



Product RA10

June 2003

RA SOLDER CREAMS

Multicore RA10 has been formulated as an active product for printing and reflow in air. RA10 solder creams offer good open time, high soldering activity and good printing quality.

- High activity to deal with poor component solderability
- Suitable for printing and dispensing applications.
- Good slump resistance
- Good tack performance and printer open time

PRODUCT RANGE

Multicore RA10 solder creams may be supplied with powder made from most solder alloys in the Multicore Product Range. The most common alloys used are Sn60, Sn62 and Sn63 conforming to the purity requirements of JSTD-006 and EN 29453. Minimum order requirements may apply to certain alloys and powder particle sizes.

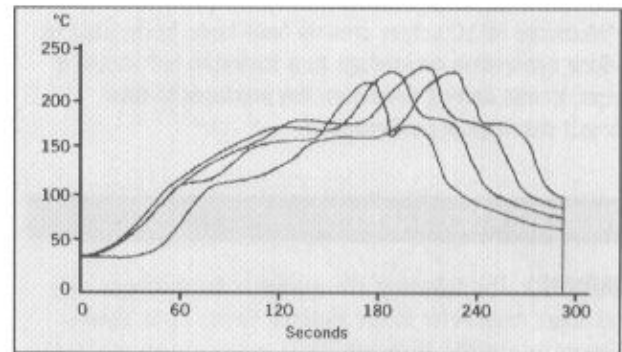
Multicore RA10 contains an RA type of activator and will be suitable to meet the demands of high volume production processes using components and boards, which have less than the desirable level of solderability.

RA10 may be used as a No Clean Solder Cream for many consumer electronics assembly processes.

Metal Content, % in RA10 Solder Creams For Particular Applications				
Application (Viscosity)	Solder Powder Particle Size			
	Size Multicore Code	53-38 μ m AAS	45-20 μ m AGS	38-25 μ m DAS
Dispensing (500,000cP)		86 (500,000)	-	-
Screen Printing (650,000cP)		88 (650,000)	-	-
Stencil Printing (820,000 900,000cP)		90 (820,000)	90 (850,000)	90 (900,000)

RECOMMENDED OPERATING CONDITIONS

Reflow: It is not possible to specify ideal conditions for reflow since they depend more on the design of the boards and the capability of the reflow equipment. RA10 has been successfully reflowed with a wide range of temperature profiles. It may be reflowed in an air atmosphere. The following shows examples of profiles used successfully in practice.



Cleaning: The residues from Multicore RA10 solder creams may be left on the PCB in some applications where they do not pose a hazard to long-term reliability. They may be removed in conventional cleaning processes based on solvents such as Multicore Prozone. If enhanced residue reliability is required without cleaning with conformance to the IPC Type L specification, the user should evaluate Fastprint MP200 solder creams.

TECHNICAL SPECIFICATION

Solder Powder: The solder powder for Multicore RA10 solder creams is produced by atomising alloys conforming to the purity requirements of JSTD-006, EN 29453 or other national and international standards where relevant.

Careful control of production processes ensures that the solder powder is at least 97% spherical and contains less than the minimum level of contaminants that would adversely affect solder cream performance. A typical maximum oxide contamination level of 80ppm (expressed as oxygen in the solder) is regularly achieved or bettered.

NOT FOR PRODUCT SPECIFICATIONS.
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Solder Cream Medium: Multicore RA10 contains a stable resin system and a blend of solvents.

The flux has been formulated to meet the requirements of IPC type MR3CN specification or the MIL-F 14256 RA classification.

Solder Cream: The properties of a solder cream depend in part on the metal content, the solder alloy and the solder powder particle size range. In general terms, increasing metal content reduced the tendency to slump and reduces the tackiness of the solder cream while the solder balling performance improves.

PACKAGING

Containers: Multicore RA10 solder creams are supplied in:

- 1 kg, 500g or 250g plastic jars with an insert to seal off the surface of the cream
- 1kg vacuum filled cartridges for direct application

Other forms of packaging may be available on request.

Shelf Life: Providing Multicore RA10 solder creams are stored at 5-10°C tightly sealed in the original container, a minimum shelf life of 6 months can be expected.

Multicore RA10 solder creams have been formulated to reduce separation on storage to a minimum but should it occur, gentle stirring will return the products to their correct rheological performance.

HEALTH AND SAFETY

WARNING: The following information is for guidance only and users must refer to the Material Safety Data Sheet relevant to Multicore RA10 solder paste product before use.

Fumes, Vapours and Precautions: The flux fumes given off at soldering temperatures are irritating to the nose, throat and respiratory organs. Prolonged or repeated exposure to the fumes may cause sensitisation.

These materials should always be used in a well ventilated area and suitable fume extraction should be used to extract flux fumes away from the operators.

Protection and Hygiene: Suitable protective clothing should be worn to prevent materials from coming into contact with the skin and eyes. If the materials come into contact with the skin, the affected area should be cleaned with a proprietary hand cleanser followed by washing with soap and water. If the materials come into contact with the eyes, they should be irrigated thoroughly with running water for at least 10 minutes and medical attention sought.

Eating, drinking or smoking should not be permitted in the working area and hands should be washed thoroughly with soap and warm water before eating.

Fire Hazards and Precautions: The flashpoint of the solvent used in these materials is high (118°C) but it is combustible. Carbon dioxide, foam or dry powder extinguishers are suitable. High temperatures may produce heavy metal dust, fumes and/or vapours. Do not use water where molten metal is present.

Spillage and Waste Disposal: Spills of the materials should be scraped up and the contaminated area washed with water. Waste materials should be stored in closed containers and disposed of in accordance with the relevant local and national regulations.

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Loctite Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.



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