



# **WB-100**

## **FLUORESCENT WATER-BASED PENETRANT AQUA-CHEK**

Technical Data Sheet

### **Approvals and conformities**

AMS 2644

ASME

ISO 3452-2

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

### **DESCRIPTION / APPLICATION(S):**

Fluorescent water-based penetrant Type I, Method A, Level 1.

It is supplied either as WB-100 (ready-to-use form) or as WB-100C (as a “concentrate”).

Aqua-Chek WB-100 is a free-rinsing, water-washable, bio-degradable, water-base fluorescent penetrant. WB-100 contains no oil or petroleum distillates. Waste treatment and disposal costs are reduced. Resources are conserved.

WB-100 has exceptional self-developing properties.

**WB-100 is the WB-100C diluted with 50 % of water.**

**Companion products:** D-90G Dry Powder Developer (form a)

D-100 Non aqueous Developer (form d)

D-106 Non aqueous Developer (form d)

D-110A.1 Water-suspendable (form c)

### ***DIRECTIONS FOR USE***

These instructions describe the basic process. They may need to be amended by the user to comply with applicable specifications and/or inspection criteria provided by the contracting agency.

1. **Mixing (only for concentrate) :** Mix Aqua-Chek WB-100C concentrate with equal parts by

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volume of water.

Deionised water is preferred but not required. Adding the concentrate slowly to the water while stirring is the more efficient mixing method.

**Application:** apply a thin coat of WB-100 to clean, dry surfaces by spraying (pneumatic or electrostatic), flowing, brushing or dipping.

1. **Dwell-Time:** a 10 minute, or longer, dwell time is mandatory. Allow the penetrant to drain from the part. This not only conserves material, it improves performance.
2. **Removal:** use a quick, ambient temperature water wash to rinse WB-100 from the part surface. Avoid washing entrapped penetrant from surface flaws; avoid high water pressures and temperatures; avoid prolonged washing and scrubbing. Wash under UV-A light.
3. **Drying:** begin drying procedure immediately after the water wash; do not allow water to stand or puddle on the part's surface. Use pressurized air to disperse and remove as much excess surface water as possible before placing part in oven. Place part in a recirculating oven set no higher than 70°C just long enough to evaporate surface moisture. Use a heat gun to dry parts too large to fit in oven; avoid overheating.
4. **Developing:** WB-100 is self-developing. To amplify flaw marks, or in critical inspection situations, use a developer such as the Sherwin developers listed above.
5. **Inspection:** in a UV-A booth, with ambient visible light level less than 20 lux, and with UV-A irradiance of at least 1000 W/cm<sup>2</sup> (better : 1500 W/cm<sup>2</sup>) on the surface under inspection.
6. **Tank Maintenance:** water evaporation should be anticipated. Evaporation rate will depend on atmospheric conditions, "tank head room", etc. When tank is filled, record refractometer reading, then take periodic readings. As required, add water to restore to original reading. Stay within the content 45-55%.

## TECHNICAL CHARACTERISTICS

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- Very low halogen and sulfur content
- Compatible with any metal and many synthetic materials (composites).

### BIODEGRADABILITY:

According to the biodegradability test in aerobic and according to OECD 302 B criteria, WB-100 has shown capacities at inherent biodegradability.

The sample of WB-100 is 'inherent biodegradable without pre-adaptation' and further evidence of an "ultimate inherent biodegradability" according to OECD criteria extrapolated to a finish product. The result is positive (biodegradability >70%) but this does not mean that the effluents of WB-100 can be released into natural environments, however an effluent discharge into water treatment plant is entirely possible: contact the entity managing the wastewater networks in your area.

Appearance ..... yellow-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 and day light

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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