

ARDROX[®] 8501

HIGH-SENSITIVITY FLUORESCENT MAGNETIC INK

1 Description

Ardrox[®] 8501 is a ready-to-use fluorescent ink ideal for the inspection of ferromagnetic materials, structures and components by the magnetic particle inspection method.

Ardrox[®] 8501 consists of finely-divided fluorescent magnetic particles, dispersed in a hydrocarbon carrier fluid which will fluoresce brilliant yellow/green under ultraviolet radiation with a predominant wavelength of 365 nanometer.

Ardrox[®] 8501 contains a hydrocarbon carrier fluid corresponding to the AMS 2641, Type 1 Magnetic Particle Inspection Vehicle with a flash point exceeding 93°C / 200°F.

Ardrox[®] 8501 is available as bulk material and as aerosol.

Conformances

- ✓ ASTM E-1444
 - ✓ CEN ISO 9934-2
 - ✓ SAE AMS 3045/3046 & 2641 Type 1
- Ask your Chemetall representative for a complete list of approvals

2 Physical and chemical properties

Property	Value	Unit	Method
Appearance	Suspension of brown powder	-	-
Particle size (medium)	3	µm	-
Flash point	>93 / >200	°C / °F	ASTM D93
Density	0.83 at 20°C / 68°F	g/cm ³	volumetric

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

3 Application

Ardrox[®] 8501 is used as supplied without any dilution.

The surface of the component to be inspected should be cleaned prior to testing as any contamination on the component can mask any indication and contaminate the magnetic particle ink. Surface temperature should be between 0°C and 75°C (30°F-165°F).

Before use, Ardrox[®] 8501 must be agitated/shaken to ensure that the magnetic particles are maintained in suspension.

The ink can be applied by spray, flow-on or when residual magnetic field method is used by immersion. When the continuous magnetization method is used, the application of ink must be stopped before the magnetizing current is switched off to enable the particles to migrate to the area of flux leakage.

Indications appear brilliant yellow-green when viewed under UVA (black light) of peak wavelength of 365 nm. The component surfaces should be inspected under UVA (black) light of minimum output of 1,000 $\mu\text{W}/\text{cm}^2$ and peak wavelength of 365 nm. The ambient light should also be less than 10 lux.

Note: Specification may vary. Check concentration and UVA/ambient light as per the applicable specification.

4 Effects on materials

When Ardrex® 8501 is used in the prescribed manner, no significant corrosion will occur on ferrous materials. Equipment/tanks should be constructed of stainless steel.

Some thermoplastics and certain rubbers may be softened or swollen with prolonged contact and intending users are advised to check the compatibility of such materials with the product.

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.

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.

**Headquarters and Regional Head Office
Europe, Middle East, Africa, South America**
Chemetall GmbH
Trakehner Straße 3
60487 Frankfurt am Main, Germany
Tel: +49 (0) 69 7165-0

**Regional Head Office
North America**
Chemetall US, Inc.
675 Central Avenue
New Providence, NJ 07974, USA
Tel: +1-908-464-6900

**Regional Head Office
Asia-Pacific**
Chemetall Asia Pte Ltd.
12 Loyang Crescent
Singapur 508980
Tel: +65 6885 7900