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TECHNICAL DATA SHEET

Ref: RC 50

Page: 1/2

Rev: 1 Date: 05/05



MANUFACTURER : SHERWIN (USA)/NDT Europa (NL)
DISTRIBUTOR: NDT Consultants Limited (UK)

DESCRIPTION / APPLICATIONS:

Post-emulsifiable medium sensitivity fluorescent penetrant designed for inspection of critical parts, turbines blades, assemblies, welds.

COMPANION PRODUCTS:

ER 83 A hydrophilic emulsifier
ER 85 lipophilic emulsifier
D90G, D 100 developers

SPECIFICATIONS / STANDARDS:

AMS 2644-QPL-1-listed
Type 1 method B, C, D, level III
GENERAL ELECTRIC: in accordance with AMS - 2644
PRATT & WHITNEY: FPM high sensitivity (code 1)
ALLISON: level 2
MTU: 83/297
AIRBUS-EADS: IGC-04-25-101
ROLLS ROYCE: RPS 702-F2A/TSD 594-op 210 standard
SNECMA: level S2 DMC-0010 rev. G
CFM INTERNATIONAL: Code CP 3300

PHYSICO-CHEMICAL PROPERTIES:

Aspect: green liquid
Fluorescence: green-yellow
Flash point: > 93°C
Viscosity: 4.4 mm²/s ± 10 % at 38°C
-Very low halogen and sulfur content
-Compatible with all metals, ceramics, and certain synthetic substances.

PACKAGING / SHIPPING / STORAGE:

Packaging:

1-, 5-, and 10-liter canisters.
60-liter drum.
200-liter drum.

Shipping / Handling: refer to MSDS

Storage:

Keep away from moisture
Temperature limit : 0 to 50° C.
Keep packaging closed after taking out some of the product.
Shelflife:
Canister / drum: 48 months.

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INSTRUCTIONS:

Parts cleaning: use appropriate process/products as per applicable specifications

Application: By spraying (electrostatic, pneumatic, aerosol), using a brush, or by immersion.

Dwell time: 10 to 30 minutes, depending on applicable specs. If dipping is used, allow the penetrant to drain from the part surface back to the penetrant tank.

Removal: Two separate procedures apply:

- with pre-wash
- without pre-wash

Pre-wash:

RC 50 -> Pre-wash -> Hydrophilic emulsifier -> Rinsing -> Drying -> Developer

Conventional post-emulsion method diagram :

RC 50 -> Hydrophilic or lipophilic emulsifier -> Rinsing -> Drying -> Developer

The first process will save considerable quantities of emulsifier. The emulsifier is applied by immersion or by spraying (see technical datasheet ER 83 A or ER 85).

Rinsing off:

Use coarse plain water spray to remove all traces of emulsified penetrant. Air + water spray gun is a good alternative.

Washing is carried out under UV-A radiation, so as to ensure that no fluorescent background is left.

Drying:

A circulating oven (60 to 80°C ; 140°F to 176°F) is suggested; do not use compressed air. Infrared lamps and/or air guns are not advisable.

Development:

Although RC 50 is self-developing, using a developer enhances indications.

Inspection:

Inspect parts under appropriate UV-A lighting and dimmed visible light, in accordance with ISO 3059.2001 standard.

HEALTH AND SAFETY: refer to MSDS.

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