



Magnetic Particle Inspection Materials

Better products through chemistry.



Mi-Glow® Wet Method Magnetic Particles

CircleSafe® Aerosols

SirChem® Dry Method Magnetic Particles



2010 - 2011

Quality and Innovation



Excellent Customer Service

Our friendly customer support is just a phone call away. We pride ourselves on offering knowledgeable live assistance in a timely manner.

We are Global

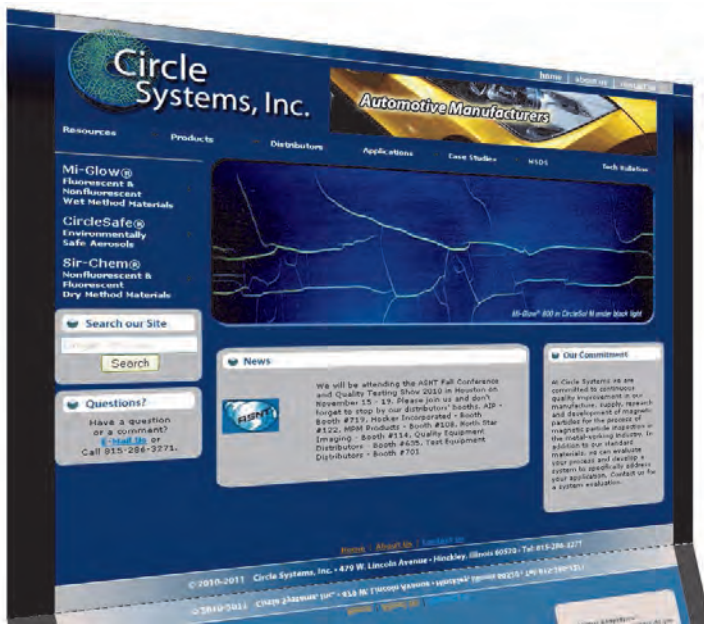
Circle Systems has a network of worldwide representatives. Visit www.CircleSafe.com to find an authorized distributor in your area.

Fast Turnaround

At Circle Systems we maintain an extensive inventory of our products, thus ensuring our distributors have a ready inventory of materials on hand.

Commitment to Quality

Circle Systems is committed to continuous quality improvement. As part of these efforts we are ISO 9001:2008 certified.



Our newly re-launched website is an excellent resource for our customers.



Contact Us:

Circle Systems, Inc.

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Hinckley, IL 60520 USA

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Email: customerservice@circlesafe.com

URL: www.CircleSafe.com

Customer Service Hours:

Monday - Friday

8:00am - 4:30pm US CST



A company built on quality materials and excellent customer service.

Having been with Circle Systems for over 30 years, I am impressed with the incredible progress Circle Systems has achieved. These achievements are the results of continually striving to be the leading manufacturer of magnetic particles for nondestructive testing.

Our knowledgeable team of researchers, technicians and sales representatives are uniquely qualified to provide innovative solutions for specific NDT applications.

In addition to our extensive standard product line of magnetic particle inspection materials, we work closely with our carefully selected distributors and their customers to develop materials to address specific application requirements.

Circle Systems has continued to experience tremendous growth, thanks to our many loyal customers from around the world.

R. Mark Erlanson
President & CEO
Circle Systems, Inc.

Particle Inspection Materials

Better products through chemistry.

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MAGNETIC PARTICLE TRAINING COURSE - LEVEL II CERTIFICATION

The training course has been prepared to establish criteria for the certification of nondestructive testing personnel, whose job requires appropriate knowledge of the technical principles of magnetic particle inspection. Certification is in accordance with most recognized standards.

Personnel considered for Level II certification shall have sufficient education and work experience to ensure understanding of the principles and procedures for magnetic particle testing inspection. Personnel must meet the following requirements for Level II Certification:

- 530 Hours magnetic particle work experience
- High School Graduate
- Visual Acuity Examination
- 80% Minimum Course Composite Score
- Practical Examination Proficiency

Records must be available during the certification training program. These records shall include:

- Copy of Visual Acuity Examination
- Resume of work experience
- Record of applicable training schools
- Magnetic Particle Inspection record.

Students that have met all the requirements for a Level II certification, will be qualified to set-up and perform all process control procedures, interpret and evaluate results per company and/or customer specifications, and will be familiar with the limitations of Magnetic Particle Inspection.

Examinations to verify both physical and technical qualifications shall consist of the following:

Pre-Course Examination: This examination will provide the instructor a level of knowledge and help target specific training for the class.

General Examination: This examination will cover the material course lesson plans and the questions shall be developed which represent a cross-section of the knowledge applicable to magnetic particle inspection.

Specific Examination: This examination shall address various examples of equipment, work procedure, and test techniques that the student may use in the performance of assigned duties.

Practical Examination: The student will demonstrate proficiency by performing the magnetic particle inspection test on production parts, interpreting results, and documenting the results of the test.

Grading Examinations: Each candidate shall achieve a grade of at least 70% for each examination and an average grade of 80% to be eligible for certification. All certification examinations shall have specific weight in determining the average grade, selected by the instructor.

Mi-Glow® Wet Method Particles



Mi-GLOW® 800

Fluorescent yellow-green particles used with CircleSol M, a refined petroleum distillate. It is designed to be used with black light to detect very fine discontinuities in finished products. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3100	1 POUND/JAR
3102	12 POUNDS/PAIL



Mi-GLOW® 810

Mi-Glow® 800 fluorescent yellow-green particles premixed with powdered Wetting Agent 100 for use in water media. It is designed to be used with black light to detect very fine discontinuities in finished products. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3111	2 POUNDS/JAR
3114	35 POUNDS/PAIL



Mi-GLOW® 778

Mi-Glow® 800 fluorescent yellow-green particles premixed with liquid Wetting Agent 771 for use in water media. This advanced formulation allows for superior corrosion protection, wetting and particle mobility. It is designed to be used with black light to detect very fine discontinuities in finished products. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3571	4 - 1 QUART BOTTLES/CASE



Mi-GLOW® 798

Mi-Glow® 798 is Mi-Glow® 800 fluorescent yellow-green particles premixed with a liquid Wetting Agent 791 for use in water media. It is designed to be used with black light to detect very fine discontinuities in finished products. (Note: The liquid wetting agent used in this product has minimal corrosion protection, is Borate free and was developed for oversea applications.) It meets or exceeds all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3531	4 - 1 QUART BOTTLES/CASE



Mi-GLOW® 218X

Mi-Glow® 218X is a combination of Mi-Glow® 800 and Mi-Glow® 900 fluorescent yellow-green particles premixed with powdered Wetting Agent 4X for use in water media. It is designed to be used with black light to detect discontinuities in billet inspection. It meets or exceeds all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3231	2 POUNDS/JAR
3238	30 POUNDS/PAIL



Mi-GLOW® 318

Mi-Glow® 318 is Mi-Glow® 800 and Mi-Glow® 920 fluorescent yellow-green particles premixed with powdered Wetting Agent 34 for use in water media. Mi-Glow® 318 is designed to be used with black light to detect forging type discontinuities. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3301	2 POUNDS/JAR
3300	30 POUNDS/PAIL



Mi-GLOW® 718X

Mi-Glow® 718X is a combination of Mi-Glow® 800 and Mi-Glow® 900 fluorescent yellow-green particles premixed with liquid Wetting Agent 771 for use in water media. This advanced formulation allows for superior corrosion protection, wetting and particle mobility. This product is designed to be used with black light to detect discontinuities on both machine and unfinished ferromagnetic materials. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3391	4 - 1 QUART BOTTLES/CASE



Mi-GLOW® 788

Mi-Glow® 788 is Mi-Glow® 800 fluorescent yellow-green particles premixed with a liquid Wetting Agent that is specifically formulated to provide extra corrosion protection, for use in water media. Mi-Glow® 788 is designed to be used with black light to reveal very fine discontinuities on both machined and unfinished ferromagnetic materials. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3581	4 - 1 QUART BOTTLES/CASE



Mi-GLOW® 920

Fluorescent yellow-green particles used with CircleSol M, a refined petroleum distillate. It is designed to be used with black light to detect forging type discontinuities. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3162	2 POUNDS/JAR



Mi-GLOW® 920LC

Mi-Glow® 920 fluorescent yellow-green particles premixed with liquid Wetting Agent 771, for use in water media. This advanced formulation allows for superior corrosion protection, wetting and particle mobility. It is designed to be used with black light to detect forging type discontinuities. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3171	4 - 1 QUART BOTTLES/CASE



Mi-GLOW® 920W

Mi-Glow® 920 fluorescent yellow-green particles premixed with powdered Wetting Agent 34 for use in water media. It is designed to be used with black light to detect forging type discontinuities. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3172	2 POUNDS/JAR
3173	30 POUNDS/PAIL



Mi-GLOW® 934

Mi-Glow® 934 is Mi-Glow® 930 fluorescent yellow-green particles premixed with powdered Wetting Agent 34 for use in water media. Mi-Glow® 934 is designed to be used with black light to detect forging type discontinuities. It meets or exceeds AMS 3044 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3182	2 POUNDS/JAR
3185	30 POUNDS/PAIL



Mi-GLOW® 106

Mi-Glow® 106 is black particles for use with CircleSol M, a refined petroleum distillate. It is designed to be used with visible light for finding discontinuities in finished products. Higher particle concentration provides heavier indication buildup for easy detection. It meets or exceeds AMS 3042 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2431	2 POUNDS/JAR
2438	30 POUNDS/PAIL



Mi-GLOW® 820

Mi-Glow® 106 black particles premixed with liquid Wetting Agent 771 for use in water media. Higher particle concentration provides heavier indication buildup for easy detection. It is designed to be used with visible light for finding discontinuities in finished products. Higher particle concentration provides heavier indication buildup for easy detection. It meets or exceeds AMS 3042 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3611	4 - 1 QUART BOTTLES/CASE



Mi-GLOW® 600

Red particles for use in CircleSol M, a refined petroleum distillate. It is designed to be used with visible light for detecting discontinuities found in structural fabrications and weldments. Higher particle concentration provides heavier indication buildup for easy detection. Mi-Glow® 600 can be further enhanced when used with a black light or blue light. It meets or exceeds all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2881	2 POUNDS/JAR
2882	12 POUNDS/PAIL



Mi-GLOW® 850

Mi-Glow® 600 red particles premixed with powdered Wetting Agent 100 for use in water media. It is designed to be used with visible light for detecting discontinuities found in structural fabrications and weldments. Higher particle concentration provides heavier indication buildup for easy detection. Mi-Glow® 850 can be further enhanced when used with a black light or blue light. It meets or exceeds all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3641	2 POUNDS/JAR
3648	30 POUNDS/PAIL



CIRCLESAFE® 778A

An aerosol spray can of Mi-Glow® 800 fluorescent yellow-green particles, premixed with Wetting Agent 771, formulated in water media. It is designed to be used with black light inspection to detect very fine discontinuities found in finished products and critical, highly stressed component parts. Its ultra-bright, ultra-sensitive particles allow for excellent detection. It meets or exceeds all applicable industry specifications. This aerosol is packaged in a carbon dioxide propellant for odor-free, fume-free, non-combustible inspection.

ITEM # **PACKAGE SIZE**
3590 **12 - 16 OUNCE CANS/CASE**



CIRCLESAFE® 800A

An aerosol spray can of Mi-Glow® 800 fluorescent yellow-green particles and CircleSol M, a refined petroleum distillate. It is designed to detect very fine discontinuities found in finished products and critical, highly stressed component parts. Its ultra-bright, ultra-sensitive particles allow for excellent detection. It meets or exceeds all applicable industry specifications. The carbon dioxide propellant reduces combustible hazard.

ITEM # **PACKAGE SIZE**
3130 **12 CANS/CASE**



CIRCLESAFE® 820A

An aerosol spray can of Mi-Glow® 106 black particles, premixed with liquid Wetting Agent 771, formulated in water media. It is designed to be used with visible light inspection for detecting discontinuities found in finished products and structural fabrications. Higher particle concentration provides heavier indication buildup for easy detection. It meets or exceeds all applicable industry specifications. This aerosol is packaged in a carbon dioxide propellant for odor-free, fume-free, non-combustible inspection. CircleSafe® 820A can be used with Mi-Glow® WCP.

ITEM # **PACKAGE SIZE**
3600 **12 - 16 OUNCE CANS/CASE**



CIRCLESAFE® 820AX

An aerosol spray can of Mi-Glow® 106 black particles and CircleSol M, a refined petroleum distillate. It is designed to be used with visible light inspection for detecting discontinuities found in finished products and structural fabrications. particle concentration provides heavier indication buildup for easy detection. It meets or exceeds all applicable industry specifications. The carbon dioxide propellant reduces combustible hazard. CircleSafe® 820A can be used with Mi-Glow® WCP.

ITEM # **PACKAGE SIZE**
3609 **12 - 16 OUNCE CANS/CASE**



CIRCLESAFE® 850A

An aerosol spray can of Mi-Glow® 600 red particles and liquid Wetting Agent 771, formulated in water media. It is designed to be used with visible light inspection for detecting discontinuities found in structural fabrications and weldments. Higher particle concentration provides heavier indication buildup for easy detection. It meets or exceeds all applicable industry specifications. This aerosol is packaged in a carbon dioxide propellant for odor-free, fume-free, non-combustible inspection. CircleSafe® 850A can be further enhanced when used with a black light or blue light.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3630	12 - 16 OUNCE CANS/CASE



CIRCLESAFE® 850AX

CircleSafe® 850AX is an aerosol spray can of Mi-Glow® 600 red particles and CircleSol M, a refined petroleum distillate. It is designed to be used with visible light inspection for detecting discontinuities found in structural fabrications and weldments. Higher particle concentration provides heavier indication buildup for easy detection. It meets or exceeds all applicable industry specifications. The carbon dioxide propellant reduces combustible hazard. CircleSafe® 850A can be further enhanced when used with a black light or blue light.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3636	12 - 16 OUNCE CANS/CASE



MI-GLOW® WCP

A specially formulated, fast drying white contrast paint, used to create a consistent background on the component surface in a visible magnetic particle inspection. When dry, the white contrast paint is resistant to the wet method baths used for inspection, but is easily removed from the demagnetized component surface with acetone. Mi-Glow® WCP can be used with any of the Mi-Glow® and CircleSafe® nonfluorescent particle materials.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3740	12 - 16 OUNCE CANS/CASE
3750	5 GALLONS/PAIL



MI-GLOW® 778S-RTU

A Ready-to-Use water bath packaged in a hand-held spray bottle. The water bath contains Mi-Glow® 800 fluorescent yellow-green particles premixed with liquid Wetting Agent 771. It is designed for revealing very fine discontinuities in finished products using black light. It meets or exceeds all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3572	6 QUARTS/CASE

Mi-Glow® Ready-to-Use Sprays



MI-GLOW® 800LS-RTU

A Ready-to-Use oil bath packaged in a hand-held spray bottle. The bath contains Mi-Glow® 800 fluorescent yellow-green particles and CircleSol M, a refined petroleum distillate. It is designed for revealing very fine discontinuities, such as those found in finished products for the aerospace industry and other critical applications, using black light. It meets or exceeds all applicable industry specifications.

ITEM #
3145

PACKAGE SIZE
6 QUARTS/CASE



MI-GLOW® 820S-RTU

A Ready-to-Use water bath packaged in a hand-held spray bottle. The water bath contains Mi-Glow® #106 black particles and liquid Wetting Agent #771. It is designed to be used with visible light for revealing discontinuities on machined component parts. It meets or exceeds all applicable industry specifications.

ITEM #
3612

PACKAGE SIZE
6 QUARTS/CASE



MI-GLOW® 820LS-RTU

A Ready-to-Use oil bath packaged in a hand-held spray bottle. The bath contains Mi-Glow® 106 black particles and CircleSol M, a refined petroleum distillate. It is designed to be used with visible light for revealing discontinuities on machined component parts. It meets or exceeds all applicable industry specifications.

ITEM #
3622

PACKAGE SIZE
6 QUARTS/CASE



MI-GLOW® 850S-RTU

A Ready-to-Use water bath packaged in a hand-held spray bottle. The bath contains Mi-Glow® 600 red particles and liquid Wetting Agent 771. It is designed to be used with visible light for revealing discontinuities found in structural fabrications. Mi-Glow® 850S-RTU can be further enhanced with a black light or blue light. It meets or exceeds all applicable industry specifications.

ITEM #
3642

PACKAGE SIZE
6 QUARTS/CASE



MI-GLOW® 600LS-RTU

A Ready-to-Use oil bath packaged in a hand-held spray bottle. The bath contains Mi-Glow® 600 red particles and CircleSol M, a refined petroleum distillate. It is designed to be used with visible light for revealing discontinuities found in structural fabrications. Mi-Glow® 600LS-RTU can be further enhanced with a black light or blue light. It meets or exceeds all applicable industry specifications.

ITEM # **PACKAGE SIZE**
2890 **6 QUARTS/CASE**



SIRCHEM® DRY POWDER 61

A highly refined nonfluorescent gray magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light to reveal minute discontinuities on fabricated components or weldments such as bridges, pipes, large tanks, machinery and equipment. It meets or exceeds AMS 3040 and all applicable industry specifications.

ITEM # **PACKAGE SIZE**
2551 **10 POUNDS/JAR**
2555 **50 POUNDS/PAIL**



SIRCHEM® DRY POWDER 63

A highly refined nonfluorescent red magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light to reveal minute discontinuities on fabricated components or weldments such as bridges, pipes, large tanks, machinery and equipment. It meets or exceeds AMS 3040 and all applicable industry specifications.

ITEM # **PACKAGE SIZE**
2571 **10 POUNDS/JAR**
2575 **50 POUNDS/PAIL**



SIRCHEM® DRY POWDER 66

A highly refined nonfluorescent yellow magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light to reveal minute discontinuities on fabricated components or weldments such as bridges, pipes, large tanks, machinery and equipment. It meets or exceeds AMS 3040 and all applicable industry specifications.

ITEM # **PACKAGE SIZE**
2621 **10 POUNDS/JAR**
2625 **50 POUNDS/PAIL**



SIRCHEM® DRY POWDER 68

A highly refined nonfluorescent blue magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light to reveal minute discontinuities on fabricated components or weldments such as bridges, pipes, large tanks, machinery and equipment. It meets or exceeds AMS 3040 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2631	10 POUNDS/JAR
2635	50 POUNDS/PAIL



SIRCHEM® DRY POWDER 73

A highly refined red magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light and black light to reveal minute discontinuities on fabricated components or weldments such as bridges, pipes, large tanks, machinery and equipment. It meets or exceeds AMS 3040 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2601	10 POUNDS/JAR
2605	50 POUNDS/PAIL



SIRCHEM® DRY POWDER 75

A highly refined green magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light and black light to reveal minute discontinuities on fabricated components or weldments such as bridges, pipes, large tanks, machinery and equipment. It meets or exceeds AMS 3040 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2641	10 POUNDS/JAR
2645	50 POUNDS/PAIL



SIRCHEM® DRY POWDER 91

A highly refined and bonded nonfluorescent gray magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light to reveal discontinuities on fabricated components or weldments such as bridges, drill pipes, large tanks, machinery and equipment. This specially bonded iron based powder is designed to minimize dustiness and provide clear, sharp discontinuities. The decrease in dusting allows for a safer inspection area. It meets or exceeds AMS 3040 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2661	10 POUNDS/JAR
2665	50 POUNDS/PAIL



SIRCHEM® DRY POWDER 93

A highly refined and bonded orange/red magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light, black light and blue light to reveal discontinuities on fabricated components or weldments such as bridges, drill pipes, large tanks, machinery and equipment. This specially bonded iron based powder is designed to minimize dustiness and provide clear, sharp discontinuities. The decrease in dusting allows for a safer inspection area. It meets or exceeds AMS 3040 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2671	10 POUNDS/JAR
2675	50 POUNDS/PAIL



SIRCHEM® DRY POWDER 95

A highly refined and bonded green magnetic powder used for dry method magnetic particle inspection. It is designed to be used in visible light, black light and blue light to reveal discontinuities on fabricated components or weldments such as bridges, drill pipes, large tanks, machinery and equipment. This specially bonded iron based powder is designed to minimize dustiness and provide clear, sharp discontinuities. The decrease in dusting allows for a safer inspection area. It meets or exceeds AMS 3040 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2681	10 POUNDS/JAR
2685	50 POUNDS/PAIL



MI-GLOW® UNDERWATER 1

Red particles pre-mixed with a powdered Wetting Agent for use in underwater inspection. These particles are large for better enhancement of large weld discontinuities. The particles can be used with visible light, black light and/or blue light.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2701	2 POUNDS/JAR
2703	25 POUNDS/PAIL



MI-GLOW® UNDERWATER 528

Red particles pre-mixed with a powdered Wetting Agent for use in underwater inspection. These particles are finer and lighter, allowing them to remain in suspension longer and enhance finder discontinuities. The particles can be used with visible light, black light and/or blue light.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2771	2 POUNDS/JAR
2773	25 POUNDS/PAIL

Odorless Inspection Oils & Water Bath Conditioners



CIRCLESOL M

A high flashpoint, refined petroleum distillate specifically designed for use in magnetic particle inspection. It meets or exceeds AMS 3161 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3880	55 GALLONS/DRUM
3883	5 GALLONS/PAIL



MI-GLOW® 800L

Mi-Glow® 800L is a pre-proportioned combination of Mi-Glow® 800 fluorescent yellow-green particles and CircleSol M, a refined petroleum distillate, packaged ready-for-use in five-gallon cans. It is designed to be used with black light to detect very fine discontinuities in finished products. It meets or exceeds AMS 3045 and all applicable industry specifications.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3143	5 GALLONS/PAIL



ANTIFOAM 3

A concentrated, silicone-based defoamer for water-based systems, used to reduce excessive foaming. It should be added sparingly, per manufacturer's recommendations.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2950	4 - 1 QUART BOTTLES/CASE



CLEANER 500

Cleaner 500 is a mild alkaline cleaner excellent for use in cleaning out an oil-based or water-based system prior to going to the water-based system or in between baths. This cleaner can be used undiluted or can be diluted up to one gallon cleaner to 25 gallons of water.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3851	1 GALLON/BOTTLE



CORROSION INHIBITOR 7

A concentrated corrosion inhibitor used to supplement a water bath system with additional corrosion protection. See Technical Bulletin for recommended usage.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
3510	4 - 1 QUART BOTTLES/CASE
3515	55 GALLONS/DRUM



TYPE 2000 MSC

This card is recognized as a tool for evaluation of fluorescent wet method baths in ASTM E-709-01 "Standard Guide for Magnetic Particle Examination," Paragraph 20.6.8 and Appendix X4; as well as in ASTM E-1444-05 "Standard Practice for Magnetic Particle Testing," Appendix X7.3.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2800	EACH



TYPE A MSC

This card is a high coercivity magnetic stripe card that assists in evaluating the quality of fluorescent magnetic particle baths and Sirchem® Dry Powders. The card acts as a test piece and supplement to the ASTM D-96 settling tube, Ketos ring and other tests of magnetic particle materials.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
2850	EACH



PARTICLE REFERENCE DISC

The Particle Reference Disc is a permanently magnetized steel disc containing coarse and fine cracks that have been induced onto the surface through a special treatment. The surface is then ground and coated. The disc is used to test the performance of the magnetic particle materials and lighting environment being used and to check the sensitivity of the materials on a daily basis for material degradation and/or bath contamination. A reference photograph accompanies the test block so the existing bath can be compared to indications from an optimum system.

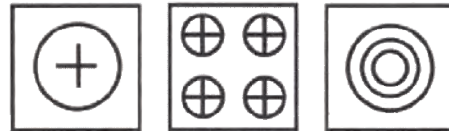
<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5801	EACH (SIDE 1 - GRINDING CRACKS; SIDE 2 - QUENCH CRACKS)
5802	EACH (BOTH SIDES - RANDOM CRACKS)



KETOS TEST RING

Meets the requirements of ASTM E-1444, ASTM E-709.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5604	EACH



QUANTITATIVE QUALITY INDICATORS (QQI)

Shims which, when placed on part surface, verify field direction and relative strength. Approved by ASTM E-1444. Offered in three designs - standard, miniature and variable depth.

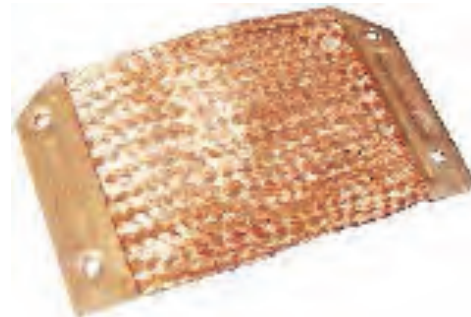
<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5207	STANDARD, EACH
5208	MINIATURE, EACH
5209	VARIABLE, EACH



COPPER PAD ASSEMBLY

Double-braided copper pad assembly with neoprene insert and V-Block.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5201	EACH



COPPER REPLACEMENT PAD

Heavy, flexible copper braid over neoprene base, with two wear faces.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5202	EACH



HEAVY DUTY COPPER CONTACT PLATE

Braided copper impregnated with lead. Heavy duty, lasts up to 10 times longer than solid contact plates.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5210	EACH



COPPER CENTRAL CONDUCTORS

Solid copper rod provides circular magnetization of hollow parts.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5203	1/2IN X 12IN, EACH
5611	3/4IN X 18IN, EACH
5212	1IN X 18IN, EACH



POWDER BULB

Light weight, easy to use spray bulb. Cap removes for easy filling.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5302	EACH



CONTROLLED MAGNETIC POWDER APPLICATOR

Provides reliable and controlled application of Magnetic Inspection Powder to areas previously inaccessible: horizontal, vertical and overhead.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5304	EACH



MAGNETIC POWDER BLOWER

Gently applies powder to horizontal, vertical or overhead surfaces. Metered Powder delivery provides uniform application without operator influence. Blow-off air will not disturb relevant indications.

ITEM # **PACKAGE SIZE**
 5305 EACH



EXCESS REMOVAL BULB

A simple blower bulb used to remove excess particles.

ITEM # **PACKAGE SIZE**
 5303 EACH



**CENTRIFUGE TUBE -
 FLUORESCENT MATERIAL**

- 100 mL, 0-1.0 mL in 0.05 mL increments
- For use with Fluorescent Mi-Glow® materials
- Stand sold separately

ITEM # **PACKAGE SIZE**
 5205 EACH



**CENTRIFUGE TUBE -
 NONFLUORESCENT MATERIAL**

- 100 mL, 0-1.5 mL in 0.10 mL increments
- For use with Nonfluorescent Mi-Glow® materials
- Stand sold separately

ITEM # **PACKAGE SIZE**
 5206 EACH



**CENTRIFUGE TUBE -
FLUORESCENT MATERIAL**

- 100 mL, 0-0.2 mL in 0.01 mL increments
- For use with Mi-Glow® 118
- Stand sold separately

ITEM # **PACKAGE SIZE**
5204 EACH



CENTRIFUGE STAND

- For use with all centrifuge tubes
- Safely holds tube while testing bath concentrations
- Centrifuge tube sold separately

ITEM # **PACKAGE SIZE**
5211 EACH



ANALOG GAUSSMETER

Available in the following ranges: 5-0-5, 10-0-10 and 20-0-20. Each is accompanied with a certificate of calibration.

ITEM # **PACKAGE SIZE**
5605 5-0-5, EACH
5606 10-0-10, EACH
5607 20-0-20, EACH



**MAGNETIC PARTICLE PORTABLE
EQUIPMENT TRANSPORT TRUCK**

For use with heavy duty portable magnetic particle inspection units. (Equipment, materials and accessories sold separately.)

ITEM # **PACKAGE SIZE**
5310 EACH



INDIVIDUAL PROD SET

Set of two (2).

ITEM #
5319

PACKAGE SIZE
EACH



DUAL HORIZONTAL PROD ASSEMBLY

Adjustable tips

ITEM #
5311

PACKAGE SIZE
EACH



BRAIDED CONTACT CLAMP

Copper braided contact clamp.

ITEM #
5312

PACKAGE SIZE
EACH



BATTERY/INVERTER POWER SUPPLY

- Stand alone AC power for Parker AC yokes.
- On-the-spot 115VAC power - independent of any outside power source.
- Totally portable for shop or field applications.
- Provides compliance with applicable specifications.
- AC yoke sold separately.

ITEM #
5314

PACKAGE SIZE
EACH



PORTABLE MAGNETIZING COILS

AC/DC pulsed field 115/230 VAC 50/60 Hertz/12A. Available in 8" and 10" inside diameters.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5316	8" DIAMETER, EACH
5317	10" DIAMETER, EACH



PORTABLE MAGNETIC INSPECTION UNIT - 750 AMP

Heavy duty portable magnetic inspection unit that provides high output AC or HWDC fields for magnetic particle inspection. Optional Black Light and Blue Light kits contain inspection light, 15' 4/0 cable set with either end connectors, 20' remote switch assembly, choice of contacts (individual prod set or dual horizontal prod assembly) and fluorescent aerosols.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5321	EACH
5308	BLACK LIGHT, KIT
5309	BLUE LIGHT, KIT



PORTABLE MAGNETIC INSPECTION UNIT - 1500 AMP

Heavy duty portable magnetic inspection unit that provides high output AC or HWDC fields for magnetic particle inspection. Optional Black Light and Blue Light kits contain inspection light, 15' 4/0 cable set with either end connectors, 20' remote switch assembly, choice of contacts (individual prod set or dual horizontal prod assembly) and fluorescent aerosols.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5322	EACH
5308	BLACK LIGHT, KIT
5309	BLUE LIGHT, KIT



CONTOUR PROBE, 115VAC

AC/DC/AC Demagnetization 115VAC. Optional Black Light and Blue Light Kits include an inspection light, carrying case, yoke light and fluorescent aerosols.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5327	EACH
5315	BLACK LIGHT, KIT
5318	BLUE LIGHT, KIT

Magnetic Particle Accessories: Magnetic Inspection Units, Probes & Yokes



ES-X FERROUS PROBE™ FLEXIBLE

A portable, lightweight, state-of-the-art electromagnetic particle testing device for reliable one-man inspection.

- 42/115/220 VAC 50/60Hz
- AC Inspection
- Legs are adjustable 0-12"
- For use with dry powder, wet visible or fluorescent

Optional Black Light and Blue Light Kits include an inspection light, carrying case, yoke light and fluorescent aerosols.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5905	EACH
5907	BLACK LIGHT, KIT
5908	BLUE LIGHT, KIT



ES-X FERROUS PROBE™ FIXED

A portable, lightweight, state-of-the-art electromagnetic particle testing device for reliable one-man inspection.

- 42/115/220 VAC 50/60Hz
- AC Inspection
- Legs are permanently fixed to 5"
- For use with dry powder, wet visible or fluorescent

Optional Black Light and Blue Light Kits include an inspection light, carrying case, yoke light and fluorescent aerosols.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5906	EACH
5907	BLACK LIGHT, KIT
5908	BLUE LIGHT, KIT



UNDERWATER YOKE - 12VDC

Mini Underwater Contour Probe

- 12 VDC 2.5 amp, power supply or battery.
- For use where permanent magnets or full wave DC fields are permitted.

Optional kit includes carrying case, powder blower, blue light, underwater particles.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5326	EACH
5313	KIT



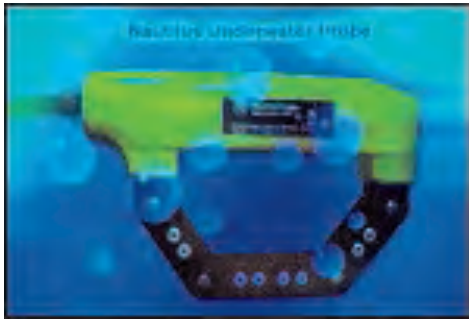
UNDERWATER YOKE, 115VAC

Mini Underwater Contour Probe

- 115 VAC 4 amp, power supply.
- Offers optimum results for surface breaking defects.

Optional kit includes carrying case, powder blower, blue light, underwater particles.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5329	EACH
5313	KIT



UNDERWATER YOKE, 24VDC

This unit is coated in an easy to see bright yellow epoxy and is totally submersible. It has a maximum cord length of 250'.

- pulsed DC low voltage - 24V
- 250' cord provided

Optional kit includes carry case, blue light and underwater particles.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5903	EACH
5904	KIT



BIB-150P BUILT-IN-BALLAST UV LAMP

Produces super-high ultraviolet intensity and performance at an economical price. Meets MIL and ASTM specifications for MPI.

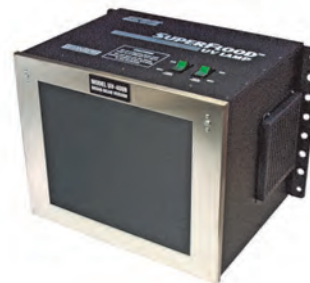
<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5501	EACH



**MAXIMA™ ML-3500
ULTRA-HIGH INTENSITY UV-A LAMP**

Features state-of-the-art Micro Discharge Light (MDL) technology with user-friendly design. The only lamp that offers the widest choices to suit your specific application.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5502	EACH



UV-400 SUPERFLOOD™ STATIONARY LAMP

Ideal for fluorescent magnetic particle inspection. It can be chain- or ceiling-mounted over automated magnetic particle systems.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5503	EACH



**ADVANCED DIGITAL
RADIOMETER/PHOTOMETER KIT**

Single detector with dual sensors measures both ultraviolet and visible light. Complies with MIL and ASTM specifications for MPI and FPI.

ITEM #
5504

PACKAGE SIZE
EACH



PROTECTIVE EYEWEAR

UV-absorbing spectacles.

ITEM #
5505

PACKAGE SIZE
EACH



**MODEL FL5000™ DUAL
MODE INSPECTION LIGHT**

Kit includes FL5000 and filter glasses.

ITEM #
5401

PACKAGE SIZE
EACH



**MODEL FPS-1™ FLOURESCENCE
PHOTOGRAPHY SYSTEM**

A complete, compact fluorescence photography system that does not even require darkness.

ITEM #
5405

PACKAGE SIZE
EACH



MODEL BLR-1™ BLUE LIGHT RADIOMETER

The BLR-1 reads out directly in $\mu\text{W}/\text{cm}^2$ with NIST traceable calibration.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5406	EACH



FILTER GLASSES

The BlueLine filter glasses are designed to work with the BlueLine lights to provide maximum contrast for seeing fluorescent indications. Models FG1 and FG2 can be used over eyeglasses.

<u>ITEM #</u>	<u>PACKAGE SIZE</u>
5402	FG 1, EACH
5403	FG2, EACH
5404	FG3, EACH

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Email: customerservice@circlesafe.com

Web: www.CircleSafe.com

To order, contact your local authorized distributor or the office listed above. If you have a technical question or need assistance, call 815-286-3271.