



Inspection - Detection



MOD Approval

## FLAW DETECTOR DEVELOPER 3

### DEVELOPER FOR NON-DESTRUCTIVE TESTING

A quick drying developer, for the non-destructive testing of surfaces and structures. Many cracks in engineering materials can be deep in spite of having a very small opening on the surface, and can cause very serious or critical defects. By normal visual inspection such cracks may be very difficult to detect, but penetrant flaw detection is an extension of the visual inspection method. The inspection is carried out using 3 products: Flaw Detector Cleaner, Flaw Detector Penetrant and Flaw Detector Developer. Flaw Detector Developer is a dispersion of a white powder in a fast evaporating solvent, giving a high contrast visual reference.

The inspection can be carried out with ready-to-use aerosols and the results are produced quickly and easily.

An economical technology with no need for expensive and advanced equipment. Identifies defects as small as 30µm.

A sensitive and reliable test method, widely applicable, regardless the nature of the materials and shape of the objects.

- ASME Code Section V

### PRODUCT CODES / FILL SIZES



30290 / 400ml

### APPLICATIONS

Non-destructive inspection of materials, parts, assemblies, equipment, surfaces and structures:

- Detects cracks, lack of fusion, and open cavities in welded parts.
- Finds cracks and cavities caused by metal fatigue and cutting operations.
- Check for porosity or leaks in pipes, tanks, boilers, heat exchangers.
- Discontinuities, laps, folds and cracks in castings, forgings and ceramics.

### TECHNICAL DATA (WITHOUT PROPELLANT)

Appearance	Powder dispersed in a solvent blend
Color	White
Odour	Solvent
Application temperature	> 10°C
Specific gravity (@ 20°C)	0.781
Boiling range (solvent)	40 - 65°C
Flash point liquid	< 0°C
Auto-ignition temperature	> 200°C
Solubility in water	Not soluble

## DIRECTIONS

- Do not use at ambient temperatures below 10°C.
- In liquid penetrant inspections, the test object or material is coated with a visible dye solution. The excess dye is removed from the surface and a developer is then applied. The developer acts like a blotter and draws penetrant out of the imperfections of the surface. With visible dyes, the vivid colour contrast between the penetrant and the developer makes the 'bleed-out' easy to see.

### Cleaning of the surface

- The surface to be checked must be clean, degreased and dry. All soil such as rust, oil, grease, paint etc, which can mask the imperfections, must be removed. Finish the cleaning by spraying Flaw Detector Cleaner generously. If possible wipe with an absorbent cloth and allow to dry thoroughly.

### Penetrant application

- Shake the can of Flaw Detector Penetrant prior to use. Spray the penetrant in a light, even film on the surface, wetting all areas to be inspected. Allow to drain for 10 to 20 minutes.

### Excess penetrant removal

- Remove excess of penetrant by wiping the surface using a lint-free cloth. Apply water (Flaw Detector Penetrant is water washable) until all visible, coloured traces are removed. Care must be taken that only penetrant on the surface is removed. Dry properly.

### Development

- Shake the can of Flaw Detector Developer thoroughly prior to use. Spray a light, homogeneous coat of Developer from a distance of about 20 cm. Avoid any excess Developer (to avoid masking the finest flaws). Allow to develop for at least 7 minutes so that imperfections are visible.

### Visual inspection of defects

- As time passes, the defects will appear as red spots or lines on a white background. The speed of appearance, the shape and dimensions, can give information about the nature of the defects. If necessary, after inspection clean the surface with cleaner, and protect against corrosion with one of Ambersil's corrosion protection products such as Ambersil Corrosion Inhibitor.

## STORAGE & SHELF LIFE

The product may be stored at normal ambient temperatures and has a shelf life of not less than 6 years with correct storage. Aerosols should always be stored below 50°C, away from direct heat and naked flame.

## HEALTH AND SAFETY

A separate Safety Data Sheet (SDS) according to EC Regulation 73/404/EEC and 648/2004/EC is available from Ambersil.com or via [info.uk@crcind.com](mailto:info.uk@crcind.com)

## MISREPRESENTATION ACT 1967

## TRADE DESCRIPTIONS ACT 1968

The information given in this publication is based on our experience and reports from customers. There are many factors outside our control and knowledge which affect the use and performance of our products and for which reason no warranty is given, express or implied. Users should make their own tests to determine the applicability of such information or the suitability of any products for their own particular purposes. Statements concerning the use of the products described herein are not to be construed as recommending the infringement of any patent and no liability for infringement arising out of any such use is to be assumed.

Version 2.0  
Created: July 2019  
Updated: N/A

CRC Industries UK Ltd.  
Wylds Road, Bridgwater  
Somerset, TA6 4DD  
United Kingdom

t +44 (0)1278 727200  
f +44 (0)1278 425644  
e [sales.uk@crcind.com](mailto:sales.uk@crcind.com)  
w [www.ambersil.com](http://www.ambersil.com)

Company Registered No. 04910479

VAT No. GB 821 5195 42

