

# AL-4B

## Water-washable Fluorescent Penetrant



AUTOGLO® AL-4B is a fluorescent water-washable penetrant specially designed for use in the automotive industry. It has superior washability and is easy to remove from rough non-ferrous cast parts and complex shapes.

AL-4B can also be used to detect leaks in welded tanks and containers, and in applications where traditional petroleum solvent-based penetrants may attack the test surface, such as plastics.

### FEATURES

- Bright indications
- Quick to prepare and easy to use
- Excellent water washability.
- Can be diluted with water to make it more cost-effective.

### APPLICATIONS

#### Ideal for:

- Use in the automotive industry
- Rough non-ferrous cast parts
- Complex shapes
- To detect leaks in welded tanks and containers
- In applications where traditional petroleum solvent-based penetrants may attack the test surface, such as plastics.

### COMPOSITION

A blend of water, fluorescent dyes, liquid emulsifying agents and solvents. AL-4B does not contain any corrosion inhibitors.

### PRODUCT PROPERTIES

Form and colour	Yellow/green liquid
Flash point	> 100°
Density at 20°C	0.99 g/ml
Viscosity at 38°C	5 mm <sup>2</sup> /s
pH (1% in water)	6 - 8

Like all Magnaflux materials, AL-4B is closely controlled to ensure batch-to-batch consistency, optimum process control and inspection reliability.

### USER RECOMMENDATIONS

Storage temperature	10°C to 30°C
Usage temperature	5°C to 55°C
Coverage	20 - 30m <sup>2</sup> per litre (undiluted)
Cleaner/remover	SKC-S
Dry developer	ZP-4B
Solvent-based developers	SKD-S2, ZP-9F
Aqueous developer	ZP-5B
Water-based developer	ZP-14A
UV lamp	EV6000, ST700

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### INSTRUCTIONS FOR USE

AL-4B is water-soluble and can be diluted 1:1 to 1:2 in water (depending on the application). This will lower its viscosity, making spraying easier, and it will penetrate through leaks faster than when undiluted. For maximum sensitivity, however, use AL-4B as supplied.

Pre-clean the test part and allow to dry. The surface must be free from oil, grease and any other contaminant.

Apply AL-4B by immersion dip, brush, flow on, conventional or electrostatic spray. The test area must be completely covered with penetrant.

- For conventional penetrant applications, allow 2 -15 minutes penetration time.
- For leak testing, apply penetrant to one side of test area, apply developer to the opposite side and allow 15 - 30 minutes penetration time.

Remove excess penetrant by thoroughly spraying the test part with clean water at 10°C to 40°C. This should be carried out under a UV(A) source so you can monitor the penetrant removal.

Dry the test part by placing in a controlled recirculating warm air dryer at a temperature of 50°C - 70°C.

Where you think it necessary, apply a developer to maximise the sensitivity of the penetrant and to provide a white contrasting background. There are three types of suitable developer:

- **Dry powder:** free-flowing, lightweight powders applied to the dry component by powder storm, dusting, electrostatic spray or puffer.
- **Solvent-based:** quick-drying materials applied to the dry component by spraying.
- **Aqueous or water-based:** applied before drying by dipping or spraying.

**Note:** aqueous developers should be used with great care, as, with prolonged contact, they tend to wash the penetrant out of the defects.

Inspect your test part using a suitable UV source. Any defect indications will fluoresce a bright green-yellow when exposed UV(A) light at a peak wavelength of 365 nm.

If required, you can clean your test part after inspection. Developer residues can be removed either by wiping with a cloth or by a water and detergent wash. Penetrant residues can be removed by vapour degreasing or solvent soak.

### PACKAGING AND PART NUMBERS



056C225



056C226

### HEALTH AND SAFETY

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the Safety Data Sheets, which are available at [www.magnaflux.eu](http://www.magnaflux.eu)