ARDROX® 9VF2

COLOR CONTRAST / FLUORESCENT PENETRANT

1 Description

Ardrox® 9VF2 is a red dye penetrant in accordance with EN ISO 3452 Type II, which can be removed by water or solvents – and a fluorescent penetrant in accordance with EN ISO 3452 Part 2 Type III. It corresponds to the requirements of ASTM and ASME.

Ardrox® 9VF2 is a high sensitivity, azo-dye free penetrant which does not contain any aromatic hydrocarbons and has a low sulfur and halogen content. It has good removability characteristics and offers the highest sensitivity level according to EN ISO 3452. Ardrox® 9VF2 can also be viewed with an ultraviolet light to give enhanced indication of the defects.

Ardrox® 9VF2 is used in non-destructive testing for forged parts, welds, castings etc. Ardrox® 9VF2 is used together with the Ardrox® range of cleaners and developers.

Conformances

- ✓ ASME Boiler & Vessel Code Section V, Article 6
- ✓ EN ISO 3452 Part 2, 5 and 6, Type III, Level 2

Ask your Chemetall representative for a complete list of approvals

2 Physical and chemical properties

Property	Typical Value	Unit	Test Method
Appearance	Clear bright fluorescent red liquid	-	-
Density	Approx. 0,92 @ 20°C / 68°F	g/ml	-
Flash point	> 93°C / 201°F	-	-

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

3 Method of use

Ardrox® 9VF2 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® 9PR5, 9PR50 or 9PR88 before applying Ardrox® 9VF2 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® 9VF2 penetrant to cover test area. Allow penetrant 10–30 minutes penetration time before removing. 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® 9PR5, 9PR50 or 9PR88). Alternatively, removal can be made by gentle water spray or by rinsing with water. Do not flush surface with cleaner as sensitivity will be impaired. Repeat procedure until surface penetrant has been removed. For temperatures over 50°C/122°F,

excess penetrant should be removed with Ardrox® 9PR50 or a dry, clean, lint-free cloth. Under 10°C/50°F, use penetrant remover Ardrox® 9PR5 for a faster evaporation.

Thoroughly dry the component surface before developer application.

3.4 Developing

Shake developer (typically Ardrox® NQ1) thoroughly. Spray thin, even developer film over area to be inspected (spraying distance 20–30 cm). Allow 10–30 minutes developing time before evaluation. Over +50°C/+122°C, use Ardrox® NQ1; the minimum development time is reduced to 2 minutes. Under 10°C/50°F, use developer Ardrox® 9D4E for a faster evaporation. Optionally, evaluation may be made under UV-light.

3.5 Cleaning

After final inspection, components can be cleaned using e.g. Ardrox® 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® 9VF2 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.

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.

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