

MAGNA 88C

DESCRIPTION:

Magna 88C is a special solder type alloy that has been designed for applications requiring higher strength than that obtained from ordinary soft solders.

Magna 88C has a much higher remelt temperature than ordinary soft solders, and thus can be used for electric motor armatures where melting of solders at high temperatures is a problem. Magna 88C prevents "throw out" of solder alloy.

Magna 88C has superior wetting qualities when compared with ordinary solders. Magna 88C has a flux core which is far more active than rosin cored solders. Thus flux has the ability to penetrate deep into the pores of the metal and cleaning the metal enables Magna 88C to penetrate deep into the grain boundaries.

Magna 88C has a special affinity for stainless steel and has wide uses in the food industry where foodstuffs are likely to come into contact with soldered joints, because of its lead free formulation. Magna 88C has a variety of uses in the refrigeration industry and has a far better resistance to tarnishing than the more common soft solders in the food industry. Magna 88C is perfectly safe for use where foodstuffs are likely to come into direct contact with the soldered join, because of its lead free formulation.

Magna 88C has a variety of uses in the refrigeration industry and has a far better resistance to tarnishing than the more common soft solders. Rupture pressure rating at 38°C (100°F) is 725 psig.

Magna 88C may be applied by means of a flame or by using a soldering iron, making it an extremely versatile alloy.

Magna 88 flux may be used in conjunction with Magna 88C improve flow in long laps or difficult to bond metals.

Stainless steel is readily soldered with Magna 88C. Due to the very low thermal conductivity of stainless steel, it is advisable to use a large, hot soldering bit. It

is necessary to apply Magna 88 Flux liberally to the joint area. Any good solder joint design can be used; as in all solder joint design, make certain that the solder does not have to contribute to the structural strength of the assembly. Magna 88C readily wets to the stainless steel. The alloy should be applied to the junction between the flat face of the soldering iron and the stainless steel, rather than applying the alloy to the soldering iron. This is because the flux in the core of the solder will gas off when applied to the hot iron, rather than flowing down the side of the iron to the base metal as the alloy does.

Soldering stainless with a torch is more difficult and should not be done unless it is not practical to use an iron. With a torch it is difficult not to overheat. Overheating causes distortion and also causes the stainless steel to oxidize readily. Once a thick film of surface oxidization occurs, it is impossible to solder until the oxidized surface is abraded and mechanically removed. When using a torch, use the smallest possible flame and adjust to a highly carburizing flame and keep the torch in constant motion to avoid overheating. Since Magna 88C only requires 212°C for bonding, only the smallest amount of heat is required and this is why indirect heating, or heating with an iron is preferred.

When soldering very dirty stainless steel in maintenance, the food and chemical residues may be so heavy as to interfere with soldering unless they are removed. They should be removed with mechanical methods such as filing or scraping, or if only of light nature, with water and a soft brush. If extremely dirty, or if dirt exists embedded in seams, wash with a strong chemical solvent such as muriatic acid. Do not use any wire brush for cleaning as this usually rubs more dirt into the surface than it removes.

After soldering the only treatment necessary is removal of the flux which can be done with warm water. The flux can be removed perfectly by rinsing first in hot water containing 2% of concentrated hydrochloric acid per gallon of water, then a hot rinse followed by clear water rinse.

APPLICATION

Clean and degrease area to be joined. Brush Magna 88 flux over prepared area then apply a gentle heat, using a soldering iron or an oxyacetylene torch with a small tip, adjusted to a soft carburizing flame. Using an iron as the heat source is preferable, particularly on intricate work.

Transfer welding alloy using a soldering technique and allow preheating to conduct Magna 88C through the joint. If flow becomes sluggish, lightly play the flame or the iron over the area ensuring you do not burn the molten alloy.

Wash remains of any surplus flux away, using hot water.

When applied on Stainless Steel

Use Corium 93 to shift heavy build ups of dirt and grease.

Prevent formation of oxides which will weaken the strength of the weld, avoid over- heating the Stainless Steel. If applying Magna 88C with an oxyacetylene torch, select a very small tip and an excess acetylene flame. Be sure not to overheat since over- heated stainless steel becomes oxidized and is difficult to bond. Magna 88C only requires 220°C (429°F) so oxidation should be avoided.