

"It Can Be Done"
With **Johnson**®



ALUMINUM REPAIRS MADE EASY!

Zn/Al Flux-Coated 'Repair' Rods & Al/Si Flux-Cored 'Brazing' Rods



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It Can Be Done
With
JOHNSON



DayRod 820

**Flux Coated Aluminum Repair Rods Are
CADMIUM FREE... Much Safer To Use!**



**Zn/20Al 'Hard Solder'
has Melting Range of
698°F - 806°F**



The only 80Zn/20Al alloy rod with DayCoat, Non-Charring Flux. Melts fast, flows quickly and consistently, has superb wettability, allows easy, attractive looking repairs, and amazing gap-filling! Available in Tubes with 10 DayRods, or in Boxes of 50 DayRods. To Order Call **800-747-0030**, IA, or **716-881-3030**, Buffalo, NY.

As advertised in NARSA'S April/May Cooling Journal



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With
JOHNSON



'WonderBrazes'

**Flux-Cored, #4047 Al/12Si Brazing Rod
"Greatest Strength at the Lowest Temp!"**

**Al/12Si 'Brazing Alloy'
Eutectic Melting Point
1170°F - 1180°F**

**WonderBrazes
Contains NO
CADMIUM!**





This Al/Si near eutectic alloy is combined with a highly proprietary flux core that melts fast, to easily wet most cladding alloys without disturbing the parent metals underneath. Otherwise, as one shop owner from Texas has put it, "You could risk losing the whole crop!" Johnson's WonderBrazes is .076" OD x 18" long and it's available in packs of 10 coils, or in a tube that contains 100 rods, as shown above. Be sure to request a sample today! To order call **800-747-0030**, IA, or **716-881-3030**, Buffalo, NY

As advertised in NARSA'S June/July Cooling Journal

MANY PROFESSIONAL REPAIR SHOPS UTILIZE BOTH OF THESE UNIQUE ALLOY/FLUX COMBINATIONS, BASED ON WHATEVER TYPE AND TEMP THE REPAIR MAY REQUIRE. SUGGESTIONS FOR USE SHOWN ON THE REVERSE SIDE:

SUGGESTIONS FOR PROPER USE:

Johnson Manufacturing Company offers a variety of alloys and appropriate flux combinations to repair various types of aluminum heat exchangers, as well as other alloy products. Important: Rod and flux selections for any specific application must be determined by the USER based on their experience with a torch, as well as knowledge about the feasibility of the techniques that may be required for properly repairing any alloy component. Johnson products do not contain the toxic element Cadmium (Cd), yet it is always important to read the Safety Data Sheet (SDS) before using any metal joining product.

DayRod 820 & 982, Zn/Al Flux-Coated Repair Rods

Before repairing 'CAB' brazed radiators, heater cores, parallel flow condensers, charge air coolers, etc., dry brush the repair area using a stainless steel toothbrush to remove the expired brazing flux and oxide coatings on its surface. For new, never brazed aluminum components, using a product like Scotchbrite, not sandpaper, may be sufficient. DO NOT BEAD BLAST ALUMINUM before making any repair as it may embed silicon or other contaminants into the surface, making it much more likely to resist wetting by the flux, and/or ball up, or repel the flow of any repair rod!

Using a 'Gas/Air' torch along with any common fuel gas, Acetylene, L-P, MAPP, or Natural Gas, preheat the general area around the repair site. The object is to build up enough heat, and prevent it from being lost just long enough to make a successful repair, but without overheating, or melting the base metals! Learning how to achieve the best "time-at-temperature" for each aluminum repair is what it's all about!

When heating aluminum using the outer, reducing part of the flame, you may observe a slight blush on the surface indicating it's time to touch the repair site with your DayRod. Avoid using the inner cone, or oxidizing part of the flame directly on a repair, and never heat the rod directly, as this may cause flux to drop off the rod, so more is needed. If the temperature is adequate, the DayCoat flux will flow off tip of the rod, followed almost immediately by the silvery flow of the molten DayRod alloy. If your temperature is insufficient, continue heating a few seconds longer, while bringing outer flame slightly closer to the repair from either side. Once the silvery flow of the alloy is observed, remove all heat and allow the repair to solidify naturally, in just a matter of seconds. Scan Johnson's QR Code on front page for video.

WonderBraze 718, Al/12Si Flux-Cored Brazing Rods

Repairing aluminum heat exchangers using the eutectic brazing alloy requires greater care when applying heat, because its melting temperature is much closer to that of aluminum. In order to quickly reach the brazing temperatures, Oxygen is typically mixed with Acetylene, or other fuel gases to boost flame temps. Based on the higher intensity of Oxy/Fuel torches, smaller tips are generally used with neutral to slightly reducing flame settings, this while keeping well back in the flame and moving the heat continuously.

When the proper brazing temperature has been reached, a highly proprietary, non-corrosive flux inside the core of every WonderBraze rod quickly becomes fluid, to melt and flow in and around the repair, just a second or two before the rod itself becomes molten. At that very instant, it is possible to add more flux and filler metal into the molten braze pool, but while taking care to avoid overheating. This is extremely helpful when brazing to cast, or heavier cross sections. Once an operator reaches the skill level to master torch brazing, they often continue using WonderBraze, or equivalent, in order to produce strong, permanent repairs, while covering a wider range of applications.

Post cleaning of repaired areas is not required for either flux; both are non-corrosive. Under normal use and conditions, galvanic corrosion should not occur as a result of using DayRod 820, or 982 Zn/Al filler metals. Both Zn/Al and Al/Si alloys and have been used for aluminum heat exchanger repair for decades!