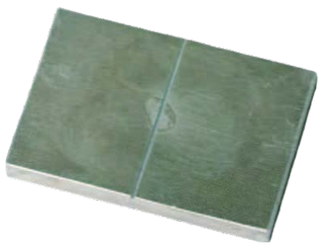
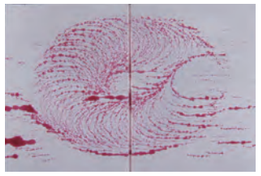
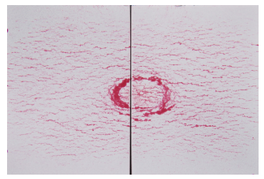
Test panel for liquid penetrant testing

Check for deterioration of penetrant, Check for sensitivity levels of different penetrant,
Check for sensitivity level in visibility comparison, and performance evalution.

Eishin NiCr Type1 Test Panels ISO 3452-3,JIS Z2343-2	JIS Type 3:24SAlminum quench crack ing test panel ISO 3452-3,JIS Z2343-2	ASME Alminum quench cracking test panel two pieces and 10mm thick
		
Options for these panels include 10, 20, 30, and 50 microns.		

Coating area

Coating area	Aerosol (450ml)	Penetrant Approx. 12㎡ Developer Approx. 4.2㎡
	Brush coating（per /1L）	Penetrant Approx. 35㎡

※The coating area will be increased or decreased depending on the surface roughness. It varies greatly depending on the individual skill of the inspector.

Size and packaging

Size	Penetrant	Aerosol450ml, Liquid 3.8L square can, 18L square can
	Remover	Aerosol450ml, Liquid3.8L square can , 18L square can
	Developer	Aerosol450ml, Liquid3.8L square can, 18L square can
Shipping unit	Aerosol products	A set of six cans: penetrant×1、developer×2、remover×3 in cardboard box
		6pack, 12pack,18pack, 24pack、30pack,36pack,48pack each in cardboard box
	Liquid products	3.8L square can: 2 or 4cans in cardboard box 18L squqre can:one cans in cardbiard box

ISO9001 Factory,R&D Center

ISO14001 Factory

EISHIN KAGAKU CO.,LTD

Head office 1-2-13,Higashisinbashi,Minato-ku,Tokyo,105-0021
Ibaragi Factory 4689-1,Uchimoriya-cho,Zyousou-shi,Ibaragi,303-0043
R&D 6-283,Wakashiba,Kashiwa-shi,Chiba,277-0871
Higashinihon Branch 6-283,Wakashiba,Kashiwa-shi,Chiba,277-0871
Kawasaki Branch 13-5,Ise-cho,Kawasaki-ku,Kawasaki-shi,Kanagawa,210-0805
Nagoya Branch 3-28-14,Chikusa,Chikusa-ku,nagoya-shi,Aichi,464-0858
Oosaka Branch 2-3-30,Gamou,Zyoutou-ku,Oosaka-shi,Oosaka,536-0016
Hiroshima Branch 1-4,Minamitakeya-cho,Naka-ku,Hiroshima-shi,Hirosima,730-0049

https://www.eishinkagaku.co.jp/

Ver.GC26.01EN

EISHIN

Non Destructive Testing Materials & Systems

Product catalog

RED MARK / NEO GLO / MAGNATRON / BLACK LIGHT

ISO 9001 and ISO 14001 certified

EISHIN
栄進化学株式会社

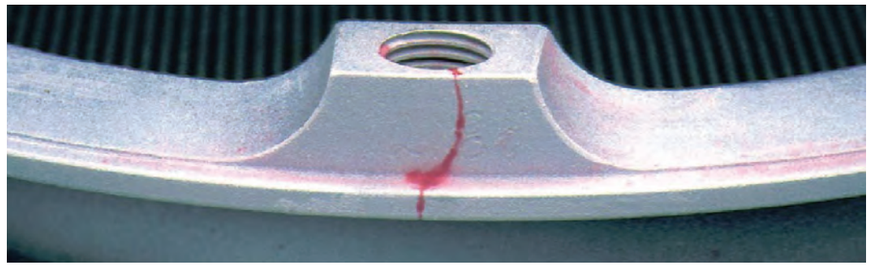
ABOUT US

Since its establishment in 1957, Eishin Kagaku has been committed to
"protecting materials, products, and the environment."
We have been striving to improve the quality of industry.
Focusing on technological innovation and environmental protection,
Eishin Kagaku continues to provide industry-leading products and services.
Eishin Kagaku is one of the world's leading developers and manufacturers of non-destructive testing products. Eishin Chemical's products are manufactured in Japan with the highest priority on quality control.
Our mission is to create a safer and more sustainable society
through high quality non-destructive testing.

INDEX

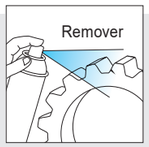
RED MARK

DPT is a relatively low-cost and easy to use method that can be performed quickly and on-site, making it a cost-effective and efficient method of testing.



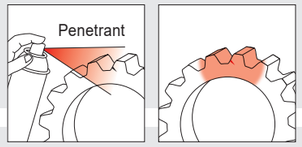
■ how to use

❶ Cleaning



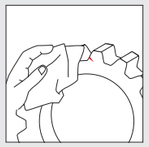
Use a cleaner/remover to remove dirt (fats and oils,etc) from the inspection surface and clean the sueface.Allow cleaner to remain on part long enough to dissolve dirt or film. Wipe dry with a clean cloth. Repeat if necessary. After final clean wiping, allow time to dry before using penetrant.

❷ Apply Penetrant



Spray or brush on the penetrant and allow to stand for 5 to 60 minutes.

❸ Remove Penetrant



A. solvent removal

Wipe off excess penetrant with a dry wess cloth, then wipe off the remaining penetrant with a wess cloth perfused in the remover.DO NOT flush surface with cleaner/remover

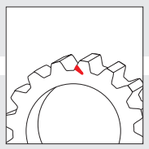
B. water washing

Remove excess penetrant with a water spray and completely dry surface moisture with a wess cloth or dry air or hot air drying.DO NOT flush surface with cleaner/remover

❹ Develop

The developer should be shaken well before use. Spray a thin, even layer of developer on the inspection surface. Developing time is 10 to 30 minutes.

❺ Inspect



Defects will be marked by a deep red indication. After the appropriate development time has elapsed, visually inspect under natural or white light.

❻ Post Cleaning

Remove developer on the inspection surface with water, brush, solvent,etc.

Click here to view a video of
dye penetrat test procedure and principle

https://www.youtube.com/watch?v=GpazBTV2x-s

EISHIN

Solvent Removale　Combinations of products for various uses and cleaning methods

Type	Item	Product Name	Product features	STANDARDS JIS	STANDARDS ASME	Flash Point
STANDARD	Penetrant	R-1A(NT)	Most popular products can be used for various materials of iron and non-iron material.	○		≧70℃
	Developer	R-1S(NT)		○		-10℃
	Remover	R-1M(NT)		○		-4℃
AMS	Penetrant	R-1A(NT)/1	AMS2644 Qualified products	○	○	>94℃
	Developer	R-1S(NT)/1	AMS2644 Qualified products	○	○	-10℃
	Remover	R-1M(NT)/1	AMS2644 Qualified products　High flash point and quick-drying type	○	○	>40℃
Low HALOGEN Low SULFUR	Penetrant	R-1A(NT) Special	This is the standard type suitable for flaw detection of stainless steel,titanium alloys and nickel alloys	○	○	≧70℃
	Developer	R-1S(NT) Special		○	○	-10℃
	Remover	R-1M(NT)Special		○	○	-4℃
NON-FLAMMABLE	Penetrant	RF-1A	Non-flammable solvent-removing with Low-GWP	○		-
	Developer	RF-1S		○		-
	Remover	RF-1M		○		-
HIGH TEMPERATURE	Penetrant	R-1AH(NT)	Inspection target items can be used in a range from 90℃ to 200℃	○		>70℃
	Developer	R-1SH(NT)		○		>70℃
	Remover	R-1MH(NT)		○		>90℃

Water-washable penetrant

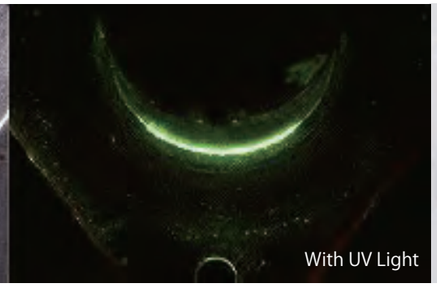
Type	Item	Product Name	Product Featuress	STANDARDS JIS	STANDARDS ASME	Flash Point
REGULAR	Penetrant	R-3B(NT)PLUS	large parts, rough surface, Complex shaped parts stainless steel,titanium alloys,	○		≧70℃
LOW HALOGEN LOW SULFUR	Penetrant	R-3B(NT) Special PLUS	titanium alloys and nickel alloys	○	○	≧70℃
WATER BASE	Penetrant	R-3B(NT) W-1 PLUS	Water-based penetrant is ideal flaw detection of all test items			-

DEVELOPER REMOVER for Special Applications

Type	item	Product Name	Product Features	STANDARDS JIS	STANDARDS ASME	Flash Point
EASILY REMOVABLE	Developer	R-1SB	Easy removal of developer coating after inspection with a brush or air	○		-10℃
FAST DRYING	Developer	R-1SD(NT)	Ultra-quick-drying type with a low flash point Effective at high humidity and low temperatures	○		-10℃
LOW HALOGEN LOW SULFUR	Developer	R-1SD(NT) Special	Flaw detection of same as above, stainless steel,titanium alloys, titanium alloys and nickel alloys	○	○	-10℃
WET SUSPENDABLE	Developer	R-3W	Non-flammable wet, developer.			-
PASTE	Developer	DP-1S	High-viscosity type suitable for inspection of slab materials			-
SLOW DRYING	Remover	R-1MS(NT) 2	Slow Volatilization and Drying	○		>40℃
LOW HALOGEN LOW SULFUR	Remover	R-1MS(NT) Special 2	High flash point and safer than the normal low halogen and low sulfur type	○	○	>40℃
	Remover	R-1MG(NT) Special	High flash point and safer than the normal	○	○	23℃
	Remover	R-3M（NT） Special	Water aerosol used in removal processes, ideal for stainless steel, titanium alloys, and nickel alloys		○	-
Removal of condensation and freezing	Remover	R-1ML(NT) Special	Quick-drying type suitable for low temperature and high humidity	○	○	-4℃
WATER AEROSOL	Remover	R-3M（NT）	Pure aerosol for use in removal processes			-

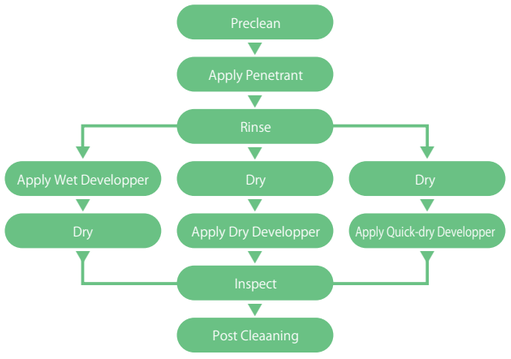
NEO GLO

Fluorescent Penetrant Testing (FPT) is a non-destructive testing method that detects surface-breaking defects in a wide range of materials by applying a fluorescent penetrant and using UV light to visualize any penetrant that has been drawn out of the defects..

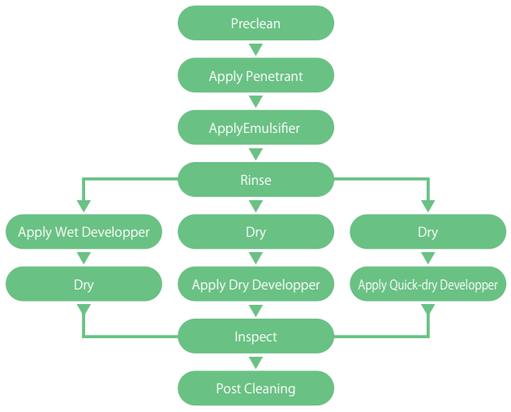


Fluorescent Penetrant Testing (FPT) procedure, which is governed by a set of guidelines and standards.

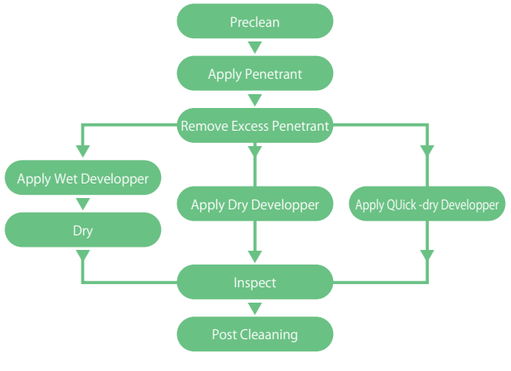
Method A Water Washable



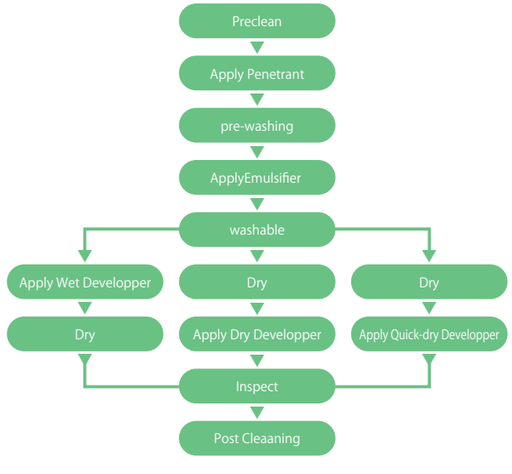
Method B Post Emulsifiable (oil-based)



Method C Solvent Removal



Method D Post Emulsifiable (water-based)



Water Washable series. Standard type of Fluorescent penetrant

Category	Product name	Features	Standards JIS
Penetrant	FWB3	Water-based fluorescent penetrat, no flammable. Can be used to inspect rough inspection surfaces, ceramics, plastics, and porous materials.	
	FWB3C	Concentrated type of FWB3 , Reduce transportation costs, inventory space, and costs.	
	F-4A-Au plus	Ideal for High-volume parts flaw detection of casting and other products with rough surfaceas and relatively large flaws.	
	F-4A-B plus(T)	Better wastewater treatment and low-odor than B-plus. Sensitivity level 2.	○
	F-4A-C plus	Law amount of drainage and good detectability. Sensitivity level 2.	○
	F-4A-E plus	Ideal for detecting microscopic flaws. Sensitivity level 3.	○
Developer	F-4S(NT)	Quick dry developer.	○
	F-5D/1	Dry developer.	○
	F-5D Special 2	Dry developer. It's low sulfer, low halogen and can be used in nuclear applications	○
	F-4W-SP/1	Aqueous wet developer. Use a mixture of water and developing powder.	○
Remover	R-1M(NT)	Most standard and versatile remover/cleaner	○
	R-3M(NT)	Removal solution for water spray rinse	

Oil-water separation Separates penetrant in cleaning wastewater, enabling recycling of cleaning water. It can be reduced cleaning wastewater to about 1/10.

Category	Product name	Features
Penetrant	FB-3100KR	Ideal for detecting large flaw.
	FB-3100C	Better detectability than FB-3100KR. Also capable of detecting penetration defects in castings such as engine cases.
	FB-3500A	Better detectability than FB-3100C. It's also capable of detecting penetration defects .
Developer	RB-1SD(NT)	Wastewater can be recycled when the developer post-treatment is washed with water.(aerosol type)

AMS2644 quality Can be used in the aerospace field. AMS2644 quality also listed in QPL.

Aircraft engine manufactures quality *P&W: Pratt & Whitney RR: Rolls-Royce

Type	Product Name	Methods	Sensitivty	Features	Aircraft engine manufacture P&W	RR
Penetrant	F-4A/3	Method A Water Washable Method C Solvent removal	1	Fluorescent penetrant used in water washing or solvent removal.		
	F-4A-B/3		2		○	○
	F-4A-C/3		3		○	○
	F-4A-C/4		3			
	F-4A-E/3		4			
	F-5L-SP/3	Method B Post Emulsifiable (oil-based)	2	Fluorescent penetrant used in post-emulsification or solvent removal.	○	○
	F-6A/3	Method C Solvent removal	3		○	○
	F-6A-SP/3	Method D Post Emulsifiable (Water-based)	4		○	○

Type	Product Name	Methods	Features	Aircraft engine manufacture P&W	RR
Emulsifer	F-5E-SP/3	Oil-based emulsifiers for Method B	Cost effective due to low viscosity. Less prone to emulsification uneven.		
	F-6E-W/3	Water-based emulsifieres for Method D	Dilute to certified concentration of 20% or less. Goog emulsification and less prone to uneven emulsification.		○
Remover	R-1M(NT)	Class(2) -chlirine-free	Removers used in Method "C" solvent removal.		○
	R-1M(NT)/1		Removers used in Method "C" solvent removal.		○
Developer	F-5D/1	Form a : dry type	Flaw is clearly recognizable.	○	○
	F-4W-SP/1	Form c : water suspension type	Suspend in water and use.		
	F-4S(NT)/1	Form d : quick-drying type	Easy to carry because of aerosol.	○	○

MAGNATRON

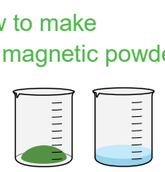
※)Conformity standard name AMS : 2641, 3040, 3042, 3043, 3044, 3046,,ASTME1444 ASME: Boiler and Pressure Vessel Code, section V

Fluorescent Magnetic Powder - Wet type

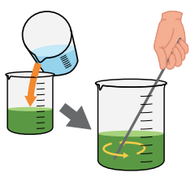
JIS : JIS Z 2320-2,**NDT- MT Powder - Part 2**

	Product name	Particle size (μm)	Features	Compatible standards※		
				AMS	ASME	JIS
Powder	SY-6000	5～30	Often used for material inspection of rolled products, cast products. Coarsest grain size among fluorescent magnetic powders.			
	SY-7000	5～20	Used for relatively large defects such as castings.			
	SY-7000S	1～15	Slightly wider adjustment to smaller grain sizes than SY-7000. Enhanced detection performance.			
	SY-7500	2～5	General-purpose product widely used in general.	○	○	
	SY-8000	～3	Often used for machined end products such as forgings. Finest particle size among general-purpose fluorescent magnetic powders.	○	○	
	SY-8000A/1	～3	Widely used for detecting minute defects in aircraft.	○	○	
	SY-6000Br T2	1～15	High-luminance type of SY-7000.			
	SY-6000BrSP	3～8	High-luminance type of SY-7500.			
	SY-25	4～21	Relatively large grain size. ISO 9934 compatible (Water dispersion only)	○	○	○
	SY-35	4～19	General-purpose type.ISO 9934 compatible (Water dispersion only)	○	○	○
	SY-45	3～15	Relatively small grain size type.ISO 9934 compatible (Water dispersion only)	○	○	○
Aerosol	SY-7500	2～5	Oil-dispersed aerosol product of SY-7500.	○	○	○
	SY-7500T	2～5	Oil-dispersed aerosol product of SY-7500. Low irritation to skin.	○	○	○
	SY-7500 Special	2～5	Controlled and refined type of halogen and sulfur content in the material of SY-7500.	○	○	○
	SY-8000	～3	Oil-dispersed aerosol product of SY-8000.	○	○	○
	SY-8000XB	～3	Aerosol product dispersed in a quick-drying solvent. suitable for flaw detection on steeply inclined surfaces, where dichens adsorbed on cracks tend to flow.			○
	SY-8000W	～3	Water-dispersed aerosol product of SY-8000.	○	○	○

How to make wet magnetic powder solution



①Calculate the amount of magnetic powder and dispersant required and measure them into a container.



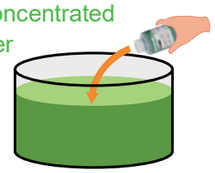
②While adding a small amount of dispersant to the magnetic powder, knead well to make a paste.

③Put into the paste-like magnetic powefer to the tank then stirring.

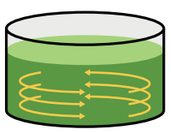
④After stirring thoroughly, confirm that the test solution is evenly dispersed and start the inspection.

	Product name	Particle size (μm)	Features	Compatible standards※		
				AMS	ASME	JIS
Concentration magnetic powder	SY-25WD	4～21	Pre-mixed fluorescent magnetic powder and dispersant. Can be used by simply diluting it in water. Product names are listed in descending order of particle size.	○	○	○
	SY-35WD	4～19		○	○	○
	SY-45WD	3～15		○	○	○
	SY-75WD	2～5			○	

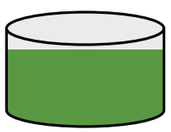
How to make concentrated magnetic powder solution



①Add 500 mℓ of concentrated magnetic powder solution to 100 L of water. (using a test solution concentration of 1 g/ℓ as an example)



②Stirring can be used to adjust the solution to a uniform magnetic powder solution. (Concentration 1.0 g/ℓ)



③After stirring thoroughly, confirm that the test solution is evenly dispersed and start the inspection.

	Product name	Partocle size (μm)	Features	Compatible standards※		
				AMS	ASME	JIS
Instant magnetic powder	SY-7500WS-3	2～5	Pre-mixed fluorescent magnetic powder and powder dispersant. Throw into water and use.			

EISHIN

Non-fluorescent magnetic powder - for wet type

	Color	Product name	Particle size (μm)	Features	Compatible standards※		
					AMS	ASME	JIS
Powder	Red	MA-30	5～30	Suitable for use on test surfaces that offer more contrast than black or white magnetic powder, such as a gray surface of the object to be inspected.	○	○	
	White	MS-30	5～30	Suitable for use on dark colored surfaces of inspection objects.			
	Black	MK-15	2～5	Suitable for use on brightly colored surfaces of inspection objects.	○	○	○
		MK-10	～3	Smaller grain size than MK-15. Using Contrast Enhancement paint can be eisier to see.	○	○	○
Aerosol	Black	MK-15	2～5	Oil-dispersed aerosol product of MK-15.	○	○	○
	-	Contrast Enhancement paint	-	White background paint for black magnetic powder. Applied thinly to the test surface.			

Non-fluorescent magnetic powder - for dry type

Color	Product name	Particle size (μm)	Features	Compatible standards※		
				AMS	ASME	JIS
Red	MA-100B	40～100	Suitable for use on test surfaces that offer more contrast than black or white magnetic powder, such as a gray surface of the object to be inspected. Product names are listed in descending order of particle size.	○	○	○
	MA-100	5～50		○	○	○
	MA-200	5～30		○	○	○
White	MS-300M	40～100	Widely used in general, Suitable for use on dark colored surfaces of inspection objects. Product names are listed in descending order of particle size.	○	○	○
	MS-200	5～50		○	○	○
	MS-300	5～40		○	○	○
Black	MK-300	30～50	Suitable for use on bright colors such as metallic luster on the surface of the object to be inspected.	○	○	○

■ Magnetic powder dispersant Brendex

Dispersing magnetic powder in water requires a dispersing material.
Please knead the dispersant (Blendex) and magnetic powder well in advance to make a paste, and then add it to the water.

Product name	Appearance	Dispersant Concentration	Features
Blendex-B	Pale milky viscous liquid	Against water 0.5～2.0%	Standard product, good dispersibility of magnetic powder
Blendex-D		Against water 0.5～2.0%	Foam-resistant type, Use when bubbling during circulation of magnetic powder solution
Blendex-RH		Against water 3～5%	Strong rust-preventive, can be painted without cleaning the parts after inspection

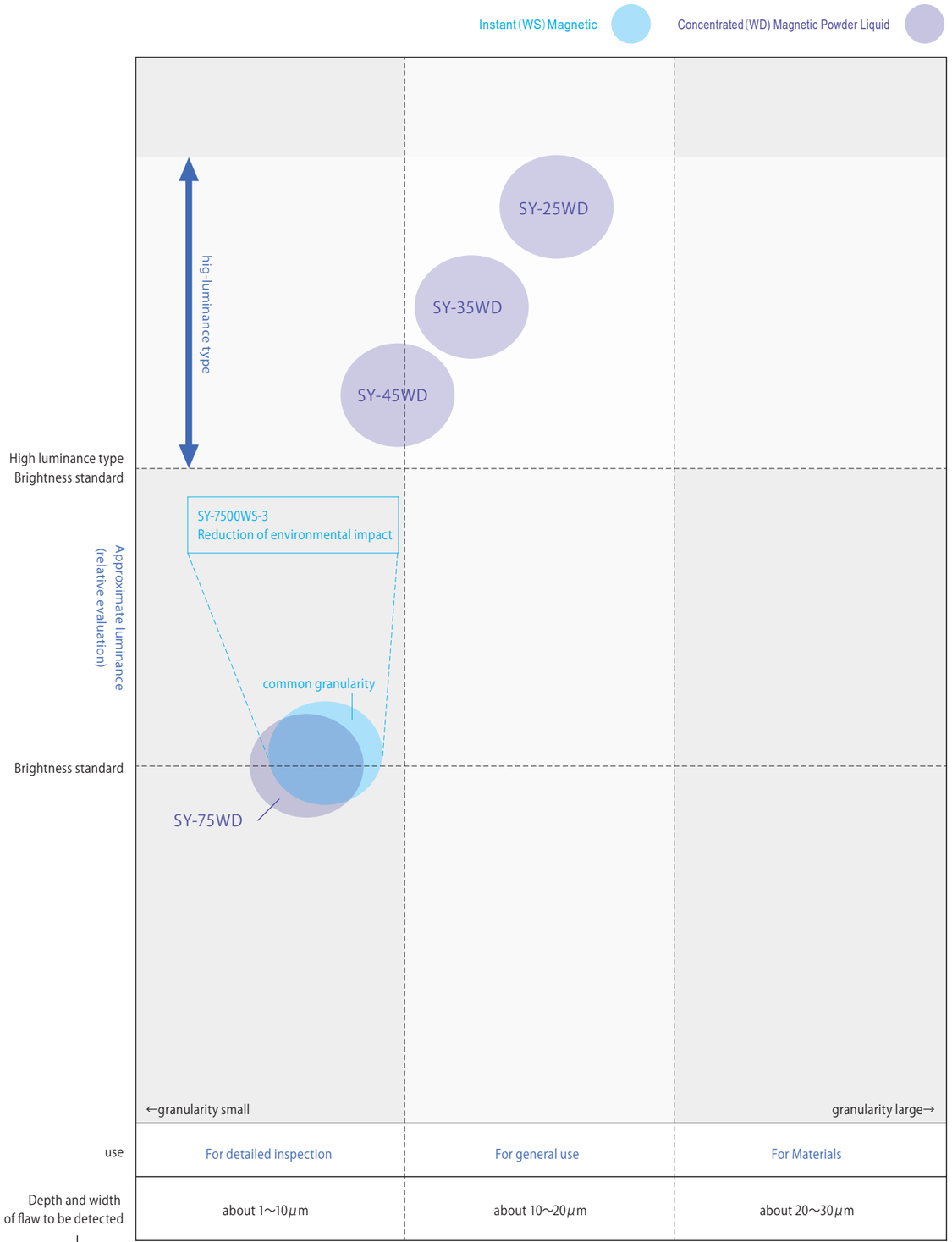
■ Dispersion oil Magnatron oil

Use when dispersing magnetic powder in oil.
Since its flash point is above 94°C,
compared to kerosene,It is odorless and has no risk of ignition at room temperature.

■ Rust inhibitor Resmin

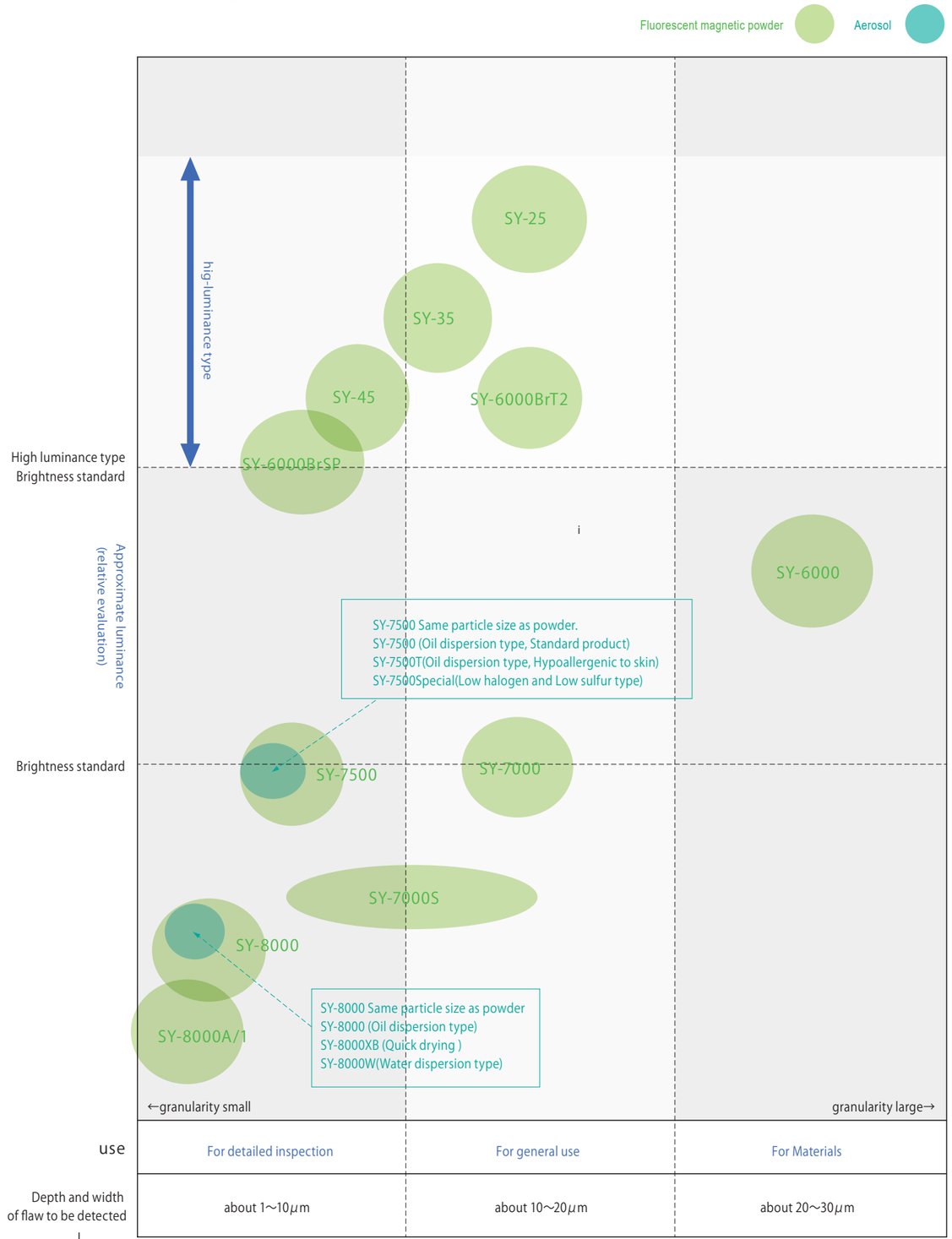
When added to a water-dispersed magnetic powder solution,
it prevents rusting of the inspected object for several days after the inspection.
(Increase or decrease the amount added depending on the degree of rust prevention.)
Resmin..... For general steel, 1-5% added to magnetic powder solution
Resmin C.....For casting, 0.5% to 5% added to magnetic powder liquid

Quick Guide to Brand Selection and Classification for Instant (WS) Magnetic Powder and Concentrated (WD) Magnetic Powder Liquid



Please use as a reference for initial selection of brand names,
as they vary greatly depending on actual testing conditions.

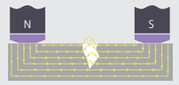
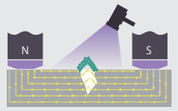
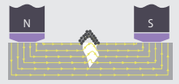
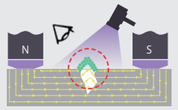
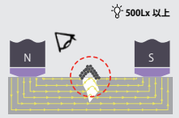
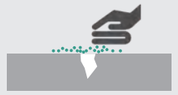
Quick Guide to Brand Selection and Classification for Fluorescent magnetic powder, aerosol



Please use as a reference for initial selection of brand names,
as they vary greatly depending on actual testing conditions.

Magnetic Powder Scratch Testing Process

The testing method and type of testing agent are selected based on the type of material, surface condition, and type of defect.
*The following is an example of a pole-to-pole method flaw detection procedure

Test procedures	Fluorescence	Non-Fluorescent
❶ Pretreatment	Performed to ensure that pre-treatment and subsequent steps are effective. ・Remove foreign matter (oxides, oil, water, paint, rust, etc.) from the test surface using a cleaning solution or other means. ・If the specimen has strong residual magnetism, demagnetize it.	
❷ Magnetization	Magnetize the test piece using a magnetizing device, etc.	
❸ Application of magnetic powder	Expose to ultraviolet light, Apply the test solution uniformly 	Apply the test solution Apply uniformly 
❹ Observation	Observe by irradiating ultraviolet light from a black light in a dark room. 	The test surface should be as bright as possible in a bright environment (for example illumination of 500 lx or more). 
❺ Aftertreatment	Cleaning, demagnetization, and rustproofing of the test surface, if necessary. 	Cleaning, demagnetization, and rustproofing of the test surface, if necessary. 
reference JIS Z 2320-2 Contrast specimen type 1	Fluorescent magnetic powder	Non-fluorescent magnetic powder (white)

Magnetization method

In JIS Z 2320-1:2007, magnetization methods are classified into the following types and contents,
The most suitable method is selected considering the shape of the specimen and the expected direction of defects.

Magnetization method	code	remarks
Axial current method	EA	Magnetizing a test piece by placing it between electrodes and passing an electric current in the axial direction.
Prod method	P	Two electrodes (prods) are pressed against the surface of a test piece with a large area and magnetized by passing an electric current.
Flux Penetration Method	I	The test specimen is made to work as the secondary side of a transformer by applying an alternating magnetic flux to a magnetic material that is passed through a hole in the test specimen, A method of magnetizing a test piece by means of an induced current generated in the test piece.
Current penetration method	B	A current is passed through a conductor through a hole in a perforated test piece, The method of magnetization by means of a circular magnetic field formed around the current.
Adjacent current method	AC	One or more conductors are placed parallel to the surface of the test piece, adjacent to the area to be tested, and energized,magnetized by the magnetic field formed around the current.
Interpole method (stationary form)	FM	A method in which the specimen or a part of the specimen is brought into contact with the magnetic poles of an electromagnet, and the magnetic flux generated by the electromagnet is injected into the specimen to magnetize it.
Interpole method (portable)	PM(Y)	Magnetic flux generated by an AC electromagnet (yoke) installed in contact with the surface of the test piece, The method in which the magnetic flux generated by an AC electromagnet (yoke) installed in contact with the surface of the test piece is fed into the test piece and magnetized.
Coil method (fixed)	RC	The test piece is placed in the coil and energized.The coil is magnetized in the axial direction by the magnetic field created by the coil.
Coil method (cable)	FC	The cable is wound around the test body so that there is no slack in the cable, the coil is formed and energized, and the magnetic field created by the coil. The method of magnetizing the test object.

You can see the video of fluorescent magnetic particle testing procedure from here.

https://www.youtube.com/watch?v=0hf15XrQETg

EISHIN

Capacity and Packaging

Capacity Unit	Powdered Magnetite	1kg・5kg
	Dispersant, Rust inhibitor	3.8L・18Lcan
	Magnatron Oil	3.8L・18Lcan
	Concentrated fluorescent magnetic powder solution	500ml,4L
Shipping Unit	Aerosol Products	a set of 6cans in cardboard box
		6pack, 12pack, 24pack each in cardboard box
	Canned products	3.8L square can : 2 or 4cans in cardboard box
		18L square can : 1 can in cardboard box

Magnetic Powder Disperser

Used for dry magnetic powder spreading.
Put a small amount of dry magnetic powder in the rubber ball and push the rubber ball, The magnetic powder is then dispersed from the nozzle.

Pear-shaped precipitator

Measuring magnetic powder concentration from sedimentation volume
Used for control.

Magnetic Powder Yokes (Handy Magna)

Model		A-1	A-2	A-4	A-6	TE-2
Appearance						
Power		AC 100V 50/60Hz				
Amperage rating(A)	50Hz	4	2.5	4	3.5	1.2
	60Hz	3	2.3	3	2.3	0.7
Total magnetic flux(mWb)	50Hz	0.80	0.60	0.70	0.57	0.30
Magnetomotive force	60Hz	0.70	0.55	0.57	0.48	0.27
(Ampere-turn)	50Hz	2400	2100	2500	2600	1500
Inner pole dimensions(mm)	60Hz	1900	1600	1900	1800	1300
Magnetic pole cross-section method(mm)		140	110	140	110	70
Main unit weight(kg)		25×25	20×20	25×25	20×20	15×15
Yoke		3.2	2.0	3.6	2.0	1.2
Configuration		Removable variable universal yoke		Adjustable yoke		
		①Main unit (with waterproof micro switch) ※TE-2 is a non-waterproof switch				
		②Power cord 5m(3-core, cabtyre cable) A-4 & TE-2 can be detached from the main unit.				
		③Universal Yoke(onlyA-1・A-2)				
		④Steel storage case				

※A-2 & A-6 are dedicated for 50Hz and 60Hz respectively. ※Amperage rating & total magnetic flux are measured by the test methods specified in JIS Z 2321 & JIS Z 2320-3.
※Repetitive use rate is 5 seconds on, 2 seconds off (70%)〔TE-2 is energized for 5 seconds and deactivated for 5 seconds (50%)〕
※Lifting power is detachable from the main body for the TE-2 model

Type A-1	Wide magnetic field effective range、Universal yoke included
Type A-2	Small,lightweight type of A-1 type.Convenient for long-time probing. Universal yoke is optional.
Type A-4	Variable pole type, Versatile and flexible in application
Type A-6	Small,lightweight type of A-4 type.
Type HM-76	Compact and lightest weight (1 kg) for narrow and long-time inspections.
Type HM-52L	L-shaped for narrow and corner inspection.
Type TE-2	Spot type, convenient for local and on-site inspections
MAGUNA mini HK-type70	Compact and lightweight type with movable magnetic poles

BLACK LIGHT

All of our UV-LED blacklights comply with the JIS Z 2323 standard and are specialized for the performance required for inspection.In addition to power saving and long lif, the convenience of portability is improved and the amount of heating value is reduce.Choose the stand that best suits your needs.Each black light is equipped with a countermeasure to cut out harmful visible light during observation, and the LCE model can be used in the demanding aircraft industry.

LED BLACK LIGHT

ZB-365J

Compact and lightweight(approx.180g), cordless type using batteries.You can use the dimmer function for your preferred range and UV illumination.A"special protective filter"that cuts out unnecessary visible light during observation is standard.

Type	ZB-365J
Power consumption	-
Dimensions	Φ38(head) φ25(grip)×147(mm)
Weight	0.18kg
UV intensity	～19,990μw/cm2 at 381mm/15 inch
Power source voltage	(Li-ion battery)
Power current	-
Power cable	N/A
Compliance standards	JIS Z 2323

S-60LC2

Model S-60 LC2 is a direct plug-in type with an integrated power supply.The UV LED/white(visible light) lamp can be turned on and off with a switch on the hand.

Type	S-60LC2
power consumption	20W
Dimensions	φ94×150×245mm
Weight	0.6kg
UV intensity	3,000μw/cm2 at 381mm/15 inch
power source voltage	AC100V±10% 50/60Hz
power current	0.2A
Power cable	3.0m
Compliance standards	JIS Z 2323

S-65LC2・LCE2 Type

Model S-65LC2 is a lightweight resin floodlight with two 100V service outlets in the storage power supply box. Withe(visible light) lamps can be turned on and off with a hand-held switch.The S-65LCE2 model conforms to ASTM E 3022 and RRES 90061, can be used for demanding aircraft inspection.

Type	S-65LC2・LCE2
Power Consumption	20W
Dimensions	φ94×150×245mm Ballast：W340×D295×H152mm
Weight	0.5kg（ballast:3.0ｋｇ）
UV intensity	4,000μw/cm2,LCE：3,500μW/cm2 at 381mm/15 inch
Power source voltage	AC100V±10% 50/60Hz
Power current	0.2A
Power cable	Primary2.5m / Secondary3m
Compliance standards	JIS Z 2323, ASTM E3022(LCE2) RRES 90061(LCE2)

Stationary LED Black Light

L-500LC・LCE TYPE

L-500LC

This black light uses UV-LED and is used for hanging. Useful reduce electricity and operating cost. Multiple units can be connected for use. Equippetd with “V-cut glass” as standard equipment, which cuts off unnecessary visible light during observation. Model “L-500LCE” complying with ASTM E 3022 and RRES90061 is also available.

Type	L-500LC/LCE
Power consumption	40W (max)
Dimensions	220×220×160(mm)
Weight	6kg
UV intensity	4,200μw/cm2 at 600mm
Power source voltage	AC100V±10% 50/60Hz
Power current	0.4A
Power cable	3.0m
Compliance standards	JIS Z 2323, ASTM E3022(LCE) RRES 90061(LCE)

LV Series

LV-9

LV-18

Black light with output adjustment function using high output UV-LED. Patented light distribution technology eliminates uneven irradiation, and the design ensures that there is no reduction in UV illumination intensity from one light fixture to another, even during continuous lighting. Despite being fanless, it has high heat dissipation performance, which is essential for LED lights, and eliminates causes of failure and short life of LEDs at a high level. Depending on the application, 9 UV-LEDs "LV-9", and 18 UV-LEDs "LV-18" are available, which are very suitable for continuous lighting in steel works, etc.

Type	LV-9	LV-18
Power Consumption	170W(100V)	
Dimentions	630×171×188(mm)	1260×171×188(mm)
Weight	8.2kg	14.3kg
Uv Intensity	6,500μw/cm2(at 600mm)	
Power Source Voltage	AC100～240V (50Hz/60Hz)	
Power current	1.7A	3.1A
Power cable	Primary5m / Secondary 3m	
Compliance standards	JIS Z 2323	