

## MAGNAGLO® MG-3410 WET METHOD FLUORESCENT MATERIALS

### GENERAL DESCRIPTION

Magnaglo® MG-3410 is a dry, free flowing, green magnetic powder which fluoresces bright green under UV black light (wavelength of 365 nanometers). It's bright fluorescent color contrasts with the background of clean metal surfaces when viewed under black light in a darkened area.

MG-3410 is used with water as the suspension vehicle. The powder contains conditioners which improve the magnetic particle suspendibility, mobility and wetting of test part surface. No additional wetting or conditioning agents are required when MG-3410 is used.

### APPLICATIONS

Typical usage applications for MG-3410 include magnetic particle inspection of steel billets, tube rounds and large castings for the detection of small to large defects.

### COMPOSITION

Magnaglo® MG-3410 is composed of Magnaglo® MG-410 magnetic particles and wetting agents.

### TYPICAL PROPERTIES (Not a specification)

Typical Properties	MG-3410
Color Under White Light	Green
Color Under Black Light	Green Fluorescence
Mean Particle Size	10 Microns (same as MG-410)
SAE Sensitivity	6
Settling Vol. (0.10 oz/gal of Water, 30 min.)	0.02 ml @ 0.10 oz/gal 0.04 ml @ 0.20 oz/gal
PH	9
Temperature Limit	120° F Maximum

### BATH PREPARATION

Magnaglo® MG-3410 is used in water at a recommended concentration of 0.10 to 0.20 oz. per gallon. Weigh out powder and add to agitated bath. Allow bath to mix for 30 minutes or until uniform.

## **CONCENTRATION CONTROL**

The bath strength should be maintained constant at all times to ensure consistent results. The concentration should be checked at make-up time and at least once each day. The most widely used method of control is by gravity settling in a graduated ASTM pear shaped centrifuge tube. Magnaflux® part number 507923 is recommended for MG-3410 with a stem measure of 0.2 ml in 0.01 ml graduation. The tube is filled to the 100 ml line with well mixed bath and placed in the stand in a vibration-free location for 30 minutes for water (60 minutes for Carrier II oil). After 30 minutes for water, (60 minutes for Carrier II) the settling volume is taken. The settling volume indicates the amount of magnetic particles present in the bath.

In billet units, the settling tube should be examined under black light to determine the amount of nonfluorescent scale present in the bath. Scale will reduce the brightness of the fluorescent indications and may completely overwhelm the fluorescent particles preventing flaw detection. A concentration of 0.10 ounce/gallon of MG-3410 will have a settling volume of 0.02 ml. If the reading is too high, add vehicle. If the reading is too low, add MG-3410 powder. Water should be added to prevent excessive buildup of wetting agent from continual addition.

## **METHOD OF APPLICATION**

Parts should be cleaned prior to testing to reduce bath contamination and to ensure a more desirable test surface. The bath must be continuously agitated when in use to ensure uniformity, as particles will settle out of suspension on standing. Using the wet continuous method, the bath is applied to all surfaces of the part. The instant the bath stream is removed from the part the magnetizing current is applied. The indication will be formed during the current shot. If the bath is applied after the magnetizing shot, the force of the bath application may wash away indications.

## **POST INSPECTION CLEANING**

If required, parts should be demagnetized before cleaning to ensure ease of particle removal.

## **PACKAGING**

30 Lb. Pails.

