

# ARDROX® 906

Water Washable Visible Penetrant

## PRIMARY APPLICATION

ARDROX 906 is a water washable color contrast penetrant, widely used in many industries for the detection of indications which are open to the surface of non-porous parts. Ardrex 906 is dark red in color, allowing easy control and monitoring of the washing process.

Ardrex 906 is a high-sensitivity, low- viscosity liquid with excellent surface wetting properties to ensure optimum coverage of the part. It is used in conjunction with developers and a penetrant remover, which can be water or a suitable organic solvent, as a part of the inspection technique.

Defects such as cracks, laps, cold shuts, porosity, bursts, casting and welding discontinuities can be detected using the appropriate process. Ardrex 906 has been formulated to ensure the product has improved resistance to over-washing where removal by water spray is the preferred method.

Ardrex 906 is designed to be used with a non-aqueous developer such as Ardrex 9D1B or Ardrex NQ1.

### APPROVAL & CONFORMANCES:

- ✓ ASME Boiler & Vessel Code                      Section V, Article 6
  - ✓ NAVSEA    250-1500-1
  - ✓ SAE    AMS 2644
- Ask your Chemetall representative for a complete list of approvals.

## CHEMICAL CHARACTERISTICS

PROPERTY	TYPICAL VALUE	UNIT	TEST METHOD
Appearance	Deep red liquid	-	-
Density	0.926	g/ml at 68°F	-
Flash Point	>200	°F	ASTM D 113
Sulphur Content	<1000	ppm	-
Chloride Content	<1000	ppm	-

## APPLICATION PROCEDURE

Ardrox 906 may be applied by aerosol, brush, tank immersion, conventional or electrostatic spray. The following typical process sequence illustrates the recommended method of use.

### PRECLEAN/DRY

Completely remove all surface contamination (rust, paint residues, greases, scale, etc.). After cleaning, make sure that the component is completely dry and cool,  $\leq 120^{\circ}\text{F}$  ( $49^{\circ}\text{C}$ ), before applying the penetrant. Ardrox 9PR50 solvent-based products may be used as oil and grease cleaners/removers.

### PENETRANT APPLICATION

Apply penetrant to the surface and leave on for a suitable dwell period. If the contact period exceeds 120minutes, the penetrant should be reapplied to the surface.

### AMS 2644, METHOD A, PENETRANT REMOVAL: WATER WASH

Water washes in accordance with the relevant specification or Code.

Use either one or a combination of manual spray or automatic spray tank rinses. To accelerate drying time, use wash water at upper limit temperatures.

### AMS 2644, METHOD C, PENETRANT REMOVAL: WIPE OFF

Wipe excess penetrant from surface with a clean cloth. Moisten a clean cloth with Ardrox 9PR50 or Ardrox PR1 and wipe surface free of penetrant residue. To maintain sensitivity, do not flood surface with cleaner/remover.

### OVEN DRY, AIR RECIRCULATING

Maximum oven temperature:  $160^{\circ}\text{F}$  ( $71^{\circ}\text{C}$ ).

Use the minimum time necessary to thoroughly dry the components. Use clean, filtered, low-pressure compressed air to remove pockets of water before oven drying. If a drying oven is not available, accelerate drying time by blowing warm air across the part.

### APPLY DEVELOPER

Apply non-aqueous developers Ardrox 9D1B or NQ1 by spray. Allow 10-30 minutes developing time before evaluation.

### INSPECTION

Components should be inspected under bright light (e.g. 100 ft. candle). A pinkish developer film indicates incomplete surface penetrant removal. Severe penetrant residue will mask fine indications.

## NOTES ON USE (See Safety Data Sheet)

Ardrox 906 is non-corrosive, safe to use on all metal alloys and meets AMS 2644 corrosion requirements. Ardrox 906 will stain or soften some plastics, rubbers or ceramics; where appropriate, perform a compatibility test.

## SAFETY AND HANDLING

Prior to handling and use of any of the materials referenced in this document, the Safety Data Sheets should be read and understood by all personnel in contact with these materials.

## KEEP OUT OF REACH OF CHILDREN

## STORAGE

Dry indoor storage at temperatures between 40°F and 100°F (4.4°C and 37.8°C) is recommended, away from any incompatible materials referenced in the Safety Data Sheets. All containers should be tightly closed when not in use.

## SHELF LIFE

The shelf life for Ardrox 906 is 3 years.

## DISPOSAL

Any disposal of the materials referenced in this document should be in accordance with all applicable federal, state, providential and local regulations. The process solution can contain components other than those present in the materials as supplied. Analysis of process solutions may be required prior to disposal.

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