

ARDROX[®] 970P24E, 970P25E & 970P26E

WATER-WASHABLE FLUORESCENT PENETRANTS

1 Description

Ardrox 970P24E, 970P25E and 970P26E are biodegradable water washable fluorescent penetrants with respective sensitivity levels 2, 3 and 4. They consist of a mixture of biodegradable nonionic surfactants and fluorescent dyes without any mineral oil or hydrocarbon. These products give crisp indications with exceptionally low levels of background and have excellent heat and UV fade characteristics.

Ardrox 970P24E, 970P25E and 970P26E can be used for metals and ceramics which are not strongly porous, during production and maintenance works.

Ardrox 970P24E, 970P25E and 970P26E are usually used in conjunction with the Ardrox 9D4A or 9D1B developer and the Ardrox surface technologies. They are also approved to the AMS 2644 as Method C, solvent removable penetrants.

Ardrox 970P24E, 970P25E and 970P26E are available as ready to use bulk material. Ardrox 970P25E is available in aerosol spray cans.

Approvals

✓ SAE	AMS 2644
✓ Airbus	AITM 6-1001
✓ ASME	Boiler & Vessel Code (conformance)
✓ Boeing	BSS7039
✓ Pratt & Whitney	PMC 4360-6 & FPM Code 9 (P25E only)
✓ Rolls Royce	CSS 232 & OMat 632J (P25E only), RRP 58003
✓ SAFRAN Group	PR-5000

Ask your Chemetall representative for a complete list of approvals

2 Physical and chemical properties

Property	
Appearance	Fluorescent yellow liquid
Density in g/ml at 20 °C / 68 °F	Approx. 0.97
Flash point	> 93 °C / 200 °F

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

3 Method of use

Ardrox 970P24E, 970P25E and 970P26E may be applied by brushing, tank immersion or by electrostatic or conventional spraying. The following typical process sequence illustrates the recommended method of use for general industrial applications. However, where relevant, the process specifications of the approving authorities must be followed.

3.1 Pre-Cleaning

All surface contamination such as rust, paint residues, grease, scale etc. must be completely removed. Ensure that the component is completely dry and not too hot or cold (10-50°C / 50-122°F).

3.2 Penetrant Application

Apply penetrant to the surface and leave for a suitable dwell period. Allow components to drain as necessary. The combined application and drainage period should be at least 10 minutes. If the drain time exceeds 1 hour, the penetrant should be re-applied to the surface.

3.3 Cleaning

Penetrant removal by water washing: 15 – 35°C (59°F – 95°F) for 30 seconds up to 2 minutes at 0.8–1.7 bar (10-25 psi).

Use one or a combination of the following methods:

- a) air agitated water rinse tank
- b) spray rinse tank
- c) manual spray rinse

The times given are a rough guide only. Practical trials should be carried out to find the optimum.

3.4 Drying

Dry in air recirculating oven at 50–60°C (122–140°F), typically for 10 minutes. Longer times may be required for larger components. To assist drying, clean, filtered, low pressure, compressed air (1.7 bar/25 psi maximum) can be used prior to oven drying. Use the minimum oven time required to obtain thoroughly dry components.

3.5 Development

Apply developer Ardrox 9D4A or Ardrox 9D1B and allow 10 – 30 minutes developing time before evaluation.

3.6 Inspection

When applicable, low pressure, clean filtered air at 0.3 bar/5 psi (maximum) should be used to remove excess powder prior to inspection under black (UV) light, (1000 µW/cm² minimum) in a darkened area.

4 Effects on material

When Ardrox 970P24E, 970P25E and 970P26E are used in the prescribed manner, no significant corrosion is likely to occur on commonly used constructional metals.

These products may stain or soften some plastics and rubbers and, where appropriate, a compatibility test should be carried out.

5 Shelf life, storage, and disposal

Please refer to the corresponding Material Safety Data Sheets for details on shelf life, storage, and disposal.

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 advise 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.