ADHESIVE APPLICATION

Adhesives are frequently used to temporarily hold SMT components in position prior to soldering. Once the soldering operations are completed, the adhesive residue is removed during the cleaning process.

The application of adhesive should be controlled to ensure proper placement, amount, and cure. Excess adhesive, improper placement, or incomplete cure can contaminate solder paste and solderable surfaces, interfere with proper component alignment, and impact cleanability.

PREFERRED
The deposition of adhesive is consistent, properly placed, and repeatable. Dots are centered under the part body, equidistant between the land pattern areas.

NASA-STD-8739.2 [8.9], [8.10.2]

UNACCEPTABLE

ADHESIVE ON LEADS / SOLDER PADS

Adhesive deposits on part leads and/or solder pads interfere with proper placement, component retention, and solderability.

NASA-STD-8739.2 [8.10.3]

UNACCEPTABLE

VOIDS

Bubbles and voids in the adhesive reduce the deposit’s cross-section and retention properties.

NASA-STD-8739.2 [8.9], [8.10.1]

NASA WORKMANSHIP STANDARDS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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Released: 06.27.2002
Revision: 7
Revision Date: 7.03
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UNACCEPTABLE
INSUFFICIENT ADHESIVE
Insufficient adhesive may result in lost and/or misaligned components, and increased rework.
NASA-STD-8739.2 [ 6.15.1 ], [ 8.9 ]

UNACCEPTABLE
INSUFFICIENT CURE
Insufficiently cured adhesive may result in lost and/or misaligned components, and increased rework.
NASA-STD-8739.2 [ 8.9 ]

UNACCEPTABLE
LOST COMPONENTS
Evidence of lost components indicates a process control problem (excessive / insufficient adhesive, insufficient cure, etc.).
NASA-STD-8739.2 [ 6.15.4 ]

UNACCEPTABLE
SKIPPING
Skipping is an indicator of a process control problem, and may result in lost components and increased rework.
NASA-STD-8739.2 [ 8.9 ]

UNACCEPTABLE
STRINGING
Stringing is an indicator of a process control problem, is a contaminant, and affects overall solderability.
NASA-STD-8739.2 [ 6.15.1 ]

NASA WORKMANSHIP STANDARDS
SURFACE MOUNT TECHNOLOGY (SMT)
ADHESIVE APPLICATION (cont.)