ARDROX® P6R

WATER-WASHABLE AND SOLVENT-REMOVABLE RED PENETRANT

1 Description

Ardrox® P6R is a visible light inspection penetrant as per the AMS 2644 Type 2 and 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. Its dark red color allows easy control and monitoring of the washing process. The product offers the highest sensitivity level according to ISO 3452-2.

Ardrox® P6R is a blend of surfactants with a low sulfur and halogen content. It is oil free and consequently offers an excellent biodegradability.

Ardrox® P6R is available as bulk material and as aerosol cans. It is typically used together with the Ardrox® range of cleaners and developers.

Conformances

✓ ASME Boiler & Vessel Code	Section V, Article 6
✓ ISO 3452-2	Type-II, Method A & C, Level 2
✓ SAE AMS 2644	Type 2, Method A & C (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, liquid	-	-
Density	Approx. 0,88 @ 20 °C / 68 °F	g/ml	-
Flash point	> 99 °C / 210 °F	-	-

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

3 Method of use

Ardrox® P6R may be applied by aerosol, brushing, flow-on, immersion, spray or by swab.

3.1 Pre-Cleaning

Clean part with e.g. Ardrox® 9PR5, 9PR50 or 9PR88 before applying Ardrox® P6R penetrant. Apply cleaner to the part and wipe clean with cloth. The 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 10 and 50°C (50-120°F). Apply a thin even film of Ardrox® P6R penetrant to cover test area. Allow penetrant 10–30 minutes penetration time before removing.

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 effected 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.

Thoroughly dry the component surface before developer application.

3.4 Developer

Shake developer (e.g. Ardrox® NQ1 or 9D1B) thoroughly. Spray an even developer film over the area to be inspected (spraying distance 30 cm / 1 ft.). Allow 10 – 30 minutes developing time before evaluation. Inspection should take place in diffused white light of at least 500 lux at the component surface.

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® 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 material

When Ardrox® P6R 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, protect 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.

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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