

## 1. Identification

|   |  |                       |
|---|--|-----------------------|
| <b>Product identifier</b>                                     | <b>PERCHLORIC ACID SOLUTION, 0.1 N IN ACETIC ACID</b>  |                       |
| <b>Other means of identification</b>                          |  |                       |
| <b>Product code</b>   | 71   |                       |
| <b>Recommended use</b>  | professional, scientific and technical activities: other professional, scientific and technical activities |                       |
| <b>Recommended restrictions</b>                               | None known.  |                       |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |  |                       |
| <b>Manufacturer</b>   |  |                       |
| <b>Company name</b>   | GFS Chemicals, Inc.  |                       |
| <b>Address</b>  | P.O. Box 245<br>Powell, OH 43065<br>United States  |                       |
| <b>Telephone</b>  | Phone  | 740-881-5501          |
|   | Toll Free  | 800-858-9682          |
|   | Fax  | 740-881-5989          |
| <b>Website</b>  | www.gfschemicals.com   |                       |
| <b>E-mail</b>   | service@gfschemicals.com   |                       |
| <b>Emergency phone number</b>                                 | Emergency Assistance   | Chemtrec 800-424-9300 |

## 2. Hazard(s) identification

|                              |  |  |
|------------------------------|--|--|
| <b>Physical hazards</b>      | Flammable liquids                                      | Category 3                             |
| <b>Health hazards</b>        | Acute toxicity, dermal                                 | Category 4                             |
|                              | Skin corrosion/irritation                              | Category 1A                            |
|                              | Serious eye damage/eye irritation                      | Category 1                             |
|                              | Sensitization, respiratory                             | Category 1                             |
|                              | Specific target organ toxicity, single exposure        | Category 1 (blood, respiratory system) |
| <b>Environmental hazards</b> | Hazardous to the aquatic environment, acute hazard     | Category 3                             |
|                              | Hazardous to the aquatic environment, long-term hazard | Category 3                             |
| <b>OSHA defined hazards</b>  | Not classified.  |  |

### Label elements



**Signal word** Danger

**Hazard statement** Flammable liquid and vapor. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Causes damage to organs (blood, respiratory system). Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

### Precautionary statement

#### Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.

|  |  |
|--|--|
| <b>Response</b>                                  | In case of fire: Use appropriate media to extinguish. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Take off contaminated clothing and wash before reuse. |
| <b>Storage</b>                                   | Store in a well-ventilated place. Keep cool. Store locked up.  |
| <b>Disposal</b>                                  | Dispose of contents/container to an approved incineration plant.   |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.  |
| <b>Supplemental information</b>                  | 0.98% of the mixture consists of component(s) of unknown acute dermal toxicity. 0.98% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 0.98% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.  |

### 3. Composition/information on ingredients

#### Mixtures

| Chemical name                            | Common name and synonyms             | CAS number | %    |
|--|--------------------------------------|------------|------|
| ACETIC ACID                              | GLACIAL ACETIC ACID<br>ETHANOIC ACID | 64-19-7    | 98.6 |
| PERCHLORIC ACID                          |                                      | 7601-90-3  | 0.98 |
| Other components below reportable levels |                                      |            | 0.42 |

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

|   |   |
|---|---|
| <b>Inhalation</b>   | If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  |
| <b>Skin contact</b>   | Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.  |
| <b>Eye contact</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.   |
| <b>Ingestion</b>  | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.   |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing.  |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |
| <b>General information</b>  | Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.   |

### 5. Fire-fighting measures

|  |  |
|--|--|
| <b>Suitable extinguishing media</b>                                  | Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).  |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.   |
| <b>Specific hazards arising from the chemical</b>                    | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire.  |
| <b>Fire fighting equipment/instructions</b>                          | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.   |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.   |
| <b>General fire hazards</b>  | Flammable liquid and vapor.  |

Material name: PERCHLORIC ACID SOLUTION, 0.1 N IN ACETIC ACID

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

### Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

## 7. Handling and storage

### Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. Wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components                | Type | Value              |
|---------------------------|------|--------------------|
| ACETIC ACID (CAS 64-19-7) | PEL  | 25 mg/m3<br>10 ppm |

#### US. ACGIH Threshold Limit Values

| Components                | Type | Value  |
|---------------------------|------|--------|
| ACETIC ACID (CAS 64-19-7) | STEL | 15 ppm |
|                           | TWA  | 10 ppm |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Components                | Type | Value              |
|---------------------------|------|--------------------|
| ACETIC ACID (CAS 64-19-7) | STEL | 37 mg/m3<br>15 ppm |
|                           | TWA  | 25 mg/m3<br>10 ppm |

### Biological limit values

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

### Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. 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. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | Chemical respirator with organic vapor cartridge and full facepiece.   |
| <b>Skin protection</b>                |  |
| <b>Hand protection</b>                | Wear appropriate chemical resistant gloves.  |
| <b>Other</b>                          | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.   |
| <b>Respiratory protection</b>         | Chemical respirator with organic vapor cartridge and full facepiece.   |
| <b>Thermal hazards</b>                | Wear appropriate thermal protective clothing, when necessary.  |
| <b>General hygiene considerations</b> | When using do not 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**

|   |                              |
|---|------------------------------|
| <b>Physical state</b>                               | Liquid.                      |
| <b>Form</b>   | Liquid.                      |
| <b>Color</b>  | Colorless.                   |
| <b>Odor</b>   | Vinegar                      |
| <b>Odor threshold</b>                               | Not available.               |
| <b>pH</b>   | Not available.               |
| <b>Melting point/freezing point</b>                 | 62 °F (17 °C) estimated      |
| <b>Initial boiling point and boiling range</b>      | 244 °F (118 °C) estimated    |
| <b>Flash point</b>                                  | 106.3 °F (41.3 °C) estimated |
| <b>Evaporation rate</b>                             | Not available.               |
| <b>Flammability (solid, gas)</b>                    | Not available.               |
| <b>Upper/lower flammability or explosive limits</b> |                              |
| <b>Flammability limit - lower (%)</b>               | 4 % estimated                |
| <b>Flammability limit - upper (%)</b>               | Not available.               |
| <b>Explosive limit - lower (%)</b>                  | Not available.               |
| <b>Explosive limit - upper (%)</b>                  | Not available.               |
| <b>Vapor pressure</b>                               | 20.93 hPa estimated          |
| <b>Vapor density</b>                                | Not available.               |
| <b>Relative density</b>                             | Not available.               |
| <b>Solubility(ies)</b>                              |                              |
| <b>Solubility (water)</b>                           | Not available.               |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.               |
| <b>Auto-ignition temperature</b>                    | 798.8 °F (426 °C) estimated  |
| <b>Decomposition temperature</b>                    | Not available.               |
| <b>Viscosity</b>                                    | Not available.               |
| <b>Other information</b>                            |                              |
| <b>Density</b>                                      | 1.057 g/cm3 estimated        |
| <b>Flammability class</b>                           | Combustible II estimated     |
| <b>Flash point class</b>                            | Combustible II               |
| <b>Percent volatile</b>                             | 99 % estimated               |
| <b>Specific gravity</b>                             | 1.06 estimated               |
| <b>VOC (Weight %)</b>                               | 99 % estimated               |

**10. Stability and reactivity**

|                           |   |
|---------------------------|---|
| <b>Reactivity</b>         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <b>Chemical stability</b> | Material is stable under normal conditions.   |

|   |  |
|---|--|
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.   |
| <b>Conditions to avoid</b>                | Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| <b>Incompatible materials</b>             | Strong oxidizing agents.   |
| <b>Hazardous decomposition products</b>   | Toxic gas.   |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | May cause damage to organs by inhalation. May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful. |
| <b>Skin contact</b> | Causes severe skin burns. Harmful in contact with skin.   |
| <b>Eye contact</b>  | Causes serious eye damage.  |
| <b>Ingestion</b>    | Causes digestive tract burns.   |

**Symptoms related to the physical, chemical and toxicological characteristics** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Difficulty in breathing.

### Information on toxicological effects

**Acute toxicity** Harmful in contact with skin.

| Product  | Species    | Test Results                                   |
|--|------------|--|
| PERCHLORIC ACID SOLUTION, 0.1 N IN ACETIC ACID (CAS Mixture) |            |  |
| <b>Acute</b>   |            |  |
| <i>Dermal</i>  |            |  |
| LD50   | Rabbit     | 1075.0507 mg/kg estimated                      |
| <i>Inhalation</i>  |            |  |
| LC50   | Guinea pig | 5070.9941 mg/l, 1 Hours estimated<br>5051 mg/l |
|  | Mouse      | 5699.7974 mg/l, 1 Hours estimated<br>5051 mg/l |
|  | Rat        | 11.5619 mg/l, 4 Hours estimated                |
| <i>Oral</i>  |            |  |
| LD50   | Mouse      | 5030.4258 mg/kg estimated                      |
|  | Rabbit     | 1217.0386 mg/kg estimated                      |
|  | Rat        | 3.357 g/kg estimated                           |
| <i>Other</i>   |            |  |
| LD50   | Mouse      | 532.4543 mg/kg estimated                       |
|  | Rabbit     | 1217.0386 mg/kg estimated                      |

| Components                | Species    | Test Results           |
|---------------------------|------------|------------------------|
| ACETIC ACID (CAS 64-19-7) |            |                        |
| <b>Acute</b>              |            |                        |
| <i>Dermal</i>             |            |                        |
| LD50                      | Rabbit     | 1060 mg/kg             |
| <i>Inhalation</i>         |            |                        |
| LC50                      | Guinea pig | 5000 mg/l, 1 Hours     |
|                           | Mouse      | 5620 mg/l, 1 Hours     |
|                           | Rat        | 11.4 mg/l, 4 Hours     |
| <i>Oral</i>               |            |                        |
| LD50                      | Mouse      | 4960 mg/kg             |
|                           | Rabbit     | 1200 mg/kg             |
|                           | Rat        | 3.53 g/kg<br>3.31 g/kg |

| Components   | Species   | Test Results                   |                                  |
|--|---|--------------------------------|----------------------------------|
| <i>Other</i>   |   |                                |                                  |
| LD50   | Mouse   | 525 mg/kg                      |                                  |
|  | Rabbit  | 1200 mg/kg                     |                                  |
| * Estimates for product may be based on additional component data not shown. |   |                                |                                  |
| <b>Skin corrosion/irritation</b>   | Causes severe skin burns and eye damage.  |                                |                                  |
| <b>Serious eye damage/eye irritation</b>                                     | Causes serious eye damage.  |                                |                                  |
| <b>Respiratory or skin sensitization</b>                                     |   |                                |                                  |
| <b>Respiratory sensitization</b>   | May cause allergy or asthma symptoms or breathing difficulties if inhaled.  |                                |                                  |
| <b>Skin sensitization</b>  | This product is not expected to cause skin sensitization.   |                                |                                  |
| <b>Germ cell mutagenicity</b>  | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.  |                                |                                  |
| <b>Carcinogenicity</b>   | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.   |                                |                                  |
| <b>Reproductive toxicity</b>   | This product is not expected to cause reproductive or developmental effects.  |                                |                                  |
| <b>Specific target organ toxicity - single exposure</b>                      | Causes damage to organs (blood, respiratory system).  |                                |                                  |
| <b>Specific target organ toxicity - repeated exposure</b>                    | Not classified.   |                                |                                  |
| <b>Aspiration hazard</b>   | Not available.  |                                |                                  |
| <b>Chronic effects</b>   | Prolonged inhalation may be harmful.  |                                |                                  |
| <b>12. Ecological information</b>  |   |                                |                                  |
| <b>Ecotoxicity</b>   | Harmful to aquatic life with long lasting effects.  |                                |                                  |
| <b>Product</b>   | <b>Species</b>  | <b>Test Results</b>            |                                  |
| PERCHLORIC ACID SOLUTION, 0.1 N IN ACETIC ACID (CAS Mixture)                 |   |                                |                                  |
| <b>Aquatic</b>   |   |                                |                                  |
| Crustacea  | EC50  | Daphnia                        | 285.666 mg/l, 48 hours estimated |
| Fish   | LC50  | Fish                           | 125 mg/l, 96 hours estimated     |
| <b>Components</b>  | <b>Species</b>  | <b>Test Results</b>            |                                  |
| ACETIC ACID (CAS 64-19-7)  |   |                                |                                  |
| <b>Aquatic</b>   |   |                                |                                  |
| Crustacea  | EC50  | Water flea (Daphnia magna)     | 65 mg/l, 48 hours                |
| Fish   | LC50  | Bluegill (Lepomis macrochirus) | 75 mg/l, 96 hours                |
| * Estimates for product may be based on additional component data not shown. |   |                                |                                  |
| <b>Persistence and degradability</b>   | No data is available on the degradability of this product.  |                                |                                  |
| <b>Bioaccumulative potential</b>   | No data available.  |                                |                                  |
| <b>Partition coefficient n-octanol / water (log Kow)</b>                     |   |                                |                                  |
| ACETIC ACID  |   | -0.17                          |                                  |
| <b>Mobility in soil</b>  | No data available.  |                                |                                  |
| <b>Other adverse effects</b>   | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.   |                                |                                  |
| <b>13. Disposal considerations</b>   |   |                                |                                  |
| <b>Disposal instructions</b>   | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow the material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |                                |                                  |
| <b>Local disposal regulations</b>  | Dispose in accordance with all applicable regulations.  |                                |                                  |
| <b>Hazardous waste code</b>  | The waste code should be assigned in discussion between the user, the producer and the waste disposal company.  |                                |                                  |
| <b>Waste from residues / unused products</b>                                 | 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**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN2920  |
| <b>UN proper shipping name</b>      | Corrosive liquids, flammable, n.o.s. (ACETIC ACID RQ = 5071 lbs, PERCHLORIC ACID) |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 8   |
| <b>Subsidiary risk</b>              | 3   |
| <b>Label(s)</b>                     | 8, 3  |
| <b>Packing group</b>                | II  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling.           |
| <b>Special provisions</b>           | B2, IB2, T11, TP2, TP27   |
| <b>Packaging exceptions</b>         | None  |
| <b>Packaging non bulk</b>           | 202   |
| <b>Packaging bulk</b>               | 243   |

**IATA**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN2920  |
| <b>UN proper shipping name</b>      | Corrosive liquid, flammable, n.o.s. (ACETIC ACID, PERCHLORIC ACID)      |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 8   |
| <b>Subsidiary risk</b>              | 3   |
| <b>Packing group</b>                | II  |
| <b>Environmental hazards</b>        | No.   |
| <b>ERG Code</b>                     | 8F  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |
| <b>Other information</b>            |   |
| <b>Passenger and cargo aircraft</b> | Allowed.  |
| <b>Cargo aircraft only</b>          | Allowed.  |

**IMDG**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN2920  |
| <b>UN proper shipping name</b>      | CORROSIVE LIQUID, FLAMMABLE, N.O.S. (ACETIC ACID, PERCHLORIC ACID)      |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 8   |
| <b>Subsidiary risk</b>              | 3   |
| <b>Packing group</b>                | II  |
| <b>Environmental hazards</b>        |   |
| <b>Marine pollutant</b>             | No.   |
| <b>EmS</b>                          | F-E, S-C  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |

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

**DOT**



## 15. Regulatory information

### US 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.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

ACETIC ACID (CAS 64-19-7)

Listed.

#### SARA 304 Emergency release notification

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Hazard categories

Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - Yes

Pressure Hazard - No

Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312

No

#### Hazardous chemical

#### 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.

### US state regulations

#### US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

#### US. Massachusetts RTK - Substance List

ACETIC ACID (CAS 64-19-7)

PERCHLORIC ACID (CAS 7601-90-3)

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

ACETIC ACID (CAS 64-19-7)

PERCHLORIC ACID (CAS 7601-90-3)

#### US. Pennsylvania Worker and Community Right-to-Know Law

ACETIC ACID (CAS 64-19-7)

PERCHLORIC ACID (CAS 7601-90-3)

#### US. Rhode Island RTK

ACETIC ACID (CAS 64-19-7)

#### US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

### International Inventories

#### Country(s) or region

Australia

#### Inventory name

Australian Inventory of Chemical Substances (AICS)

#### On inventory (yes/no)\*

Yes

Material name: PERCHLORIC ACID SOLUTION, 0.1 N IN ACETIC ACID



| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Canada                      | Domestic Substances List (DSL)   | Yes                    |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | No                     |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| 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)      | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply 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

|                             |  |
|-----------------------------|--|
| <b>Issue date</b>           | May-27-2015  |
| <b>Version #</b>            | 01   |
| <b>Disclaimer</b>           | GFS Chemicals cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. |
| <b>Revision Information</b> | Product and Company Identification: Physical States<br>Composition / Information on Ingredients: Ingredients<br>Physical & Chemical Properties: Multiple Properties<br>Transport Information: Proper Shipping Name/Packing Group   |