Ardrox 9704

Water-washable fluorescent penetrant

Description

Ardrox 9704 is a water washable fluorescent penetrant. This products gives crisp indications with exceptionally low levels of background and has excellent heat and UV fade characteristics. It is ideal for electrostatic application.

Ardrox 9704 can be used for metals and ceramics which are not strongly porous, during production and maintenance works. It is appropriate for applications in the nuclear industry and correspond, among others, to the requirements of the ASME-Boiler and Pressure Vessel Code, Section V, Art. 6.

Sensitivity levels
Ardrox 9704 is approved to AMS 2644 to the following level:
Level 2, medium sensitivity

Method of Use

Ardrox 9704 may be applied at temperatures between +10°C and +50°C by brushing, tank immersion or by electrostatic 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 closely followed.**

1. Pre-Cleaning

Preclean and dry
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 (component/working temperature between +10 °C and +50 °C).

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.

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3. Cleaning

Penetrant removal by water washing

15 – 35 °C for 1 - 3 minutes.
1.4 - 1.7 bar (20 - 25 psi).
(In the case of rough surfaces or if products for higher sensitivity levels are used, it may be necessary to clean with warm water at this point. Relevant trials should be carried out prior to application.)
Use one or a combination of the following methods:

a) air agitated water rinse tank
b) spray rinse tank
c) manual spray rinse (e.g. with ARDROX® BCP 65/3 air/water pistol)

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

4. Drying

Oven-dry in air recirculating oven at 50 – 60 °C, for 15 minutes max. Longer times may be required for larger components.

To assist drying, either the use of clean, filtered, low pressure, compressed air (1.7 bar/25 psi maximum) or a hot water dip (80 – 90 °C maximum for up to 20 seconds) can be used prior to oven drying. Use the minimum oven time required to obtain thoroughly dry components.

5. Development

Apply developer Ardrox 9D4A

Ardrox 9D4A may be applied in purpose built dust storm cabinets, or by an electrostatic spray unit or spray applicator in an extracted booth. Contact time 10 minutes minimum.

6. Inspection

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/cm' minimum) in a darkened area.

Effects on materials

Ardrox 9704 is 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.

Equipment/tanks should be constructed of stainless steel or mild steel if free from rust, scale and other contaminants.

Chemical and Physical Properties

Appearance:	Clear, yellow - greenish liquid.
Density:	Approx 0.87g/ml at 20°C
Flash Point:	>= 93ºC

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

Packaging

Available in 5, 20 & 200 litre containers

Safety, Transport and Storage Information

Please refer to the Material Safety Data Sheet.

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