Approvals and conformities

ASME
ISO 3452-2
DASSAULT AVIATION
EADS
SAFRAN
ROLLS ROYCE
PRATT & WHITNEY
GE
QPD-AMS 2644

MANUFACTURER : SHERWIN (US) / NDT-Europa (NL)

DESCRIPTION / APPLICATION(S) :
Post-emulsifiable ultra-high sensitivity fluorescent penetrant designed for inspection of critical parts, turbines blades, assemblies, welds.
Type 1, method B, C, D, level 4 according AMS 2644 and ISO 3452-2.

Companion products : Lipophilic emulsifier ER-85
Hydrophilic emulsifier ER-83A, ER-83B, ER-83C
Developer D-90G, D-100, R60, D-106

DIRECTIONS FOR USE

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

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- without pre-wash

Pre-wash :

RC-77 -> Pre-wash -> Hydrophilic emulsifier -> Rinsing -> Drying -> Developer

Conventional post-emulsion method diagram :

RC-77 -> 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-83A, ER- 83B, ER-83C 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) is suggested; do not use compressed air. Infrared lamps and/or air guns are not advisable.

Development :

Although RC-77 is self-developing, using a developer enhances indications.

Inspection :

Inspect parts under appropriate UV-A lighting (mini 1000 µW/cm², if possible > 1500 µW/cm²) and dimmed visible light (less than 20 lux).

TECHNICAL CHARACTERISTICS

Very low halogen and sulfur content.
Compatible with all metals, ceramics, and certain synthetic substances.

Appearance	liquid
Fluorescence	green-yellow
Flash point	> 93°C
Viscosity	8.9 mm²/s ± 10 % at 38°C

PRECAUTIONS FOR USE AND STORAGE

Transport / Handling : Refer to Material Safety Data Sheet (MSDS).
Storage : Keep away from moisture

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Temperature range : 0°C à 50°C.
Keep packaging closed after taking out some of the product

This technical data sheet replaces and cancels the previous one.

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