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TECHNICAL DATA SHEET

Ref: HM 3 A

Page: 1/2

Rev: 1 Date: 05/05



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

DESCRIPTION / APPLICATION(S):

Level 2 water washable fluorescent penetrant designed for detecting surface defects.

COMPANION PRODUCT:

DR 60, DR 62 removers
N 120 degreaser / N 106 A,
D 100, D90G developer
R 62 quick-drying developer

SPECIFICATIONS / STANDARDS:

SAE-AMS 2644-QPL 2644-1 approved
Type 1 Method A Level II
PMUC-approved (Produits et Matériaux Utilisables en Centrales, i.e. Products and Materials that can be Used in Nuclear Plants)
Mc DONNELL/DOUGLAS: grade 3
ALLISON: level 2
TURBOMECA: classe W 2
SNECMA: sensitivity S2
AIRBUS-EADS : Type I, Method A, Level II
ROLLS ROYCE: RPS 702 -F1B TSD 594 - 213 standard
BOEING, LOOKHEED, GENERAL ELECTRIC: in accordance with AMS 2644 - QPL 2644-1
DASSAULT: Type I, Method A, Level II
PRATT & WHITNEY: PMC NO 4350-3
CFMI: product code CP 33.03

PHYSICO-CHEMICAL PROPERTIES:

Aspect: green liquid
Fluorescence: green-yellow
Flash point: > 93°C.
Viscosity: 7 mm²/s ± 15 % at 40°C.
Density: 0.872 ± 0.020
Water tolerance: > 5 %
Performance: >75 % on a 10 µm test block
Very low halogen and sulfur content

PACKAGING / SHIPPING / STORAGE:

Packaging:
1-, 5-, 10-liter canisters
60-liter drum
200-liter drum

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300-ml spray can

Shipping / Handling:

refer to MSDS

Storage / Shelflife:

keep away from moisture

Temperature limit : 0 à 50°C.

Keep the packaging closed after taking out some of the product

Canister / Drum : 48 months

Spray can : 48 months

INSTRUCTIONS:

(These describe the basic process, but they may need to be amended by the user to comply with applicable specifications and/or inspection criteria provided by the contracting agency).

1. Application : Apply HM-3A 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. Do not soak the part. To increase sensitivity, as well as conserve material, allow the penetrant to drain from the part surface back into the penetrant tank.

3. Removal: Use a quick, ambient temperature water wash at tap pressure to rinse HM-3A from the part surface. To avoid washing entrapped penetrant from surface flaws, do not use high water pressures and temperatures, or prolonged washing and scrubbing.

4. Drying: A recirculating oven set no higher than 160°F (71°C) is suggested. Leave part in 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 part in oven.

5. Developing: HM-3A is self developing. Nevertheless it is recommended to use a developer as listed above.

6. Inspection : Inspect parts under appropriate UV-A radiation and dimmed visible light, in accordance with ISO 3059-2001 standard.

HEALTH AND SAFETY: refer to MSDS.

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