

Aerosol type fluorescent magnetic particle solution

Super Magna LY-10 sol

Troublesome preparation of magnetic particle solution is not necessary. Ideal for large products to be tested outdoors, such as large-size cast products and welded structures.



- Highly sensitive fluorescent magnetic particles ensure clear indication of flaws.
- The density of the magnetic particle solution has been optimized in advance.
- The airtight container means the magnetic particle density will not change.

Oil based

No concerns about rust on the test piece. The dispersing agent has low toxicity and no odor, ensuring a comfortable test environment.

Quick-drying

The magnetic particle solution dries immediately after being applied, which facilitates transfer of the flaw indication. Due to its quick-drying property, the liquid will not dribble even when sprayed upwards.

Water based

Purified water is used as the dispersing agent, so foul odors are not generated. The Fire Defense Law does not apply to the dispersing agent and safety is improved.

Type of magnetic particle

	Oil based	Quick-drying	Water based
Charged gas	LPG	LPG	DME/CO ₂
Main dispersing agent/flashing point (undiluted solution)	Hydrocarbon solvent/95°C	Hydrocarbon solvent/-4°C	Purified water, nonhazardous substance*2
Magnetic particle density	2.0g/L	1.5g/L	0.75g/L
Quantity contained	290g	280g	420g
Fluorescent factor (cd/W) *1	5.4±10%	5.4±10%	8.2±10%
Particle size	By laser diffraction scattering type measurement (Volume standard) 10 to 15µm		
Ordinance on the Prevention of Organic Solvent Poisoning	Not applicable		
High Pressure Gas Safety Act	Applicable (Beware of fire and high temperature)		

*1: Evaluation by fluorescent factor (cd/W) Fluorescent factor = Brightness/UV intensity

*2: Though the undiluted solution is nonhazardous, this product is regarded as a hazardous substance during transportation because it is an aerosol.

Magnetic dispersant, anti-rust agent, defoaming agent

©We offer a dispersant to disperse magnetic particles of Super Magna into water, and a dispersant oil to disperse into oil. In addition, use an anti-rust agent and defoaming agent for the dispersant if necessary.

Name	Recommended density	Feature
Water-soluble magnetic dispersant	BC-1S	0.1 to 0.2%
	BC-700	1.0 to 2.0%
	EC-4	0.5%
Magnetic particle dispersing oil	SO-220B	-
	SO-220C	-
Water-soluble anti-rusting agent	AR-100K	1.0 to 5.0%
Water-soluble defoaming agent	71A	0.1 to 0.2%

The specifications are subject to change for improvement without notice.

Integrated supplier of Non-Destructive Testing and Marking

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Magnetic particle testing material

Super Magna / Eco Magna

Super Magna/Eco Magna

Optimum for testing ferromagnetic material

High-quality and environment-friendly

Super Magna/Eco Magna by MARKTEC



Super Magna

The standard for magnetic particle test materials We offer a wide range of products and the optimum plan for the application.



Eco Magna

Contains magnetic particle dispersant

Friendly to living things and the environment. The magnetic particle solution can be easily prepared. User-friendly fluorescent magnetic particle concentrated solution has appeared on the market.

Super Magna



Before testing Example of test result



Fluorescent magnetic particle

Fluorescent magnetic particle offering excellent flaw detection and identification under black light irradiation

- High fluorescent brightness enables detection of tiny flaws easily.
- Since separation and degradation of the fluorescent material is low, it can be used for a long time.
- Since a small amount of agent can test a large quantity of specimen, testing cost is reduced.
- Lineup which meet AMS 3044.

Non-fluorescent magnetic particle

Non-fluorescent magnetic particle that enables testing under visible radiation

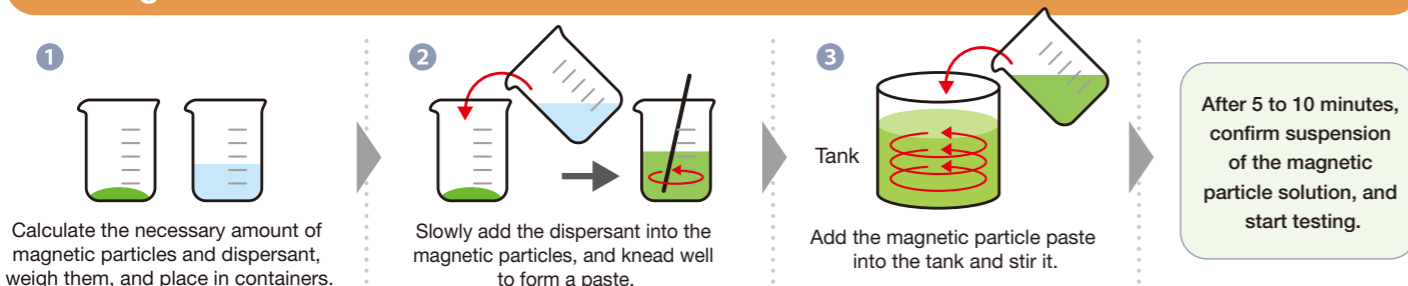
- The color of the magnetic particle that has good contrast with the surface color of the specimen can be selected.
- Owing to the special manufacturing method, separation of the coloring pigment hardly occurs.
- The dry method is also suitable for detecting relatively shallow defects under the surface of the specimen.

Type of magnetic particle

Name	Fluorescent or appearance color	Fluorescent factor (cd/W) *1	Particle size (μm) *2	Compliant standard *3	Usage	
Fluorescent magnetic particle	LY-10	Greenish yellow	8.2±10%	10 to 15	AMS3044	Exclusively for water dispersion, general-purpose product
	LY-20	Greenish yellow	11.2±10%	12 to 21		Exclusively for water dispersion, high brightness, for precision testing of steel material
	LY-30	Greenish yellow	5.8±10%	4.5 to 6.5		Exclusively for water dispersion, for ultraprecision testing, aircraft, polished round bar, etc.
	LY-40	Greenish yellow	5.8±10%	8 to 15		Exclusively for water dispersion, general-purpose product
	LY-50	Yellowish green	5.4±10%	10 to 15		Exclusively for oil dispersion, general-purpose product
Non-fluorescent magnetic particle	WD-55	White	—	—	AMS3040	Dry type, general-purpose product
	WD-103Y	White	—	—	—	Dry type, general-purpose product
	RD-203	Red	—	—	AMS3040	Dry type, general-purpose product
	BW-334	Black	—	—	—	Wet type, general-purpose product

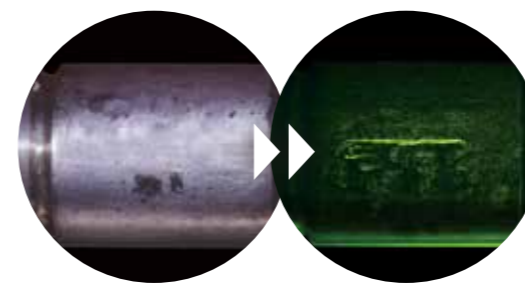
*1 Evaluation by fluorescent factor (cd/W) Fluorescent factor = Brightness/UV intensity *2 Particle size (μm): Laser diffraction/scattering type (Volume standard)
*3 Meets applicable requirements for : AMS3044, ASTM E1444/E1444M, ASTM E709

Usage instructions



Eco Magna

Related patent number: No. 5224168



Before testing Example of test result



Fluorescent magnetic particle concentrated solution

LY-Conc series products which meet for AMS standards. By adding LY-Conc. series agent to water, magnetic particle solution can be easily prepared.

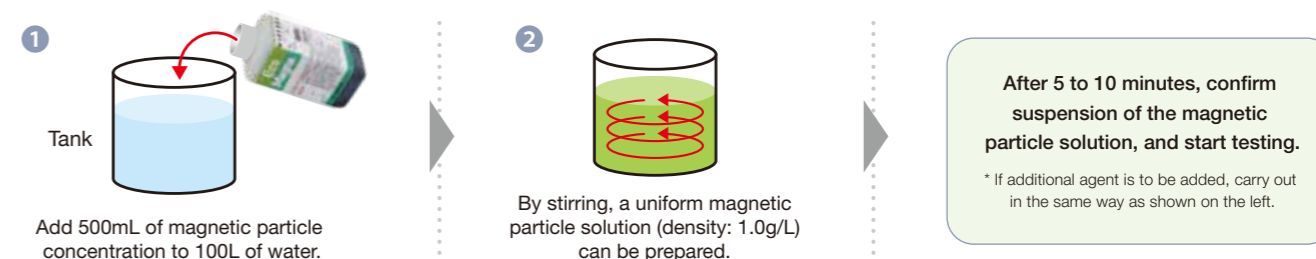
- Products which meet AMS3044 and SAE AS4792 standards. *1
- Since two-layer separation hardly occurs and storage stability is good, it can be used immediately after lightly shaking the container.
- Since dispersion stability is good and density fluctuation of the magnetic particle solution is small, only a smaller quantity is needed.
- Since the wettability is good and the magnetic particle solution can be uniformly dispersed, inspection accuracy is improved.
- Because the single liquid concentration type contains the dispersant, test conditions are consistent and stock control is simplified.

Type of magnetic particle

Name	Fluorescent color	Particle size (μm) *2	Compliant standard *1	Usage	
Fluorescent magnetic particle concentrated solution	LY-10 Conc.	Greenish yellow	10 to 15	AMS3044 SAE AS4792	Exclusively for water dispersion, general-purpose product
	LY-20 Conc.	Greenish yellow	12 to 20		Exclusively for water dispersion, high brightness, for precision testing of steel material
	LY-30 Conc.	Greenish yellow	4.5 to 6.5		Exclusively for water dispersion, for ultraprecision testing, polished round bar, etc.
	LY-40 Conc.	Greenish yellow	8 to 15		Exclusively for water dispersion, general-purpose product

*1 Meets applicable requirements for : AMS3044, SAE AS4792, ASTM E1444/E1444M, ASTM E709 *2 Particle size: Laser diffraction/scattering type (Volume standard)

Usage instructions



Notes

- * Lightly shake the container before measuring the quantity.
- * Avoid using water contaminated with dirt or salt.
- * Though the recommended magnetic particle density is 1.0g/L, the density of solution can be freely adjusted and used.

Example of preparing magnetic particle solution (in case of 100L)

Density of magnetic particle solution	0.5g/L	1.0g/L	2.0g/L
Amount of LY-Conc. added	250mL	500mL	1000mL