

# ARDROX<sup>®</sup> 8506

## HIGH-SENSITIVITY FLUORESCENT MAGNETIC INK

### 1 Description

Ardrox<sup>®</sup> 8506 is a ready-to-use fluorescent ink ideal for the inspection of ferromagnetic materials, structures and components by the magnetic particle inspection method.

Ardrox<sup>®</sup> 8506 consist 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.

The particles have been selected for their high magnetic response, low coercivity (to avoid coagulation) and prolonged operational life.

Ardrox<sup>®</sup> 8506 use 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<sup>®</sup> 8506 is available as bulk material and as aerosol.

#### Conformances

- ✓ ASME Boiler & Vessel Code Section V, Article 7
- ✓ ASTM E-1444
- ✓ CEN ISO 9934-2
- ✓ Rolls Royce CSS231 & RRP 580004 (approval)
- ✓ SAE AMS 3045/3046 & 2641 Type 1
- ✓ Safran IN-5300

Ask your Chemetall representative for a complete list of approvals

### 2 Physical and chemical properties

Property	Typical Value	Unit	Test Method
Appearance	Suspension of brown powder	-	-
Particle size (mean)	4-5	µm	-
Settlement	0.1 - 0.3	%	AMS 3045
Flash point	>93 / >200	°C / °F	ASTM D93
Density	0.81 at 20°C / 68°F	g/cm <sup>3</sup>	volumetric

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

### 3 Application

Ardrox<sup>®</sup> 8506 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 and 75°C (30-165°F).

Before use, Ardrox<sup>®</sup> 8506 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 Ardrox<sup>®</sup> 8506 is used in the prescribed manner, no significant corrosion will occur on ferrous materials. Equipment/tanks should be constructed of stainless steel.

#### **5 Storage**

Store in a cool place, protected 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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