Cleaning Optimum Ceramic MicroDot Tips Instructions

Introduction

To precisely dispense accurate, small amounts of fluid, the Optimum[®] Ceramic MicroDot[™] tip has an extremely small opening. This opening can become clogged or blocked by very small contaminants which can adversely affect dispensing results.

Tip contamination, particularly in the fluid flow path, is manifested by the following symptoms:

- Poor dispensing
- No fluid flow, caused by clogging of the nozzle orifice

Recommended Cleaning Schedule / Cycles

Cleaning and maintenance intervals vary depending on operating conditions. Testing has shown that MicroDot ceramic tips can survive 10 cleaning cycles without loss of performance.

Cleaning Tools

- · Valve disassembly / reassembly tools (refer to the valve manual)
- Tweezers
- Acetone
- · Compressed air supply
- Ultrasonic cleaner

Three Steps for Cleaning MicroDot Tips

(1) Clean the Fluid Path by Purging the Tip

If the tip is not clogged, purge the tip with a cleaning fluid or solvent that is compatible with your dispensing fluid. Purging can be performed with the tip assembled on the valve or manually if the tip has been disassembled from the valve.

NOTES:

- Refer to the valve manual for disassembly and reassembly procedures.
- The MicroDot tip can withstand repeated purging cycles with acetone. Before using acetone, refer to the Technical Data Sheet (TDS) or Safety Data Sheet (SDS) for your dispensing fluid to ensure that it is compatible with acetone.

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Three Steps for Cleaning MicroDot Tips (continued)

(2) Remove Clogging by Cleaning the Tip in an Ultrasonic Bath

- 1. If you have not already done so, carefully disassemble the MicroDot tip from the valve.
- 2. Use tweezers to carefully place the MicroDot tip in a container of acetone. Allow the tip to soak for several hours, or overnight. Use tweezers to remove the tip from the acetone.
- 3. Use compressed air to blow the acetone from the front of the tip (the ceramic side) toward the hub.
- Place the tip in an ultrasonic cleaner and clean for approximately 60 minutes. Refer to the ultrasonic cleaner instructions as needed.



(3) Clean with Air

▲ CAUTION

Do not use cleaning tools, sharp items, or brushes to clean the inner part of the tip; doing so can damage the surface of the fluid flow path.

- 1. Use compressed air to clean lint or residue from the fluid paths by forcing air from the front of the tip (the ceramic side) towards the hub.
- 2. Check the cleanliness with a magnifying loupe, if available, or with a microscope that has a backlight. If no light is visible through the ceramic tip, then the tip is still clogged.

NOTES:

- For proper operation, the fluid path must be free of lint, particles, residues from dried fluid, or other contaminants.
- Ultrasonic cleaning time can be shorter depending on the fluid type, especially for watery materials or thin fluids of less than 1,000 cps. Most other fluids will require a longer cleaning time. Sometimes multiple cycles of ultrasonic cleaning along with compressed-air cleaning are required to fully disperse cured material.



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