ARDROX® 8505

HIGH-SENSITIVITY FLUORESCENT MAGNETIC POWDER

1 Description

Ardrox® 8505 consists of finely divided fluorescent magnetic particles which will fluoresce brilliant yellow-green under ultraviolet radiation with a predominant wavelength of 365 nanometers. The particles have been selected for their high magnetic response, low coercivity (to avoid coagulation) and prolonged operational life.

Ardrox® 8505 is used for the high-sensitivity detection of surface or near surface defects in ferro-magnetic materials.

Ardrox® 8505 is also available as a bulk or aerosol ready-to-use dispersion in a high flash point carrier oil under the product name Ardrox® 8506.

Conformances

✓ ASME	Boiler & Vessel Code Section V, Article 7
✓ CEN ISO	EN ISO 9934-2
✓ Rolls Royce	RRP 580004-MILC104 (approval)
✓ SAE	AMS 3044
✓ 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	Brown powder	-	-
Density	Approx.. 0.7 at 20 °C / 68 °F	g/ml	Volumetric
Particle size	Approx. 4	µm	-

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

3 Preparation

Ardrox® 8505 is used by mixing directly with a suitable carrier fluid, such as the high flash point and odorless carrier oil Ardrox® Base Oil HF.

Ardrox® 8505 is added at concentrations between 0,8 g/L and 1,2 g/L, which will give approximate settlement volumes of between 0,15% and 0,30%.

4 Method of use

Heavy deposits of grease, rust, scale, and paint should be removed prior to use. Any contamination on the component can mask indications and contaminate the magnetic particle ink.

Components are magnetized using the appropriate technique and the Ardrox® 8505 ink is applied during magnetization. Application of the ink should cease before the magnetization source is switched off to enable the particles to migrate to the area of flux leakage. Application of the prepared Ardrox® 8505 may be by spray, flow-on or immersion.

The component surfaces should be inspected under UVA of minimum output of 1000 µW/cm² and peak wavelength of 365 nanometers. The ambient light should also be less than 20 lux.

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

5 Effects on materials

When Ardrox® 8505 used in the prescribed manner, no significant corrosion will occur on ferrous materials. Equipment/tanks should be constructed of stainless steel.

6 Storage

Store in a cool place, with protection from freezing conditions. Shelf life of Ardrox 8505® is 36 months.

7 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.

8 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

www.chemetall.com | surfacetreatment@basf.com

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