



Soft Soldering Fluxes

Introduction

Johnson Matthey has a range of soldering fluxes predominantly designed for industrial soldering applications.

Flux Selector Chart

| Flux | Recommended For Use On | Corrosive / Non corrosive | Working Range °C | Product Availability |
|--------------------------|---|---------------------------|------------------|----------------------|
| Soft Solder Flux No. 1S™ | Carbon steel / stainless steel | Corrosive | 180-350°C | 1 litre |
| Soft Solder Flux No. 2S™ | Copper / brass | Intermediate | 180-350°C | 0.5 litre |
| Soft Solder Flux No. 3S™ | Copper / brass / carbon steel / stainless steel | Corrosive | 180-350°C | 1kg |

Soft Solder Flux No. 1S™

This highly active liquid is recommended for use on stainless and carbon steels, and is active up to 350°C where it possesses good wetting and spreading properties. The flux may also be used on non-ferrous alloys where there is a need for an active flux.

With some of the lower melting point alloys such as P5™ and P40™ the flow of the molten solder will be improved with a degree of superheat. The residues are corrosive and should be removed after soldering by immersion in hot or cold water.

Soft Solder Flux No. 2S™

The flux shows good wetting properties up to 300°C and is particularly effective with the tin based soft solders such as P5™ and LM10A™.

Soft solder flux No. 2S™ is a liquid intermediate / semi-corrosive flux for use on copper and brass.

The water-soluble residues are semi-corrosive. It is recommended that residues be removed to prevent any possibility of contamination after soldering.

Soft Solder Flux No. 3S™

Soft Solder Flux No. 3S™ is a semi fluid paste flux active up to at least 350°C.

It is recommended for use on all common engineering materials except aluminium. The flux is widely used on carbon and stainless steel with solders such as P5™ and LM10A™ and is effective on copper and brass with all solders including LM5™ and A5™.

Residues are corrosive and should be washed off using hot water.



Johnson Matthey

Metal Joining York Way, Royston, Hertfordshire, SG8 5HJ, UK

Telephone: +44 (0) 1763 253200

Fax: +44 (0) 1763 253168

email: mj@matthey.com

www.jm-metaljoining.com



Soft Soldering Fluxes

Rosin based or inorganic acid fluxes

Flux cored wire or soldering paste systems for use with tin-lead or tin-copper solders and containing rosin-based fluxes are available as 'RMA' systems without 'activation' and only trace halide content or with various levels of 'activation' from 'RA' (0-0.5% halide content) to 'HA' (typically 1% halide content).

Fluxed binder systems in this group are only suitable for soldering copper and brasses. The ability of these binder systems to solder a brass will depend upon the level of activation used within the flux. Residues from these systems are non-corrosive and may be left on components.

Fumes from rosin containing fluxes present a risk to health and safety and in particular can cause asthma. Fumes should be controlled to prevent exposure to operators.

For more information consult the HSE publications:

[COSHH WL17 - Soldering: Hand-held with lead-base, rosin-cored solders](#)
[Controlling health risks from rosin \(colophony\) based solder](#)

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