

# ARDROX<sup>®</sup> 906A

## DARK RED COLOR CONTRAST PENETRANT

### 1 Description

Ardrox<sup>®</sup> 906A is a visible light inspection penetrant as per the AMS 2644 Type 2 and EN ISO 3452 Part 2, Type II, which can be removed by water or solvents. It is used in non-destructive testing for the detection of defects such as cracks, laps, cold shuts, porosity, bursts, casting and welding discontinuities.

Ardrox<sup>®</sup> 906A is a low viscosity liquid penetrant with excellent wetting properties to ensure optimum coverage of the part. Its dark red color allows easy control and monitoring of the washing process. The product offers the highest sensitivity level according to EN ISO 3452.

Ardrox<sup>®</sup> 906A is also suitable for inspection at low temperature down to -10°C/15°F and high temperature up to +150°C/302°F in accordance with the EN ISO 3452 respectively Part 6 and 5.

Ardrox<sup>®</sup> 906A is a solution of non-hazardous azo dye in a blend of biodegradable surfactants and high flash point distillates.

Ardrox<sup>®</sup> 906A is available as bulk material and as aerosol. It is typically used together with the penetrant remover Ardrox<sup>®</sup> 9PR5 or 9PR50 and the developer Ardrox<sup>®</sup> NQ1 or 9D1B.

#### Conformances

- ✓ ASME Boiler & Vessel Code Section V, Article 6
  - ✓ EN ISO 3452-2 Type II, Method A & C, Level 2
  - ✓ SAE AMS 2644 Type 2 (approval)
- Ask your Chemetall representative for a complete list of approvals

### 2 Physical and chemical properties

| Property    | Typical Value                | Unit               | Test Method |
|-------------|------------------------------|--------------------|-------------|
| Appearance  | Dark red, mobile liquid      | -                  | -           |
| Density     | Approx. 0,89 @ 20 °C / 68 °F | g/ml               | -           |
| Viscosity   | 7 at 38 °C / 100 °F          | mm <sup>2</sup> /s | -           |
| Flash point | > 93 °C / 201 °F             | -                  | -           |

These are typical values only and do not constitute a specification.

### 3 Method of use

Ardrox<sup>®</sup> 906A may be applied by aerosol, brushing, flow-on, immersion, spray or by swab.

### 3.1 Pre-cleaning and Drying

Clean part with e.g. Ardrox<sup>®</sup> 9PR5, 9PR50 or 9PR88 before applying Ardrox<sup>®</sup> 906A penetrant. Apply cleaner to the part and wipe clean with cloth. Surface has to be free of grease, oil and dirt. Allow part to dry before applying penetrant.

### 3.2 Penetrant application

Surface temperature should be between -30 and 150°C (-22-302°F).

Apply a thin even film of Ardrox<sup>®</sup> 906A penetrant to cover test area. Allow penetrant 10–30 minutes penetration time before removing. For temperatures over 50°C/122°F, the minimum dwell time is reduced to 1 minute only.

### 3.3 Penetrant removal

Remove excess surface penetrant with clean cloths, pre-moistened with cleaner (e.g. Ardrox<sup>®</sup> 9PR5, 9PR50 or 9PR88). Alternatively, removal can be performed by rinsing with water (for application over 5°C/41°F). Do not flush surface with cleaner as sensitivity will be impaired. Repeat procedure until surface penetrant has been removed.

For temperatures under 10°C/50°F, the recommended remover is Ardrox<sup>®</sup> 9PR5. Over 50°C/122°F, excess penetrant should be removed with Ardrox<sup>®</sup> 9PR50 or a dry, clean, lint-free cloth.

Thoroughly dry the component surface before developer application.

### 3.4 Developer

Shake developer (e.g. Ardrox<sup>®</sup> NQ1 or 9D1B) thoroughly. Spray an even developer film over area to be inspected (spraying distance 30 cm / 1 ft.). Allow 10–30 minutes developing time before evaluation.

Over +50°C/+122°F, use Ardrox<sup>®</sup> NQ1; the minimum development time is reduced to 2 minutes. Under 10°C/50°F, use developer Ardrox<sup>®</sup> 9D4E for a faster evaporation.

### 3.5 Inspection

Inspection should take place in diffused white light of at least 500 lux at the component surface.

### 3.6 Cleaning

After final inspection, components can be cleaned using e.g. Ardrox<sup>®</sup> 9PR5, 9PR50 or 9PR88.

Note: the procedure above is a recommendation only; where relevant, the process specifications of the approving authorities must be followed.

## 4 Effects on materials

When Ardrox<sup>®</sup> 906A is used in the prescribed manner, no significant corrosion is likely to occur on commonly used constructional metals. The product may stain or soften some plastics and rubbers and, where appropriate, a compatibility test should be carried out.

## 5 Storage

Store in a cool place, with protection from freezing conditions. Shelf life is 36 months for aerosol cans and 60 months for bulk material.

## 6 Labor and environmental protection

Before operating the process described it is important that this complete document, together with any relevant Safety Data sheets, be read and understood.

All local and national regulations on the transport, storage, use and waste treatment of chemicals in concentrated or diluted form and as working solutions must be obeyed.

## 7 General Information

Chemetall supplies a wide range of chemical products and associated equipment for cleaning, descaling, paint and carbon removal, metal working and protection and non-destructive testing. Sales Executives are available to advice on specific problems and applications.

The above details have been compiled to the best of our knowledge on the basis of tests and research work and with regard to the current state of our practical experience. This technical product information is non-binding. No liabilities or guarantees deriving from or in connection with this leaflet can be imputed to us. Statements relating to possible uses of the product do not constitute a guarantee that such uses are appropriate in a particular user's case or that such uses do not infringe the patents or proprietary rights of any third party. The reproduction of any or all of the information contained in this leaflet is expressly forbidden without Chemetall's prior written consent.

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