Circle Systems, Inc.

SAFETY DATA SHEET

1. Identification

Product identifier **MI-GLOW® 218X**

Other means of identification Not available.

Recommended use Non-destructive testing.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

Company name Circle Systems, Inc.

Address 479 West Lincoln Ave.
P.O Box 1228
Hinckley, IL 60520

Telephone 815-286-3271

E-mail customerservice@circlesafe.com

Emergency phone number Chem-tel 800-255-3924

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Reproductive toxicity (fertility, the unborn child) Category 1B

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement May damage fertility or the unborn child.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response If exposed or concerned: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) Not classified.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Borax decahydrate	1306-96-4	< 50
Iron Oxide	1317-61-9	< 15
Iron	7439-89-6	< 35
Sodium Carbonate	497-19-8	< 3

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Dust may irritate the respiratory tract, skin, and eyes.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of the other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch or walk through spilled material. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid dust formation. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush are with water. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS. Flush area with plenty of water.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Use with adequate ventilation. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Borax decahydrate (CAS 1303-96-4)	TWA	5 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves.

Other Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Color Dark green

Odor Detergent like.

Odor threshold Not available.

pH 8 – 9.5

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit – lower (%) Not available.

Flammability limit – upper (%) Not available.

Explosive limit – lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density 1.1 (68 °F (20 °C))

Solubility(ies) Soluble in water.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity	Not available.
Other information	
VOC (Weight %)	Not applicable.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard..
Inhalation	May cause irritation to the respiratory system.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dust may irritate the respiratory tract, skin and eyes.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Borax decahydrate (CAS 1303-96-4)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg
Oral		
LD50	Rat	2660 mg/kg
Sodium carbonate (CAS 497-19-8)		
Acute		
Inhalation		
LC50	Rat	2.3 mg/l, 2 hours
Oral		
LD50	Rat	4090 mg/kg
Iron (CAS 7439-89-6)		
Acute		
Oral		
LD50	Rat	30 g/kg

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	May damage fertility or the unborn child.
Specific target organ toxicity – single exposure	Not classified.

Specific target organ toxicity – repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Sodium carbonate (CAS 497-19-8)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	156.6-298.9 mg/l, 48 hours
Iron (CAS 7439-89-6)			
Aquatic			
Fish	LC50	Channel Catfish (Ictalurus punctatus)	>500 mg/l, 96 hours

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available for this product.
Mobility in soil	Not available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as a dangerous good.

IMDG

Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

U S federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S.EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard – No Delayed Hazard – Yes Fire Hazard – No Pressure Hazard – No Reactivity Hazard – No
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Borax decahydrate (CAS 1303-96-4).

US. New Jersey Worker and Community Right-to-Know Act

Borax decahydrate (CAS 1303-96-4).

US. Pennsylvania RTK - Hazardous Substances

Borax decahydrate (CAS 1303-96-4).

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product is known to contain chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Formaldehyde (CAS 50-00-0).

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	12-November-2014
Revision date	-
Version #	01
NFPA Ratings	

List of abbreviations	LC50: Lethal Concentration, 50%. LD50: Lethal Dose, 50%. TWA: Time weighted average
References	HSDB® - Hazardous Substances Data Bank
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