And Suggested Fluxes Chart

Silver Brazing Alloys Bearing Cadmium

NOMINAL COMPOSITION %							MELTING RANGE		SUGGESTED FLUXES
Ag	Cu	Zn	Cd	-	-	-	Solidus °C	Liquidus °C	
50	15	16	19	-	-	-	620	640	Lomelt 50
45	15	16	24	-	-	-	607	618	
43	16	20	21	-	-	-	615	620	
40	19	21	20	-	-	-	595	630	Lomelt A
38	20	22	20	-	-	-	605	650	
35	26	21	18	-	-	-	605	700	Lomelt 58
30	28	21	21	-	-	-	600	690	
25	30	27.5	17.5	-	-	-	607	682	Lomelt B
25	35	26.5	13.5	-	-	-	605	745	Lomelt 55
20	40	25	15	-	-	-	605	765	Lomelt 58
17	41	26	16	-	-	-	620	760	Lomelt 59
12	50	31	07	-	-	-	620	825	Lomelt 60

Silver Brazing Alloys Cadmium Free With Tin

NOMINAL COMPOSITION %							MELTING RANGE		SUGGESTED FLUXES
Ag	Cu	Zn	Sn	-	-	-	Solidus °C	Liquidus °C	
56	22	17	5	-	-	-	618	652	Lomelt B
55	21	22	2	-	-	-	630	660	
45	27	25	3	-	-	-	640	680	Lomelt 55
40	30	28	2	-	-	-	650	710	
38	32	28	2	-	-	-	650	720	Lomelt A
34	36	27	3	-	-	-	630	730	
30	36	32	2	-	-	-	665	755	Lomelt 59
25	40	33	2	-	-	-	680	760	
18	50	30	2	-	-	-	720	790	Lomelt 60

Silver Brazing Alloys Cadmium Free

NOMINAL COMPOSITION %							MELTING RANGE		SUGGESTED FLUXES
Ag	Cu	Zn	Sn	-	-	-	Solidus °C	Liquidus °C	
50	34	16	-	-	-	-	688	744	Lomelt B Lomelt 58 Lomelt 55 Lomelt 59
45	30	25	-	-	-	-	670	740	
40	30	30	-	-	-	-	675	725	
35	32	33	-	-	-	-	680	750	
30	38	32	-	-	-	-	680	765	
25	41	34	-	-	-	-	700	800	Lomelt 60 Oxiflux 630
20	44	35.9	0.1	-	-	-	690	810	
12	48	40	-	-	-	-	800	830	

Silver Brazing Alloys For Tungsten Carbide Tipped Tools

NOMINAL COMPOSITION %							MELTING RANGE		SUGGESTED FLUXES
Ag	Cu	Zn	Ni	Mn	Cd	-	Solidus °C	Liquidus °C	
50	15.5	15.5	3	-	16	-	630	690	Oxiflux Oxiflux 600 Oxiflux 630 Oxiflux 650
50	20	28	2	-	-	-	660	750	
49	27.5	20.5	0.5	2.5	-	-	670	690	
49	16	23	4.5	7.5	-	-	625	705	
40	30	28	2	-	-	-	670	779	
27	38	20	5.5	9.5	-	-	680	830	Oxiflux 630
25	38	33	2	2	-	-	707	801	



Silver - Copper - Phosphorous Brazing Alloys

NOMINAL COMPOSITION %							MELTING RANGE		SUGGESTED FLUXES
Ag	Cu	P	-	-	-	-	Solidus C°	Liquidus C°	
18	75	7	-	-	-	-	645	650	Lomelt A
15	80	5	-	-	-	-	650	800	
6	87	7	-	-	-	-	643	718	
5	89	6	-	-	-	-	650	810	Lomelt 58
2	91	7	-	-	-	-	643	788	Lomelt B
2	91.4	6.6	-	-	-	-	643	824	
1	92.5	6.5	-	-	-	-	650	810	Lomelt 57
-	92.7	7.3	-	-	-	-	710	820	
-	93.8	6.2	-	-	-	-	710	880	

Brass Brazing / Bronze Brazing Alloys

NOMINAL COMPOSITION %							MELTING RANGE		SUGGESTED FLUXES
Cu	Zn	Si	Mn	Sn	Ni	others	Solidus °C	Liquidus °C	
60	39.7	0.3	-	-	-	-	890	900	Bronze Flux
60	39.6	0.2	0.2	-	-	-	900	915	Brass Flux
59	39.7	0.2	-	1	-	-	888	899	Braze Flux
58	39.4	0.1	0.3	0.9	0.6	0.7fe	866	882	
50	39.7	0.3	-	-	10	-	890	920	Braze Flux
50	39.7	-	0.3	-	9	1 Ag	890	920	
57	39	-	2	-	-	2co	890	930	
55	35	-	4	-	6	-	880	920	Ht Flux



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Contact us :

Nachiket Sales

Regd. Office : Flat 33, D2 Bldg., Rajyog, Sinhagad Road, Pune 411068.

Tel no.: +91 9850840410 Email : lomelt@yahoo.co.in

Web: www.joflux.com / www.silverbrazingflux.com

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