

TECHNICAL DATA SHEET

DUBL-CHEK HM-3A

Water Washable Fluorescent Penetrant

Code 1544

DESCRIPTION

HM-3A is a level 2, Method A water washable fluorescent penetrant for inspecting castings, extrusions and similar parts. HM-3A is a versatile, general purpose penetrant for use on a variety of materials, including aluminium and magnesium. HM-3A 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: 6.46 cSt @ 1000F
 Fluorescence: Yellow/Green
 Water Tolerance: 15%
 Flash Point: 2200F (104.4°C)



SPECIFICATION COMPLIANCE

- SAE AMS 2644
- QPL – Type 1, Method A, Level 2
- MIL-I-25135 Revisions C, D, & E
- ASME Code NDT, Sec V
- Lockheed Martin
- MTU
- Boeing
- Rolls Royce

ORDERING INFORMATION

Product Code	Packaging
1544/39	3.8 litres (1 gallon)
1544/51	18.9 (5 gallons)
1544/64	208 litres (55 gallons)

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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 download from www.callington.com

DIRECTIONS

Note: These instructions 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. Allow the penetrant to drain from the part surface back into the penetrant tank to conserve material.
3. **Removal:**
 - a. Use ambient temperature water to rinse HM-3A from the part surface. To avoid washing entrapped penetrant from surface flaws, do not use high water pressure or temperatures and avoid prolonged washing times.
 - b. Solvent Wipe Method – Remove as much excess penetrant as possible using clean dry rag or towelling. 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 1600F (710C) 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: 400F to 1250F (0-500C). Keep the container closed when not in use. Shelf life from invoice date: Bulk Container – 36 months

HEALTH & SAFETY

HM-3A 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.

Created 1st September 2020 Date Printed 1/12/2020 3:34 PM