

### Approvals and conformities

ASME  
ISO 3452-2  
QPD-AMS 2644

**MANUFACTURER: SHERWIN Inc. (USA) / NDT-Europa (NL)**

### DESCRIPTION / APPLICATION(S):

Water-Washable fluorescent penetrant, Type I method A level 4 according to AMS 2644 and ISO 3452-2, designed for detecting surface defects.

Odourless, biodegradable penetrant.

**Companion products:** Developers D-90G, D-100, D-106, R60.

### DIRECTIONS FOR USE

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.

Before any application, it is necessary to remove all stains that could clog the defects with a suitable process.

#### Application:

Apply HM-704 only to clean, dry surfaces by spraying, flowing, brushing or dipping.

In this case, it may be better to dip parts during 1/3 of contact time and allow the penetrant to drain from the part surface back into the penetrant tank for 2/3 of contact time.

Total dwell time: 5 to 30 minutes.

#### Removal:

Use a quick, ambient temperature water wash at tap pressure to rinse HM-704 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. Removal is done under UVA light to be sure there is no more fluorescent background at the end.

#### Drying:

A recirculating oven set no higher than 80°C is suggested. Leave part in oven just long enough to evaporate surface moisture. Using pressurized air, infrared lamp or warm air pistol is strongly not recommended.

**Developing:**

HM-704 is self-developing. Nevertheless it is recommended to use a developer as listed above.

**Inspection:**

It shall be done in a darkened area (visible light level less than 20 lux) and under sufficient UV-A light (minimum 1000 µW/cm², if possible more than 1500 µW/cm²), it is also possible to use actinic blue light.

## **TECHNICAL CHARACTERISTICS**

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Very low halogen and sulfur content.

Compatible with all metals, ceramics, and certain synthetic substances.

Appearance . . . . . green liquid  
Fluorescence . . . . . green-yellow  
Flash point . . . . . > 93°C

## **PRECAUTIONS FOR USE AND STORAGE**

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**Transport / Handling:** Refer to Material Safety Data Sheet (MSDS).

**Storage :** Keep away from moisture

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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1 Date : 06-07-2017 Written and checked by : F. Héron