



Circle Systems, Inc.

Magnetic Particle Inspection



Offering the CircleSafe[®], Mi-Glow[®] & Sir-Chem[®] Product Lines

Better products through chemistry.

CIRCLE SYSTEMS, INC.

Manufacturer of the MiGlow® and CircleSafe® line of MPI Products.

Circle Systems, Inc. has been a leading manufacturer of magnetic particles for nondestructive testing for forty-nine years. Starting as a chemical company, its roots are in the chemistry of particle manufacture, wetting agents, anti-foamers, corrosion inhibitors and pH adjusters. From these roots have grown



and developed the first magnetic particles designed specifically for underwater inspection; the first water-based aerosol magnetic particle inspection package; the first magnetic stripe card for quick bath inspection; dual inspection particles; wetting agents and water base carriers that retain all the dispersion benefits of oil, while providing non-toxic and environmentally safe application -- just to name a few.

In addition to the proprietary line, Circle is also a laboratory specialist -- recognizing the need for unique requirements that go beyond its proprietary line. For this reason, Circle has developed special products for the

particular needs of the railroads, underwater inspection and the steel, automotive and aerospace industries. Circle's chemists, technicians and sales personnel stand ready to provide you with the formulations, fluorescent and non-fluorescent, that will meet your individual requirements.

Also, in an ongoing effort to emphasize Circle's commitment to provide high quality products and services to its customers, Circle has been certified to ISO 9001:2000. This certification ensures that Circle meets or exceeds industry recognized quality standards.

All Circle products are certified to Military, ASTM, AMS and other pertinent standards.

With a network of representatives now international in scope Circle can serve you quickly and professionally. Please contact your local distributor or Circle Systems for quantity pricing.



WET METHOD PARTICLE INSPECTION

MI-GLOW® 778

A liquid concentrate with fluorescent yellow Mi-Glow 800 particles and liquid wetting agent, designed for water system use. Contains special corrosion inhibitors, anti-foaming agents, wetting agents and pH buffering agents. For critical applications requiring superior wetting and corrosion resistance. One quart of concentrate, when combined with water, makes ten gallons of suspension agent.



Item #	Package Size
3571	4-1 quart bottles/case



MI-GLOW® 810

Mi-Glow 800 fluorescent yellow particles premixed with dry wetting agent for use in a water-based system. An environmentally friendly and economic solution when wetting and corrosion inhibition are not as critical.

Item #	Package Size
3111	2 pound jar
3114	35 pound pail

MI-GLOW® 820

A liquid concentrate with non-fluorescent black Mi-Glow 106 particles and liquid wetting agent, designed for water system use. Contains special corrosion inhibitors, anti-foaming agents, wetting agents and pH buffering agents.



Item #	Package Size
3611	4 - 1 quart bottles/case



MI-GLOW® 106

Non-fluorescent black particles designed for use in an oil media system with white light.

Item #	Package Size
2431	2 pound jar

AEROSOLS

CIRCLESAFE® 778A

A pre-proportioned combination of Mi-Glow 800 fluorescent particles and a specifically formulated wetting agent in water, packaged in carbon dioxide charged aerosol cans. Designed to detect very fine defects found in finished products and other critical applications. Environmentally safe, non-flammable and user friendly.



<u>Item #</u>	<u>Package Size</u>
3590	12 - 12 oz. cans/case



CIRCLESAFE® 800A

A pre-proportioned combination of Mi-Glow 800 fluorescent particles and an odorless inspection oil vehicle, packaged in carbon dioxide charged aerosol cans. Designed to detect very fine defects found in finished products and other critical applications.

<u>Item #</u>	<u>Package Size</u>
3130	12 - 12 oz. cans/case

CIRCLESAFE® 820A

A pre-proportioned combination of non-fluorescent black particles and a specifically formulated wetting agent in water, packaged in carbon dioxide charged aerosol cans. Designed to be used in white light inspection for detecting very fine defects found in finished products and structural fabrications. Environmentally safe, non-flammable and user friendly.



<u>Item #</u>	<u>Package Size</u>
3600	12 - 12 oz. cans/case



CIRCLESAFE® 850A

A pre-proportioned combination of Mi-Glow 600 red dual light particles and a specifically formulated wetting agent in water, packaged in carbon dioxide charged aerosol cans. Designed to be used in white light inspection for detecting defects found in structural fabrications. Ultra-violet light may be used to further highlight defect indications in either a well-lit or darkened area. Environmentally safe, non-flammable and user friendly.

<u>Item #</u>	<u>Package Size</u>
3630	12 - 12 oz. cans/case

Specification Guide

Wet Method Magnetic Inspection Particles

SPECIFICATION COMPLIANCE	MI-GLOW® 800	MI-GLOW® 810	MI-GLOW® 778	MI-GLOW® 820	CIRCLESOL M
AMS 2641					X
AMS 3042				X	
AMS 3044	X	X	X		
AMS 3161					X
ASME B&PV	X	X	X	X	
ASTM E709	X	X	X	X	
ASTM E1444	X	X	X	X	X
DOD-F-87935					X
MIL-STD-271	X	X	X	X	X
MIL-STD-1949	X	X	X	X	X
MIL-STD-2132	X	X	X	X	
NAVSEA 250-1500-1	X	X	X	X	
NTR-1E	X	X	X	X	
Bell Helicopter-Textron	X	X	X		
Boeing Aircraft BAC 5424	X	X	X		
Boeing (Douglas Aircraft)	X	X	X		
General Electric Aircraft	X	X	X		
Pratt & Whitney MPM	X	X	X		
Pratt & Whitney PMC-1887					X

Specification Guide cont.

Aerosol Magnetic Inspection Particles

SPECIFICATION COMPLIANCE	CIRCLESAFE® 800A	CIRCLESAFE® 778A	CIRCLESAFE® 820A	CIRCLESAFE® 850A
AMS 2641	X			
AMS 3042			X	X
AMS 3044	X	X		
AMS 3045	X			
AMS 3161	X			
ASME B&PV	X	X	X	X
ASTM E709	X	X	X	X
ASTM E1444	X	X	X	X
DOD-F-87935	X			
MIL-STD-271	X	X	X	X
MIL-STD-1949	X	X	X	X
MIL-STD-2132	X	X	X	X
NTR-1E	X	X	X	X

Dry Method Magnetic Inspection Particles

SPECIFICATION COMPLIANCE	DP 61 Gray	DP 63 Red	DP 66 Yellow	DP 68 Blue-Black	DP 73 Fluorescent Red	DP 75 Fluorescent Yellow
AMS 3040	X	X	X	X	X	X
ASME B&PV	X	X	X	X	X	X
ASTM E709	X	X	X	X	X	X
ASTM E1444	X	X	X	X	X	X
MIL-STD-271	X	X	X	X	X	X
MIL-STD-1949	X	X	X	X	X	X
MIL-STD-2132	X	X	X	X	X	X
NAVSEA 250-1500-1	X	X	X	X	X	X
NTR-1E	X	X	X	X	X	X