

Product Data Sheet

WB12 Water suspendible fluorescent particles

General Description

WB12 is a liquid concentrate used to prepare water based fluorescent ink for wet method magnetic particle testing.

The ink is used in conjunction with suitable magnetising equipment and UV(A) source to locate fine surface and slightly subsurface discontinuities in ferrous materials.

Typical defects found include shrink cracks, welding defects, grinding cracks, quenching cracks and fatigue cracks.

Inks made from WB12 give clear bright yellow indications when viewed in darkened area under ultraviolet radiation (UV-A) of peak wavelength 365 nm.

Composition

WB12 consists of a mixture of fluorescent magnetic particles, corrosion inhibitor, wetting agents and foam control additives.

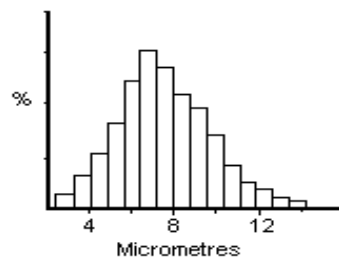
Advantages

- ✓ Easy to use and prepare
- ✓ Chromate and Nitrite free
- ✓ Enhanced corrosion protection
- ✓ Contains no Nonylphenol ethoxylates

Typical properties (Not a specification)

Form	⇒	Brown liquid
Density	⇒	1.2 g / ml
Settlement Volume	⇒	0.2 ml (At 20 ml per lt)
pH (2%)	⇒	9.0

Particle Size range ⇒



Like all MAGNAFLUX materials, WB12 is closely controlled to provide unique batch to batch consistency & uniformity to assure optimum process control and inspection reliability.

Bath Preparation / Method of Use

One 500 ml bottle of WB12 will make 25 lt of ready to use Ink.

Add the entire contents of one bottle to the bath. Rinse the container with water to remove any remaining product and add to the bath. Make up to 25 lt with water. Mix thoroughly and check for correct settlement volume before use.

Components should be cleaned prior to testing to provide a suitable test surface.

The Ink can be applied by spraying, immersion or flooding.

The ink must be mixed thoroughly prior to use and must be kept agitated during testing.

Using the wet continuous method, the ink is applied to all surfaces of the component during magnetisation.

The indications will be formed during the application of magnetising current. The flow of ink must stop before the magnetising current otherwise there is a risk that the force of the ink application may wash away indications.

Using the wet residual method, the premagnetised part is immersed in the bath, removed, allowed to drain and then inspected. This method is generally less sensitive than the continuous method and is more susceptible to rapid particle depletion and bath contamination.

Bath replenishment / Concentration control

When in use, the magnetic content of any ink will become depleted.

To guard against this the ink strength should be checked at least once each day.

The most widely used method of control is by settlement volume using a graduated ASTM pear shaped centrifuge tube.

When the settlement volume approaches the lower limit then additions of Magnaflux 14A particles can be made to the bath providing the bath liquid is still clean and uncontaminated.

If the bath appears contaminated or has been in use for any length of time, it should be replaced.

After inspection the components should be properly demagnetized before cleaning to insure ease of particle removal.

Cleaned components may be treated with a temporary film protective coating if longer lasting corrosion protection is required.

Specification compliance

- | | |
|--|---|
| <input type="checkbox"/> BS 4069 | <input type="checkbox"/> ASTM E 1444-93 |
| <input type="checkbox"/> ASME B & PV Code, Sec V | <input type="checkbox"/> ASTM E-709 |

WB12 is available in 10 x 500 ml packs.

Safety

Safety data sheets for this product are available on request.

Avoid contact with skin and eyes.

Avoid breathing spray mists.

Wear suitable gloves and eye protection if there is a risk of skin or eye contact.

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