D-100 Non Aqueous Developer

Technical Data Sheet

Description: D-100 developer consists of refined white particles suspended in isopropyl alcohol that produces enhanced sensitivity for locating tight flaws. **D-100** developer pulls flaw-entrapped penetrant to the part surface for display against a white background by solvent and capillary action. Complies with low sulfur and low halogen requirements.

Chemical Properties

Color:	White Suspended Particles
Boiling Point:	180^0F (82^0C)
Flash Point:	53^0F (11.7^0C)
Specific Gravity:	0.79

Companion Products

All fluorescent and visible dye penetrants

Packaging

One Gallon Cans	55 Gallon Drums
Five Gallon Pail	16oz. Aerosol Cans (9 cans per case)

Storage /Shelf Life

Keep away from moisture and sunlight.
Temperature limit: 40^0F to 125^0F (0-50^0C)
Keep the container closed when not in use.
Shelf life from invoice date: Bulk Container – 36 months / Aerosol Cans – 36 months

Specifications

SAE AMS 2644 & QPL – Form D & E

MIL-I-25135 Revisions C, D, & E	ASME Code NDT, Sec V
Lockheed Martin	MTU
Boeing	Rolls Royce
Honeywell	Turbomeca
Pratt & Whitney FPM	Airbus
General Electric	Northrup Grumman

Special Features

1. **D-100** lays on the surface in a thinner, more uniform, more absorbent coating.
2. **D-100** has superior suspension properties.
3. It is easily removed by light brushing or spray water rinse.
4. **D-100** works well on smooth or rough surfaces.
5. **D-100** can be used on machined or coated surfaces.
6. **D-100** can be used with both visible and fluorescent penetrants.

Instructions

Note: These instructions describe the basic process, but they may need to be amended by the user to comply with applicable specification and/or inspection criteria provided by the contracting agency.

1. **Application:** Apply the penetrant only to clean, dry surfaces by spraying, flowing, brushing or dipping.
2. **Dwell Time:** A 10 minute dwell time is suggested, although in many cases five minutes will suffice. When particularly tight cracks are suspected, or the part is especially critical, the dwell time may be extended to 30 minutes, or longer. Allow the penetrant to drain from the part surface back into the penetrant tank to conserve material.
3. **Removal**: Use the appropriate washing method to remove the excess penetrant from the surface.
4. **Drying:** A re-circulating oven set no higher than 160^0F (71^0C) is suggested. Leave the part in the oven just long enough to evaporate surface moisture. Drying is improved by using pressurized air to disperse and remove as much excess water as possible before placing the part into the oven.
5. **Developing**: After agitating the **D-100** suspension, evenly spray a light slightly wet coating of developer onto the dry surface of a part. An overly wet application will blur indications; an overly dry application lacks full developing action . Two or three light applications work better than a single heavy application . Too heavy an application may conceal indications. If **D-100** is to be applied with a paint spray gun, the spray gun should have a vaporizing tip, the spray tank should be pressurized to 15-30 pounds of pressure and have a stirrer to keep the powder in suspension.
6. **Inspection:** Inspect parts under appropriate light intensity.

Health & Safety

D-100 is highly flammable, use in a well ventilated area. Avoid prolonged or repeated inhalation of vapor and contact with skin. Do not take internally. Consult the MSDS for more safety and health information.