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**Section 1: IDENTIFICATION**

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**1.1 PRODUCT IDENTIFIER**

**Product Name:** 14A Aqua-Glo  
**Product Code:** Not available.

**1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE**

**Use:** Non-Destructive Testing.

**1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET**

**Name/Address:** Magnaflux  
155 Harlem Avenue,  
Glenview, Illinois  
60025  
**Telephone Number:** 847-657-5300

**1.4 EMERGENCY TELEPHONE NUMBER**

**Emergency Telephone Number:** CHEMTREC 800-424-9300  
**Date of Preparation:** July 18, 2014 **Version #:**1.1

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**Section 2: HAZARD(S) IDENTIFICATION**

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**2.1 CLASSIFICATION OF THE CHEMICAL ACCORDING TO OSHA HAZCOM 2012****Hazard class**

Gases Under Pressure - Compressed Gas

**2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012****Hazard Pictogram:**

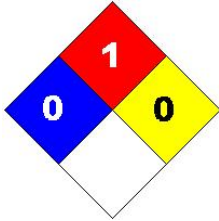
**Signal Word:** Warning  
**Hazard Statement:** Contains gas under pressure; may explode if heated.  
**Prevention:** Not applicable.  
**Response:** Not applicable.  
**Storage:** Protect from sunlight. Store in a well-ventilated place.  
**Disposal:** Not applicable.

**2.3 ADDITIONAL INFORMATION**

**Hazards not otherwise classified:** Not applicable.  
1 % of the mixture consists of ingredient(s) of unknown acute toxicity.

This product is a hazardous chemical as defined by NOM-018-STPS-2000.

**Mexico Classification:**



**Blue = Health   Red = Flammability   Yellow = Reactivity   White = Special**

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

**WHMIS Classification(s):**  
Class A - Compressed Gas

**WHMIS Hazard Symbols:**



**WHMIS Signal Word:** CAUTION

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 MIXTURES**

| Ingredient       | UN #   | H / F / R / * | CAS No   | Wt. %     |
|------------------|--------|---------------|----------|-----------|
| Carbon dioxide   | UN1013 | 1/0/0         | 124-38-9 | 0.5 - 1.5 |
| Monoethanolamine | UN2491 | 3/2/0         | 141-43-5 | 0.1 - 1   |
| Ethylene oxide   | UN1040 | 3/4/3         | 75-21-8  | < 0.1     |
| Acetaldehyde     | UN1089 | 3/4/2         | 75-07-0  | < 0.1     |
| 1,4-Dioxane      | UN1165 | 2/3/1         | 123-91-1 | < 0.1     |

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

\* Per NOM-018-STPS-2000

**Section 4: FIRST- AID MEASURES**

**4.1 DESCRIPTION OF THE FIRST AID MEASURE**

- Eye:** In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.
- Skin:** In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.
- Inhalation:** If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if

you feel unwell.

**Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

#### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

**Eye:** May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

**Skin:** May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

**Inhalation:** May cause respiratory tract irritation. May cause drowsiness or dizziness.

**Ingestion:** Not normally a hazard. May cause stomach distress, nausea or vomiting.

#### 4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

**Note to Physicians:** Symptoms may not appear immediately.

**Specific Treatments:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

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### Section 5: FIRE-FIGHTING MEASURES

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#### 5.1 FLAMMABILITY

**Flammability:** Not flammable by WHMIS/OSHA/NOM-018-STPS-2000 criteria.

#### 5.2 EXTINGUISHING MEDIA

**Suitable Extinguishing Media:** Treat for surrounding material.

**Unsuitable Extinguishing Media:** None known.

#### 5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

**Products of Combustion:** May include, and are not limited to: oxides of carbon.

#### Explosion Data:

**Sensitivity to Mechanical Impact:** Not available.

**Sensitivity to Static Discharge:** Not available.

#### 5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

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### Section 6: ACCIDENTAL RELEASE MEASURES

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#### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ruptured cylinders may rocket.

#### 6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

**Methods for Containment:** Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

**Methods for Cleaning-Up:** Scoop up material and place in a disposal container.

## Section 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING

**Handling:** Avoid contact with skin and eyes. Do not swallow. Avoid breathing gas/mist/vapours/spray. Handle container with care. When using do not eat, drink or smoke. (See section 8)

**General Hygiene Advice:** Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

**Storage:** Keep out of the reach of children. Protect from sunlight. Store in a well-ventilated place. Do not store at temperatures above 49 °C / 120 °F. (See section 10)

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

#### Exposure Guidelines

| Ingredient       | Occupational Exposure Limits     |                |
|------------------|----------------------------------|----------------|
|                  | OSHA-PEL                         | ACGIH-TLV      |
| Carbon dioxide   | 5000 ppm; 9000 mg/m <sup>3</sup> | 5000 ppm       |
| Monoethanolamine | 3 ppm                            | 3 ppm          |
| Ethylene oxide   | 1 ppm                            | 1 ppm          |
| Acetaldehyde     | 200 ppm                          | Not available. |
| 1,4-Dioxane      | 100 ppm                          | 20 ppm         |

### 8.2 EXPOSURE CONTROLS

**Engineering Controls:** Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

### 8.3 INDIVIDUAL PROTECTIVE MEASURES

#### Personal Protective Equipment:

**Eye/Face Protection:** Safety glasses or goggles are recommended when using product.

#### Skin Protection:

**Hand Protection:** Wear suitable gloves.

**Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

**General Health and Safety Measures:** Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

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**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

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**9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

|   |                         |
|---|-------------------------|
| <b>Appearance:</b>                              | Not available.          |
| <b>Color:</b>                                   | Not available.          |
| <b>Odor:</b>                                    | Not available.          |
| <b>Odor Threshold:</b>                          | Not available.          |
| <b>Physical State:</b>                          | Gas/pressurized liquid. |
| <b>pH:</b>                                      | Not available.          |
| <b>Melting Point/Freezing Point:</b>            | Not available.          |
| <b>Initial Boiling Point and Boiling Range:</b> | Not available.          |
| <b>Flash Point:</b>                             | Not available.          |
| <b>Evaporation Rate:</b>                        | Not available.          |
| <b>Flammability:</b>                            | Not flammable.          |
| <b>Lower Flammability/Explosive Limit:</b>      | Not available.          |
| <b>Upper Flammability/Explosive Limit:</b>      | Not available.          |
| <b>Vapor Pressure:</b>                          | Not available.          |
| <b>Vapor Density:</b>                           | Not available.          |
| <b>Relative Density/Specific Gravity:</b>       | Not available.          |
| <b>Solubility:</b>                              | Not available.          |
| <b>Partition coefficient: n-octanol/water:</b>  | Not available.          |
| <b>Auto-ignition Temperature:</b>               | Not available.          |
| <b>Decomposition Temperature:</b>               | Not available.          |
| <b>Viscosity:</b>                               | Not available.          |
| <b>Oxidizing Properties:</b>                    | Not available.          |
| <b>Explosive Properties:</b>                    | Not available.          |

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**Section 10: STABILITY AND REACTIVITY**

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**10.1 REACTIVITY**

No dangerous reaction known under conditions of normal use.

**10.2 CHEMICAL STABILITY**

Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn.

**10.3 POSSIBILITY OF HAZARDOUS REACTIONS**

No dangerous reaction known under conditions of normal use.

**10.4 CONDITIONS TO AVOID**

Heat. Incompatible materials.

**10.5 INCOMPATIBLE MATERIALS**

None known.

**10.6 HAZARDOUS DECOMPOSITION PRODUCTS**

May include, and are not limited to: oxides of carbon.

**Section 11: TOXICOLOGICAL INFORMATION**
**11.1 INFORMATION ON TOXICOLOGICAL EFFECTS**

**Likely Routes of Exposure:** Skin contact, eye contact, and inhalation.

**Symptoms related to physical/chemical/toxicological characteristics:**

**Eye:** May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

**Skin:** May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

**Ingestion:** Not normally a hazard. May cause stomach distress, nausea or vomiting.

**Inhalation:** May cause respiratory tract irritation. May cause drowsiness or dizziness.

**Acute Toxicity:**

| Ingredient       | IDLH          | LC50                          | LD50  |
|------------------|---------------|-------------------------------|---|
| Carbon dioxide   | 40,000 ppm    | Not available.                | Not available.  |
| Monoethanolamine | 30 ppm        | Not available.                | Oral 1720 mg/kg, rat<br>Dermal 1 mL/kg, rabbit<br>Dermal 1025 mg/kg, rabbit |
| Ethylene oxide   | Ca [800 ppm]  | Inhalation 800 ppm 4 h, rat   | Oral 72 mg/kg, rat  |
| Acetaldehyde     | Ca [2000 ppm] | Inhalation 13300 ppm 4h, rat  | Oral 1930 mg/kg, rat  |
| 1,4-Dioxane      | Ca [500 ppm]  | Inhalation 48.5 mg/L 4 h, rat | Oral 4200 mg/kg, rat<br>Dermal 7600 mg/kg, rabbit                           |

**Calculated overall Chemical Acute Toxicity Values**

| LC50 (inhalation) | LD50 (oral)       | LD50 (dermal)        |
|-------------------|-------------------|----------------------|
| 5 mg/L 4 h, rat   | > 2000 mg/kg, rat | > 2000 mg/kg, rabbit |

| Ingredient       | Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)* |
|------------------|---|
| Carbon dioxide   | Not listed.   |
| Monoethanolamine | Not listed.   |
| Ethylene oxide   | O, G-A2, I-1, N-1, CP65   |
| Acetaldehyde     | G-A3, I-2B, N-2, CP65   |
| 1,4-Dioxane      | G-A3, I-2B, N-2, CP65   |

\* See Section 15 for more information.

**11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE**

|   |   |
|---|---|
| <b>Skin Corrosion/Irritation:</b>             | Based on available data, the classification criteria are not met. |
| <b>Serious Eye Damage/Irritation:</b>         | Based on available data, the classification criteria are not met. |
| <b>Respiratory Sensitization:</b>             | Based on available data, the classification criteria are not met. |
| <b>Skin Sensitization:</b>                    | Based on available data, the classification criteria are not met. |
| <b>STOT-Single Exposure:</b>                  | Based on available data, the classification criteria are not met. |
| <b>Chronic Health Effects:</b>                |   |
| <b>Carcinogenicity:</b>                       | Based on available data, the classification criteria are not met. |
| <b>Germ Cell Mutagenicity:</b>                | Based on available data, the classification criteria are not met. |
| <b>Reproductive Toxicity:</b>                 |   |
| <b>Developmental:</b>                         | Based on available data, the classification criteria are not met. |
| <b>Teratogenicity:</b>                        | Based on available data, the classification criteria are not met. |
| <b>Embryotoxicity:</b>                        | Based on available data, the classification criteria are not met. |
| <b>Fertility:</b>                             | Based on available data, the classification criteria are not met. |
| <b>STOT-Repeated Exposure:</b>                | Based on available data, the classification criteria are not met. |
| <b>Aspiration Hazard:</b>                     | Based on available data, the classification criteria are not met. |
| <b>Toxicologically Synergistic Materials:</b> | Not available.  |
| <b>Other Information:</b>                     | Not available.  |

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**Section 12: ECOLOGICAL INFORMATION**

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**12.1 ECOTOXICITY**

**Acute/Chronic Toxicity:** May cause long-term adverse effects in the aquatic environment.

**12.2 PERSISTENCE AND DEGRADABILITY**

Not available.

**12.3 BIOACCUMULATIVE POTENTIAL**

**Bioaccumulation:** Not available.

**12.4 MOBILITY IN SOIL**

Not available.

**12.5 OTHER ADVERSE EFFECTS**

Not available.

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**Section 13: DISPOSAL CONSIDERATIONS**

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**13.1 WASTE TREATMENT METHODS**

**Disposal Method:** This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

**Other disposal recommendations:** Not available.

| Section 14: TRANSPORT INFORMATION |  |
|-----------------------------------|--|
| <b>DOT</b>                        | Consumables, Limited Quantities                  |
| <b>IATA</b>                       | UN1950, Aerosols, Non-Flammable, 2.2             |
| <b>IMDG</b>                       | UN1950, Aerosols, Non-Flammable, 2.2 (Ltd. Qty.) |

## Section 15: REGULATORY INFORMATION

### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**US:** SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

**Mexico:** SDS prepared pursuant to NOM-018-STPS-2000.

| SARA Title III   |                                 |                              |                     |                |
|------------------|---------------------------------|------------------------------|---------------------|----------------|
| Ingredient       | Section 302<br>(EHS) TPQ (lbs.) | Section 304<br>EHS RQ (lbs.) | CERCLA<br>RQ (lbs.) | Section<br>313 |
| Carbon dioxide   | Not listed.                     | Not listed.                  | Not listed.         | Not listed.    |
| Monoethanolamine | Not listed.                     | Not listed.                  | Not listed.         | Not listed.    |
| Ethylene oxide   | 1,000                           | 10                           | 10                  | 313            |
| Acetaldehyde     | Not listed.                     | Not listed.                  | 1,000               | 313            |
| 1,4-Dioxane      | Not listed.                     | Not listed.                  | 100                 | 313            |

#### State Regulations

**California Proposition 65:**

This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**Global Inventories:**

| Ingredient       | Canada<br>DSL/NDL | USA<br>TSCA |
|------------------|-------------------|-------------|
| Carbon dioxide   | DSL               | Yes.        |
| Monoethanolamine | DSL               | Yes.        |
| Ethylene oxide   | DSL               | Yes.        |
| Acetaldehyde     | DSL               | Yes.        |
| 1,4-Dioxane      | DSL               | Yes.        |

| NFPA-National Fire Protection Association: |   |
|--|---|
| <b>Health:</b>                             | 0 |
| <b>Fire:</b>                               | 1 |
| <b>Reactivity:</b>                         | 0 |



| HMIS-Hazardous Materials Identification System: |   |
|---|---|
| Health:   | 0 |
| Fire:   | 1 |
| Physical Hazard:                                | 0 |

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

**SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:**

**CP65 California Proposition 65**

**OSHA (O) Occupational Safety and Health Administration.**

**ACGIH (G) American Conference of Governmental Industrial Hygienists.**

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

**IARC (I) International Agency for Research on Cancer.**

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

**NTP (N) National Toxicology Program.**

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

**Section 16: OTHER INFORMATION**

**Date of Preparation:** July 18, 2014

**Expiry Date:** July 18, 2017

**Version:** 1.1

**Revision Date:** June 9, 2015

**Conforms to OSHA HazCom 2012, CPR & NOM-018-STPS-2000 Standards**

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**Prepared for:** Magnaflux

**End of Safety Data Sheet**