



MAGNAGLO® 410 REDI-BATH

GENERAL DESCRIPTION

Magnaglo® 410 Redi-Bath is a green, viscous, water based concentrate. It contains MG-410 Magnetic Powder together with wetting agent, anti-foaming agent, and a long lasting rust inhibitor. The one gallon jug contains enough concentrate to make 67 liters of water bath. *Warning! Do not mix this concentrate into carrier oil.*

MG-410 Redi-Bath fluoresces bright yellow-green under UV black light (wavelength of 365 nm). When mixed according to instructions, it provides a MG-410 particle concentration of 1/8 ounce per gallon of water (0.94 gm/l).

APPLICATIONS

(Information Required)

COMPOSITION

Magnaglo® 410 Redi-Bath is composed of Magnaglo® 410 magnetic particles together with wetting agent, anti-foaming agent, and a long lasting rust inhibitor.

TYPICAL PROPERTIES (Not a specification)

Typical Properties	MG-410 Redi-Bath
Color Under White Light	Dark Green
Color Under Black Light	Greenish-Yellow
Mean Particle Size	15 Mircons
SAE Sensitivity	7
Settling Volume	0.02 - 0.07 ml
PH	9 - 10

BATH PREPARATION

Shake container well to suspend the settled MG 410 Magnetic particles. The jug is purposely not quite filled when new, which makes it easier and faster to attain uniform distribution of particles in the concentrate.

To prepare a 18.5 gallon (70 L) bath, simply pour the entire contents of the jug into 17.5 gallons (67 L) of water while stirring or re-circulating. Rinse container with a little water and add to the bath. Mix continuously or allow the prepared bath to recirculate for 5 minutes prior to use. Make sure that the suspension passes through the application nozzle in the final minutes. Perform particle settling test.



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 with a stem measure of 0.2 ml in 0.01 ml graduation is recommended. 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. After 30 minutes, the settling volume is taken which indicates the amount of magnetic particles present in the bath. The settling volume recommendation for MG 410 is 0.02 – 0.07 ml. If reading is high, add water; if low, add MG 410 Redi-Bath concentrate.

Constant use of the bath requires a daily check for evaporation of water, loss of particles due to carry-off, particle breakdown, and contamination. Eventually the bath will become so contaminated by dirt, lint, chips, oil or other foreign material that efficient formation of indications will become impossible.

Contamination can be checked by noting the amount of foreign material that settles out with the particles in the centrifuge tube. The particle breakdown can be observed by viewing the bath on a ketos ring and evaluating the efficient formation of indications. If the background of the bath is such that indications cannot be readily observed, the bath should be changed.

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.

Using the wet residual method, the pre-magnetized part (must be of high retentivity) is immersed in the bath and then removed and allowed to drain. The indications will be formed in the bath, but background will be reduced during the drain. This method is generally less sensitive than the continuous method. The bath is also more susceptible to rapid particle depletion and contamination using this method.

POST INSPECTION CLEANING

Parts must be properly demagnetized before cleaning to ensure ease of particle removal.

SPECIFICATION COMPLIANCE: NAVSEA 250-1500-1, MIL-STD-271, MIL-STD-2132, ASME & PV Code, Sec. V, ASTM E 709, ASTM E 1444.

PACKAGING

1 Gal. Plastic Jug.

