

## Safety Data Sheet

**REVISION DATE:** 06/02/2016

### SECTION 1 - PRODUCT & COMPANY INFORMATION

**PRODUCT NAME:** Qwik System Flush  
**DESCRIPTION:** AC & Refrigeration System Flush  
**USE:** Flushing residue from HVAC lines

**MANUFACTURER:** Mainstream Engineering Corporation  
 200 Yellow Place  
 Rockledge, Florida 32955

**INFORMATION TELEPHONE:** 321-631-3550  
**EMERGENCY TELEPHONE:** 800-424-9300

### SECTION 2 - HAZARDS IDENTIFICATION

**GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS):**

- Gases under pressure
- Skin irritation (Category 2)
- Eye irritation (Category 2A)
- Specific target organ toxicity (single exposure)

**HAZARD STATEMENT(S):**

- H280 Contains gas under pressure; may explode if heated
- H281 Contains refrigerated gas; may cause cryogenic burns or injury
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation
- H336 May cause drowsiness or dizziness

**PICTOGRAM(S):**



**SIGNAL WORD:** Warning

**PRECAUTIONARY STATEMENT(S):**

- P261 Avoid breathing fumes/mist/vapors/spray.
- P264 Wash hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P282 Wear cold insulating gloves and either face shield or eye protection
- P312 Call a POISON CENTER or doctor if you feel unwell.

- P302+352 IF ON SKIN: Wash contaminated areas with plenty of water.
- P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P332+313 If skin irritation occurs: Get medical advice.
- P336+315 Thaw frosted parts with lukewarm water. Do not rub affected areas. Seek medical attention.
- P337+313 If eye irritation persists: get medical advice.
- P362+364 Take off contaminated clothing and wash before reuse.
- P370+380 In case of fire: Evacuate area.
- P410+403+233 Protect from sunlight. Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/ container to in accordance with local/regional/national regulations.

**HAZARDS NOT OTHERWISE CLASSIFIED BY GHS:** none

### SECTION 3 - PRODUCT COMPOSITION INFORMATION

COMPONENT	CAS #	AMOUNT
(E)-1,2-Dichloroethene	156-60-5	40-70%
Ethane, 1,1,1,2-tetrafluoro-	811-97-2	20-50%
Acid and Moisture Removing Additive*		5-10%
Inerting Additives*		2-10%

\* TRADE SECRET – PATENT PENDING PROPRIETARY FORMULA. Specific chemical identities are withheld as a trade secret under the provisions of OSHA hazard communication standard 29 CFR 1910.1200.



**SECTION 4 - EMERGENCY & FIRST-AID PROCEDURES**

**SKIN:** Immediately wash area with soap and water. Remove contaminated clothing and wash. If frostbite occurs, flush affected areas with lukewarm water. Do not use hot water. Call a physician.

**EYES:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately, preferably from an ophthalmologist.

**INGESTION:** In case of accidental ingestion, give large amounts of water provided person is conscious. Do not induce vomiting. Call a physician.

**INHALATION:** Immediately remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**SECTION 5 - FIRE-FIGHTING MEASURES**

**EXTINGUISHING MEDIA:** This product is a nonflammable aerosol. Use an extinguishing agent which is appropriate for the surrounding fire, preferably dry-chemical, carbon dioxide, foam, or water spray/fine mist.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus in positive pressure mode with confined face piece.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Never use a welding or cutting torch on or near pressurized container. This product can emit toxic and corrosive fumes under combustion conditions. Thermal decomposition products include hydrogen fluoride, fluorinated hydrocarbons and hydrogen chloride.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND**

**EMERGENCY PROCEDURES:** Use personal protective equipment outlined in Section 8 for normal handling and clean-up of this material.

Remove all sources of ignition from the vicinity if possible. Evacuate area. Ventilate area using forced ventilation, especially in lower enclosed places where heavy vapors might collect. Evacuate personnel to safe areas.

**ENVIRONMENTAL PRECAUTIONS:** Prevent release to the environment if possible. Do not flush product into drains or sewer lines.

**MATERIALS FOR CONTAINMENT AND CLEAN-UP:** Use a nonflammable absorbent material for clean-up. Place in container for disposal according to local regulations.

**REFERENCE TO OTHER SECTIONS:** For additional disposal directions and reporting requirements, please refer to Section 13.

**SECTION 7 - HANDLING AND STORAGE**

**PRECAUTIONS FOR SAFE HANDLING:** Keep container closed when not in use. Use good personal hygiene practices in accordance with this material. Avoid getting the product in eyes or on skin. Remove contaminated clothing and clean before re-use. Wash hands after handling this product. Make sure there is adequate ventilation in order to minimize exposure to possible vapors. In the event of a release and exposure, evacuate personnel to safe areas. Keep away from heat and flame. Use non-sparking tools. Use personal protective equipment outlined in Section 8 for normal handling of this material.

**STORAGE:** Store in a cool, dry location. Keep container tightly closed. Do not store near heat, flame, strong oxidants. Maintain adequate ventilation. Keep away from children.

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION MEASURES**

**EXPOSURE LIMITS:** No data available

**ENGINEERING CONTROLS:** In enclosed environments, exhaust ventilation by explosion-proof mechanical means may be necessary to control air contaminants below specified exposure limits. Handle product in accordance with good industrial hygiene and safety practice.

**PERSONAL PROTECTIVE EQUIPMENT:** Please wear appropriate person protective equipment for handling of this product as indicated below.

**EYE PROTECTION:** Chemical splash goggles or face shields are advised.

**SKIN PROTECTION:** Use gloves of an appropriate material (Viton® or Neoprene gloves recommended) to minimize exposure.

**RESPIRATORY PROTECTION:** Engineering or administrative controls should be implemented to reduce exposure during normal handling of this product. If the workplace exposure limits are exceeded (ventilation is not adequate), then a NIOSH/MSHA approved air supplied respirator is advised.



**SECTION 9 - PHYSICAL AND CHEMICAL DATA**

<b>APPEARANCE:</b>	Clear, colorless liquid
<b>ODOR:</b>	Mild sweet odor
<b>ODOR THRESHHOLD:</b>	No data available
<b>pH:</b>	No data available
<b>FLASH POINT:</b>	No data available
<b>AUTOIGNITION TEMPERATURE:</b>	No data available
<b>FLAMMABILITY:</b>	Nonflammable
<b>EXPLOSION LIMITS:</b>	No data available
<b>MELTING POINT:</b>	No data available
<b>BOILING POINT (760 mm Hg):</b>	No data available
<b>VAPOR PRESSURE:</b>	No data available
<b>VAPOR DENSITY (AIR = 1):</b>	No data available
<b>SPECIFIC GRAVITY (WATER = 1):</b>	No data available
<b>SOLUBILITY:</b>	No data available
<b>PARTITION COEFFICIENT: (N-OCTANOL/WATER)</b>	No data available
<b>DECOMPOSITION TEMPERATURE:</b>	No data available
<b>VISCOSITY:</b>	No data available
<b>VOC CONTENT:</b>	100 %
<b>EVAPORATION RATE: (N-BUTYL ACETATE = 1)</b>	No data available

**SECTION 10 - STABILITY AND REACTIVITY**

**REACTIVITY:** No data available.  
**CHEMICAL STABILITY:** Stable when handled or stored under the recommended conditions.  
**POSSIBILITY OF HAZARDOUS REACTIONS:** Avoid contact with strong bases, oxidizing agents, heat, sparks or flame. Avoid alkali, alkaline earth metals, and molten salts. Do not expose to extremes of temperature.  
**HAZARDOUS POLYMERIZATION:** Product will not undergo hazardous polymerization  
**CHEMICAL INCOMPATIBILITY:** Avoid contact with strong oxidizing agents, alkali metals and alkaline earth metals.  
**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposition products are hazardous. Can be decomposed by temperatures (open flame or glowing metal surface) forming halogen acids, carbon monoxide, carbon dioxide and possibly hydrocarbon halides.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**PRIMARY ROUTES OF ENTRY:** Inhalation, skin absorption, skin contact, eye contact, ingestion.  
**INFORMATION ON TOXICOLOGICAL EFFECTS**  
**ACUTE TOXICITY:** No data available

**ACUTE SYMPTOMS:** Increased susceptibility to any effects may be observed in persons with pre-existing disease of the central nervous system, cardiovascular system, skin or eyes.

**DELAYED EFFECTS:** Ingestion or inhalation of high concentrations of vapor is harmful and may cause nausea, stomach irregularities, dizziness or drowsiness.

**CHRONIC EFFECTS**

**MUTAGENICITY:** No evidence of a mutagenic effect.

**TERATOGENICITY:** No evidence of a teratogenic effect (birth defect).

**SENSITIZATION:** No evidence of a sensitization effect.

**REPRODUCTIVE:** No evidence of a reproductive effect.

**CHRONIC SYMPTOMS:** Repeated inhalation of high concentrations may cause central nervous system and gastrointestinal effects. Exposure may cause headache and dizziness, and a loss of balance.

**CARCINOGENICITY**

IARC No component of this product, present at levels greater than or equal to 0.1%, is identified as probable, possible or confirmed human carcinogen by IARC.

NTP No component of this product, present at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by NTP.

OSHA No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA.

**SECTION 12 - ECOLOGICAL INFORMATION**

**TOXICITY:** No data available.

**PERSISTENCE AND DEGRADABILITY:** All components of this product are classified as *readily or inherently biodegradable*.

**BIOACCUMULATION:** One component of this product has the potential to bioaccumulate.

**SOIL TO GROUNDWATER MOBILITY:** No data available

**OTHER ADVERSE EFFECTS:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Product can be toxic to aquatic life.



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**SECTION 13 – DISPOSAL CONSIDERATIONS**

**DISPOSAL METHODS:** Place in covered hazardous chemical waste containers away from open flames and remove to a permitted waste disposal facility. Do not flush to drains or sewer. Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer to assure compliance.

**SPECIAL CONSIDERATIONS FOR DISPOSAL:** Burn in a chemical incinerator equipped with an afterburner and scrubber but care should be taken as concentrated vapors may become flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**SECTION 14 – TRANSPORT INFORMATION**

**DOT SHIPPING CLASS:** ORM-D

**SECTION 16 – OTHER INFORMATION**

**HMIS RATING:**  
Health hazard: 1  
Flammability: 0  
Physical Hazard: 1  
Personal Protection: B

The information contained herein is believed to be accurate and is offered in good faith. The above information is, in part, based on material safety data sheets supplied by the vendors of the raw materials used in this product. Because product use is beyond our control, no warranty is given, expressed, or implied. Mainstream Engineering Corporation cannot assume any liability for the use of information contained herein or from damage resulting from handling or contact with the above product. To determine applicability or effect of any law or regulation with respect to the product, users should consult a legal advisor or appropriate governmental agency.

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