

# MAGNAVIS

## MAGNETIC PARTICLE INSPECTION



**MAGNAVIS** - Our range of visible magnetic particle inks and powders.

**7HF** is a prepared bath intended for spot inspection for difficult to process situations where bulk processing is impractical.

**WCP-2** is a ready to use rapid drying white contrast paint used to enhance visible indications on dark coloured test surfaces



### APPLICATIONS

#### Automotive components manufacturers

- Brakes
- Steering components
- Connecting rods
- Wheels
- Engine mounts
- Pistons
- Cylinder blocks

**Foundries** - raw castings

**Military** - critical components

**Test labs** - NDT inspections

- Helicopter gearboxes
- Brakes
- Springs

### EQUIPMENT

We also supply a wide range of versatile, reliable and well-built MPI testing equipment, from small portable units like Yokes right through to the heavy-duty MAG Benches.

Our equipment meets all industry standards and the needs of MPI testing.

### BENEFITS

- Meets industry standards
- Universal approvals
- Clear and bright indicators
- Resists breakdown
- Can show subsurface flaws
- Consistent high performance
- Oil or water suspension
- Non-fluorescent
- Economically Priced





### READY TO USE INK



Specification	7 HF
ASME B & PV Code, Sec V	✓
ASTM E 709	✓
ASTM E 1444	✓
AMS 3041	✓
AMS 3043	✓
Boeing PS -21201	✓

### WHITE CONTRAST PAINT



Specification	WCP-2
ASME B & PV Code, Sec V	✓
EN ISO 9934-1	Para. 7 & 10 as applicable
EN ISO 9934-2	Para. 7 as applicable
BS 5044	✓

# MAGNAVIS WCP-2

## WHITE CONTRAST PAINT

### General Description

Magnavis WCP-2 is a ready-to-use, rapid-drying white contrast paint. It produces an opaque white background to enhance visible indications on dark-coloured test surfaces.

WCP-2 is suitable for use in both dry method and wet method magnetic particle inspection

### Composition

WCP-2 consists of inert inorganic pigments and an acrylic binder in a solvent blend based on acetone.

It is low in sulphur and halogens, and contains no chlorinated hydrocarbons.



### Typical Properties (not a specification)

Property	WCP-2
Form & Colour	Mobile white liquid
Flash point	-18 deg C (Bulk)
Density	0.93 g/cm <sup>3</sup>
Boiling Point	56 deg C
Solids Content	20%
Viscosity at 20 deg C	< 200 mm <sup>2</sup> /s
Storage temperature	10 – 30 deg C
Usage temperature	5 – 50 deg C

Like all Magnaflux materials Magnavis WCP-2 is closely controlled to provide unique batch to batch consistency and uniformity to assure optimum process control and inspection reliability.

### Method of Use

- Clean the component before testing to provide a suitable test surface.
- Shake the WCP-2 to ensure the paint particles are evenly distributed.
- Apply a thin, even film of the paint to the test surface by spraying, dipping or brushing. Allow to dry.
- Apply magnetic particles to the test surface and observe any indications formed around leaks/defects.
- If the test material has a high retentivity, indications will remain visible; otherwise, the indications will slowly fade.
- After inspection, demagnetize the test part before cleaning. The dried paint film can be removed using a wire brush or a common solvent, such as acetone.

### Specification Compliance

Specification	WCP-2
ASME B & PV Code, Sec V	✓
EN ISO 9934-1	Para. 7 & 10 as applicable
EN ISO 9934-2	Para. 7 as applicable
BS 5044	✓

### Availability

WCP-2 is available as aerosols, part number **F03031**

### Health and Safety

- Safety Data Sheets for this product are available on request from your Magnaflux distributor or via the Magnaflux website ([www.in.magnaflux.com](http://www.in.magnaflux.com)).
- Read the relevant Safety Data Sheets before use.

**MAGNAGLO**<sup>®</sup>**Product Data Sheet****MG - 2410****Wet Method Fluorescent Magnetic Particle****General Description**

MAGNAGLO 2410 is a green fluorescent powder blended with water conditioner, used in wet magnetic particle testing, when water is used as bath vehicle. MAGNAGLO 2410 is used as general purpose wet magnetic particles, inspecting of inclusions, seams, shrink cracks, tears, laps, flakes, welding defects, quenching cracks and fatigue cracks.

MAGNAGLO 2410's bright green fluorescent color contrast with the purple background of metal surfaces when viewed under blacklight in a darkened area. A total darkened area is not required due to the intense brightness of MAGNAGLO 2410 .

The recommended use concentration of 2410 is 10.75gm/ltr of vehicle. Higher concentrations ( up to 11gm /ltr) may be required for specific purposes. (Excessive concentration might cause foaming in the bath)

**Composition:**

MAGNAGLO 2410 is composed of magnetic particles encapsulated in fluorescent pigment and non – ionic surfactants, corrosion inhibitors and anti foaming agents.

**Safety**

- \* MAGNAGLO 2410 is intended for industrial use by qualified personnel only.
- \* Donot smoke or eat while using MAGNAGLO 2410. Wash hands thoroughly after use.
- \* Avoid prolonged or repeated contact with eyes and skin. Wear protective hand wear.
- \* Store MAGNAGLO 2410 in closed container in a dry location.

**Typical properties ( Not a specification )**

Colour under white light	Green
Colour under black light	Bright green fluorescence
Sensitivity	7 ( Ketos ring indication )
Settling Volume @ 10.75g/ltr	0.03ml to 0.1 ml
Temperature limit	50deg C

**Bath Preparation:**

Weigh out appropriate amount of 2410, add enough water to form a thick slurry and mix material. Add the slurry to the agitated bath. Run pump for 10 minutes, before testing is commenced.

### **Concentration control:**

The bath strength should be maintained constant at all times to insure consistency. The concentration should be checked at make up time and atleast once each day. The widely used method of control is by gravity settling in a graduated ASTM pear shaped centrifuge tube. Magnaflux P/N 8493 is recommended for MAGNAGLO 2410 with a stem measure of 0.3 ml in 0.01 ml graduations.

The tube is filled to the 100 ml line with well mixed bath. The tube is placed in the stand in a vibration-free location for 30minutes. After 30 minutes the settling volume is taken which indicates the amount of magnetic particles present in the bath (@ concentration 10.75 gm/ltr: 0.03 - 0.1 ml). If the reading is high, add water, if low, add MAGNAGLO 410.

### **Specification Compliance**

ASTM E – 1444 ,  
AMS 3044  
ASME B & PV CODE SEC V

### **Container Size**

1Kg