## MATERIAL SAFETY DATA SHEET



Hydrochloric Acid 0.5 Normal Aqueous

| SECTION 1 . Product and Company le          | denficatio   | n   |   |  |   |
|---|--|---|---|--|---|
| Product Name and Synonym:                   | Hydrochl   | oric Acid 0.5 Normal  | Aqueous   |  |   |
| Product Code:                               | 4190   |   |   |  |   |
| Material Uses:<br>Manufacturer:             | -  | Solutions, Inc<br>Iwy 225   |   | F  | ealth: 2<br>lammability: 0<br>eactivity: 0  |
|   | Deer P   | ark, TX 77536   |   |  | ast Slight Moderate High Extreme  |
|   |  | 179-2569  |   | ľ  |   |
| Entry Date :                                | 12/1/20  |   |   | NA=  | Not Applicable NE=Not Established   |
| Print Date:                                 | 12/1/2014  |   |   |  |   |
| 24 Hour Emergency Assistance :              | Chemtre  | ec 800-424-9300<br>c 613-996-6666   |   |  |   |
| SECTION 2 HAZARD IDENTIFICATION             |  |   |   |  |   |
| SECTION 3 MIXTURE COMPONENTS                | eyes, s<br>closed.   |   |   |  | e ventilation. Avoid contact with<br>after handling. Keep container   |
| SARA 313 Component                          |  | CAS Number  | Percent<br>Comp.  | Dimensi  | Exposure<br>Limits  |
| ✓ Hydrochloric Acid                         |  | CAS# 7647-01-<br>0  | 4.3%  | V/V  | OSHA PEL (C)<br>5 ppm, (C) 7  |
| Viotor Deienized AS                         |  |   |   |  | mg/m <i>f</i>   |
| Water, Deionized AS <sup>-</sup><br>Type II | ТМ   | CAS# 7732-18-<br>5  | Balance   | V/V  | mg/m <i>j</i><br>None<br>Established  |
|   | тм   |   | Balance   | V/V  | None  |
| Type II                                     | May cau<br>or dust. I  | 5<br>se irritation and burns  | s. May be har   | rmful if sw  | None<br>Established<br>allowed. Avoid breathing vapor<br>t with eyes, skin, and clothes.  |
| Type II                                     | May cau<br>or dust. I<br>Wash the<br>FIRST A   | 5<br>se irritation and burns<br>Use with adequate ve<br>oroughly after handlin  | s. May be har<br>ntilation. Avc<br>ng. Keep cont<br>contaminated  | rmful if sw<br>bid contact<br>tainer clos  | None<br>Established<br>allowed. Avoid breathing vapor<br>t with eyes, skin, and clothes.<br>sed.<br>Wash exposed area with soap   |
| Type II                                     | May cau<br>or dust. I<br>Wash the<br>FIRST A<br>and wate<br>EYES: W<br>occasion  | 5<br>se irritation and burns<br>Use with adequate ve<br>oroughly after handlin<br>ID: SKIN: Remove c<br>er. if irritation persists,<br>Vash eyes with plenty  | s. May be har<br>intilation. Avc<br>ing. Keep cont<br>contaminated<br>, seek medica<br>r of water for<br>d. INHALATI                                  | rmful if sw<br>bid contact<br>tainer clos<br>I clothing.<br>al attentio<br>at least 15<br>ON: Rem                            | None<br>Established<br>allowed. Avoid breathing vapor<br>t with eyes, skin, and clothes.<br>ted.<br>Wash exposed area with soap<br>n.<br>5 minutes, lifting lids<br>ove to fresh air. If not breathing,                                 |
| Type II                                     | May cau<br>or dust. I<br>Wash the<br>FIRST A<br>and wate<br>EYES: W<br>occasion<br>give artif<br>INGEST<br>spontane            | 5<br>se irritation and burns<br>Use with adequate ve<br>oroughly after handlin<br>ID: SKIN: Remove of<br>er. if irritation persists,<br>Vash eyes with plenty<br>hally. Seek Medical Ai<br>icial respiration. If bre<br>ION: Give several gla                         | s. May be har<br>ntilation. Ave<br>og. Keep conf<br>contaminated<br>, seek medica<br>of water for<br>d. INHALATI<br>eathing is diffi<br>usses of milk | rmful if sw<br>pid contact<br>tainer clos<br>d clothing.<br>al attentio<br>at least 1<br>ON: Rem<br>icult, give<br>or water. | None<br>Established<br>allowed. Avoid breathing vapor<br>t with eyes, skin, and clothes.<br>sed.<br>Wash exposed area with soap<br>n.<br>5 minutes, lifting lids<br>ove to fresh air. If not breathing,<br>oxygen                       |
| Type II                                     | May cau<br>or dust. I<br>Wash the<br>FIRST A<br>and wate<br>EYES: V<br>occasion<br>give artif<br>INGEST<br>spontane<br>unconsc | 5<br>se irritation and burns<br>Use with adequate ve<br>oroughly after handlin<br>ID: SKIN: Remove of<br>er. if irritation persists,<br>Vash eyes with plenty<br>hally. Seek Medical Ai<br>icial respiration. If bre<br>ION: Give several gla<br>eously, but DO NOT I | s. May be har<br>ntilation. Ave<br>og. Keep conf<br>contaminated<br>, seek medica<br>of water for<br>d. INHALATI<br>eathing is diffi<br>usses of milk | rmful if sw<br>pid contact<br>tainer clos<br>d clothing.<br>al attentio<br>at least 1<br>ON: Rem<br>icult, give<br>or water. | None<br>Established<br>allowed. Avoid breathing vapor<br>t with eyes, skin, and clothes.<br>sed.<br>Wash exposed area with soap<br>n.<br>5 minutes, lifting lids<br>ove to fresh air. If not breathing,<br>oxygen<br>Vomiting may occur |

| Hydrochl                             | oric Acid 0.5 Norma                   | al Aqueous   |                           |  |
|--------------------------------------|---------------------------------------|--|---------------------------|--|
| Fire / Explosion Hazards:            | None                                  |  |                           |  |
| Fire Fighting Procedure:             |                                       | d breathing apparatus and protec with skin and clothing.     | tive clothing             |  |
| SECTION 6 ACCIDENTAL RELEAS          | E MEASURES                            |  |                           |  |
|                                      |                                       | ert material, then place in a chemi<br>e with a weak base.   | cal waste                 |  |
| SECTION 7 HANDLING AND STOR          | AGE                                   |  |                           |  |
|                                      |                                       | blace. Do not get in eyes, on skin,<br>oughly after handling | on                        |  |
| SECTION 8 EXPOSURE CONTROL           | S/PERSONAL PROTECTI                   | ON   |                           |  |
| Respiratory Protection:              | None required                         |  |                           |  |
| Ventilation                          | Local Exhaust 🗸                       |  |                           |  |
|                                      | Mechanical                            |  |                           |  |
| Protective Gloves:                   |                                       | gloves to prevent skin exposure                              |                           |  |
| Eye Protection:                      | Splash Goggles                        |  |                           |  |
| Other Protective Equipment:          | Wear appropriate of skin exposure     | clothing to prevent  |                           |  |
| SECTION 9 PHYSICAL AND CHEM          | CAL PROPERTIES                        |  |                           |  |
| Melting Point:                       | ~0°C                                  | Percent Volatile by Volume:                                  | >99                       |  |
| Boiling Point:                       | ~100°C                                | Evaporation Rate   | Information not available |  |
| Vapor Pressure:                      | Information not available             | Evaporation Standard   |                           |  |
| Vapor Density:                       | Information not available             | Auto Ignition Temp   | Not applicable            |  |
| Solubility in Water:                 | Soluble                               | Lower Flamm. Limit in Air                                    | Not applicable            |  |
| Appearance /Odors:                   | Clear,<br>colorless<br>liquid/no odor | Upper Flamm. Limit in Air                                    | Not applicable            |  |
| Flash Point:                         | Information<br>not available          |  |                           |  |
| Specific Gravity:                    | ~ 1                                   |  |                           |  |
| SECTION 10 STABILITY AND READ        | CTIVITY INFORMATION                   |  |                           |  |
| Stability:                           | Stable                                |  |                           |  |
| Conditions to Avoid:                 | Avoid Light                           |  |                           |  |
| Materials to Avoid:                  | Halides, ammonia,                     | phosphates, bases  |                           |  |
| Hazardous Decomposition<br>Products: | HCI Fumes, Chlori                     | ne   |                           |  |
| Hazardous polymerization:            | Will Not Occur                        |  |                           |  |

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Conditions to Avoid: None known

| SECTION 11 | Toxicological Information |  |
|------------|---------------------------|--|
| SECTION 12 | Ecological Information    |  |
| SECTION 13 | Disposal Considerations   |  |
| SECTION 14 | Transport Information     |  |

DOT Classification: UN1789, Hydrochloric Acid Solution, 8, PG III

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

| CTION 15   | Regulatory  | Information  |  |
|------------|---|--------------|--|
| SECTION 16 | Additional I  | nformation   |  |
|            | Overexposure symtoms: Corrosive effects.: Acute-Irritation possin, eyes, lungs, mucous membranes, and GI tract. Chronic-<br>known. Conditions aggravated/Target organs: Persons with pr<br>skin, eye, or respiratory disorders may be more susceptible. |              |  |
|            |   | Flammability |  |
|            |   |              |  |
|            |   |              |  |
|            | Health  | Reactivity   |  |
|            |   |              |  |
| Revisions  |   | NFPA         |  |
|            |   | 0.2          |  |
|            |   |              |  |

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