

TECHNICAL DATA SHEET

DUBL-CHEK RC-50

Code 1507

Post Emulsifiable Fluorescent Penetrant

DESCRIPTION

RC-50 is a level 2, Method B and D non-water washable fluorescent penetrant for inspecting castings, extrusions and similar parts. RC-50 is a versatile, general purpose penetrant for use on a variety of materials, including aluminium and magnesium. Complies with low sulphur and low halogen requirements. RC-50 has been used by aerospace, airframe, turbine engine and missile manufacturers for over a decade.

FEATURES & BENEFITS

- Low to near zero background for assured indication visibility
- Sharp, precise flaw indication for rapid interpretation
- Excellent electrostatic spray capability
- Long material tank life due to formula stability and non-volatility
- Low material consumption (low drag out) due to low viscosity
- Clean odourless product, vapor free atmosphere



PHYSICAL PROPERTIES

Colour:	Green
Viscosity:	5.15
Fluorescence:	Yellow/Green
Flash Point:	230°F (110°C)

SPECIFICATION COMPLIANCE

- SAE AMS 2644 & QPL – Type 1, Method B & D, Level 2
- MIL-I-25135 Revisions C, D, & E
- ASME Code NDT, Sec V
- Lockheed Martin
- Rolls Royce
- Turbomeca
- General Electric
- Pratt & Whitney FPM
- Boeing
- Honeywell
- Airbus
- Northrop Grumman
- MTU

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ORDERING INFORMATION

Product Code	Packaging
1507/42	3.8 litres (1 gallon)
1507/64	18.9 litres (5 gallons)

BATCH NUMBERS

Batch numbers can be found on the bottom of aerosol cans or labels of bulk containers. Certificate of Conformance documents are provided with the product or can be downloaded from www.callington.com

DIRECTIONS

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 RC-50 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:**
 - a. **Hydrophilic Dip Method**
 - i. **Pre-wash:** Following the dwell, use a plain water rinse to remove most of the undrained penetrant from the surface. Use a coarse spray of ambient temperature water.
 - ii. **Immersion:** Immerse and agitate the part in 20-30% hydrophilic emulsifier solution. Immersion time and agitation time will vary with part geometry and surface condition.
 - iii. **Rinse:** Remove the part from the tank; clean with a coarse, plain water spray
 - b. **Hydrophilic Spray Method**
 - i. **Wash:** Following the dwell, use an inject of 0.1 to 5.0% emulsifier solution to wash the excess penetrant from the part surface. Time and solution concentrations will vary with part geometry and surface conditions
 - ii. **Rinse:** Use a coarse plain water spray to remove all traces of the emulsified penetrant.
 - c. **Lipophilic Method**
 - i. **Emulsification:** Following the dwell, dip the part into undiluted lipophilic emulsifier. Remove the part and allow the excess emulsifier to drain back into the tank. Parts with rough surfaces require longer drain times.
 - ii. **Rinse:** Use a coarse plain water spray to remove all traces of the emulsified penetrant.
 - d. **Solvent Wipe Method**

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- i. Remove as much excess penetrant as possible using clean dry rag or toweling. Remove remaining penetrant film by wiping with a rag or toweling that has been slightly moistened with solvent. Use a minimum of solvent; avoid flushing penetrant from flaws. Do not spray solvent directly on the part surface when removing excess penetrant. Rough surfaces require more generous application of solvent
4. **Drying:** A re-circulating oven set no higher than 160°F (71°C) 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:** Apply the developer by cloud, dusting, spray, or dip using the appropriate developer. Flaw marks are visible under black light almost immediately, but allow sufficient developing time to enhance the flaw visibility.
6. **Inspection:** Inspect parts under appropriate UV-A light intensity and minimal visible light.

STORAGE/SHELF LIFE

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

HEALTH & SAFETY

RC-50 is a combustible liquid. Use with adequate ventilation and away from sparks, fire or open flames. Avoid prolonged or repeated contact with skin. Do not take internally. Consult the MSDS for more safety and health information.

WARRANTY – All statements, information and data presented herein are believed to be accurate and reliable but are not to be taken as a guarantee, expressed or implied, for which seller assumes legal responsibility and they are offered solely for your consideration, investigation and verification. Statements or suggestions concerning possible use of this product are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe on any patent.

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