

Five Star Chemicals & Supply, Inc. Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 09/21/2015

| SECTION 1: Identification of the substance/mixture and of the company/undertaking         1.1.       Product identifier         Product form       :       Substance         Substance name       :       Lactic Acid - 88%         Chemical name       :       Lactic Acid |  |
|---|--|
| Product form     : Substance       Substance name     : Lactic Acid - 88%   |  |
| Substance name : Lactic Acid - 88%  |  |
|   |  |
|   |  |
|   |  |
|   |  |
| 1.2. Relevant identified uses of the substance or mixture and uses advised against  |  |
| Use of the substance/mixture : pH Nuetralization  |  |
| 1.3. Details of the supplier of the safety data sheet   |  |
| Five Star Chemicals & Supply Inc<br>4915 E 52nd Ave   |  |
| Commerce City, CO 80022   |  |
| (303) 287-0186  |  |
| 1.4. Emergency telephone number   |  |
| Emergency number : 800-535-5053   |  |
| INFOTRAC  |  |
| SECTION 2: Hazards identification   |  |
| 2.1. Classification of the substance or mixture   |  |
| Classification (GHS-US)   |  |
| Skin Irrit. 2 H315  |  |
| Full text of H-phrases: see section 16  |  |
|   |  |
| 2.2. Label elements   |  |
| GHS-US labeling   |  |
| Hazard pictograms (GHS-US) :  |  |
| GHS07   |  |
| Signal word (GHS-US) : Warning  |  |
| Hazard statements (GHS-US) : H315 - Causes skin irritation  |  |
| Precautionary statements (GHS-US) : P264 - Wash hands, forearms and face thoroughly after handling  |  |
| P280 - Wear protective gloves, eye protection   |  |
| P302+P352 - If on skin: Wash with plenty of water<br>P321 - Specific treatment (see first aid on this label)  |  |
| P332+P313 - If skin irritation occurs: Get medical advice/attention   |  |
| P362 - Take off contaminated clothing and wash before reuse   |  |
| 2.3. Other hazards  |  |
| No additional information available   |  |
| 2.4. Unknown acute toxicity (GHS-US)  |  |
| Not applicable  |  |
| SECTION 3: Composition/information on ingredients   |  |
| 3.1. Substance  |  |
| Name : Lactic Acid - 88%  |  |
| CAS No : 50-21-5  |  |
| Full text of H-phrases: see section 16  |  |
| 3.2. Mixture  |  |
| Not applicable  |  |
|   |  |

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| 4.1.   | Description of first aid measures   |  |
|--|---|--|
|  |   | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical  |
|  | C C   | advice (show the label where possible).  |
| First-aid ı  | measures after inhalation   | : Allow victim to breathe fresh air. Allow the victim to rest.   |
| First-aid ı  | measures after skin contact   | : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.  |
| First-aid ı  | measures after eye contact  | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.   |
| First-aid ı  | measures after ingestion  | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.   |
| 4.2.   | Most important symptoms and effect  | s, both acute and delayed  |
| Symptom  | s/injuries after skin contact   | : Causes skin irritation.  |
| 4.3.   | Indication of any immediate medical   | attention and special treatment needed   |
| No additi  | onal information available  |  |
| SECTIO   | ON 5: Firefighting measures   |  |
| 5.1.   | Extinguishing media   |  |
| Suitable e   | extinguishing media   | : Foam. Dry powder. Carbon dioxide. Water spray. Sand.   |
| Unsuitabl  | e extinguishing media   | : Do not use a heavy water stream.   |
| 5.2.   | Special hazards arising from the sub  | stance or mixture  |
| No additi  | onal information available  |  |
| 5.3.   | Advice for firefighters   |  |
| Firefightir  | ng instructions   | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any  |
| Drotostio  | a during firstighting   | chemical fire. Prevent fire-fighting water from entering environment.  |
| Protection   | n during firefighting   | : Do not enter fire area without proper protective equipment, including respiratory protection.  |
| SECTIO   | ON 6: Accidental release meas   | ures   |
| 6.1.   | Personal precautions, protective equ  | ipment and emergency procedures  |
| 6.1.1.   | For non-emergency personnel   |  |
|  | i or non-emergency personner  |  |
|  |   | : Evacuate unnecessary personnel.  |
|  |   | : Evacuate unnecessary personnel.  |
| Emergen<br>6.1.2.  | cy procedures   | <ul> <li>Evacuate unnecessary personnel.</li> <li>Equip cleanup crew with proper protection.</li> </ul>  |
| Emergen<br>6.1.2.<br>Protective  | cy procedures For emergency responders  |  |
| Emergen<br>6.1.2.<br>Protective  | cy procedures For emergency responders e equipment  | : Equip cleanup crew with proper protection.   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.   | cy procedures For emergency responders e equipment cy procedures Environmental precautions  | : Equip cleanup crew with proper protection.   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.   | cy procedures For emergency responders e equipment cy procedures Environmental precautions  | : Equip cleanup crew with proper protection.<br>: Ventilate area.<br>authorities if liquid enters sewers or public waters.   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.  | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containment   | : Equip cleanup crew with proper protection.<br>: Ventilate area.<br>authorities if liquid enters sewers or public waters.   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.  | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containment   | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>t and cleaning up</li> <li>Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect</li> </ul>   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.   | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containment for cleaning up   | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>authori</li></ul> |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head   | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containmen for cleaning up Reference to other sections ding 8. Exposure controls and personal p   | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>authori</li></ul> |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head   | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containmen for cleaning up Reference to other sections  | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>authori</li></ul> |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head<br>SECTIO<br>7.1.   | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containmer for cleaning up Reference to other sections ding 8. Exposure controls and personal p DN 7: Handling and storage  | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>authori</li></ul> |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head<br>SECTIO<br>7.1.<br>Precautio  | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containment for cleaning up Reference to other sections ding 8. Exposure controls and personal p DN 7: Handling and storage Precautions for safe handling   | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>t and cleaning up</li> <li>Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.</li> <li>rotection.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation</li> </ul>   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head<br>SECTIO<br>7.1.<br>Precautio  | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containmer for cleaning up Reference to other sections ding 8. Exposure controls and personal p DN 7: Handling and storage Precautions for safe handling ons for safe handling  | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>t and cleaning up</li> <li>Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.</li> <li>rotection.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.</li> <li>Wash hands and forearms thoroughly after handling.</li> </ul>   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head<br><b>SECTIO</b><br>7.1.<br>Precautio                                   | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containmer for cleaning up Reference to other sections ding 8. Exposure controls and personal p DN 7: Handling and storage Precautions for safe handling uns for safe handling measures Conditions for safe storage, including                | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>and cleaning up</li> <li>Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.</li> <li>rotection.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.</li> <li>Wash hands and forearms thoroughly after handling.</li> <li>any incompatibilities</li> <li>Keep only in the original container in a cool, well ventilated place away from: Chlorine. Keep</li> </ul>   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head<br><b>SECTIO</b><br>7.1.<br>Precautio<br>Hygiene f                      | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containmer for cleaning up Reference to other sections ding 8. Exposure controls and personal p DN 7: Handling and storage Precautions for safe handling ons for safe handling measures Conditions for safe storage, including conditions     | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>t and cleaning up</li> <li>Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.</li> <li>rotection.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.</li> <li>Wash hands and forearms thoroughly after handling.</li> <li>any incompatibilities</li> <li>Keep only in the original container in a cool, well ventilated place away from: Chlorine. Keep container closed when not in use.</li> </ul>  |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head<br><b>SECTIO</b><br>7.1.<br>Precautio<br>Hygiene I<br>7.2.<br>Storage o | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containmer for cleaning up Reference to other sections ding 8. Exposure controls and personal p DN 7: Handling and storage Precautions for safe handling uns for safe handling measures Conditions for safe storage, including                | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>and cleaning up</li> <li>Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.</li> <li>rotection.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.</li> <li>Wash hands and forearms thoroughly after handling.</li> <li>any incompatibilities</li> <li>Keep only in the original container in a cool, well ventilated place away from: Chlorine. Keep</li> </ul>   |
| Emergen<br>6.1.2.<br>Protective<br>Emergen<br>6.2.<br>Prevent e<br>6.3.<br>Methods<br>6.4.<br>See Head<br><b>SECTIO</b><br>7.1.<br>Precautio<br>Hygiene I<br>7.2.<br>Storage o | cy procedures For emergency responders e equipment cy procedures Environmental precautions entry to sewers and public waters. Notify Methods and material for containment for cleaning up Reference to other sections ding 8. Exposure controls and personal p DN 7: Handling and storage Precautions for safe handling ons for safe handling measures Conditions for safe storage, including ible products | <ul> <li>Equip cleanup crew with proper protection.</li> <li>Ventilate area.</li> <li>authorities if liquid enters sewers or public waters.</li> <li>t and cleaning up <ul> <li>Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.</li> </ul> </li> <li>rotection.</li> <li>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.</li> <li>Wash hands and forearms thoroughly after handling.</li> <li>any incompatibilities</li> <li>Keep only in the original container in a cool, well ventilated place away from: Chlorine. Keep container closed when not in use.</li> <li>Strong bases. Strong acids.</li> </ul>   |

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| SECTION 8: Exposure controls/personal protection |                |  |  |
|--|----------------|--|--|
| 8.1. Control parameters                          |                |  |  |
| Lactic Acid - 88% (50-21-5)                      |                |  |  |
| ACGIH  | Not applicable |  |  |
| OSHA   | Not applicable |  |  |

| 8.2. Exposure controls        |  |
|-------------------------------|--|
| Personal protective equipment | : Avoid all unnecessary exposure.        |
|                               |  |
| Hand protection               | : Wear protective gloves.                |
| Eye protection                | : Chemical goggles or safety glasses.    |
| Skin and body protection      | : Wear suitable protective clothing.     |
| Respiratory protection        | : Wear appropriate mask.                 |
| Other information             | : Do not eat, drink or smoke during use. |

### SECTION 9: Physical and chemical properties

| 9.1. Information on basic physical and      | chemical properties                 |
|---|-------------------------------------|
| Physical state                              | : Liquid                            |
| Color                                       | : Colourless to light yellow        |
| Odor  | : Characteristic odour              |
| Odor threshold                              | : No data available                 |
| рН  | : 1-2                               |
| Relative evaporation rate (butyl acetate=1) | : No data available                 |
| Melting point                               | : -80 °C                            |
| Freezing point                              | : No data available                 |
| Boiling point                               | : 125 °C                            |
| Flash point                                 | : 113 °C                            |
| Auto-ignition temperature                   | : 400 °C                            |
| Decomposition temperature                   | : No data available                 |
| Flammability (solid, gas)                   | : No data available                 |
| Vapor pressure                              | : No data available                 |
| Relative vapor density at 20 °C             | : No data available                 |
| Relative density                            | : No data available                 |
| Specific gravity / density                  | : 1.19                              |
| Solubility                                  | : Soluble in water.<br>Water: 100 % |
| Log Pow                                     | : No data available                 |
| Log Kow                                     | : No data available                 |
| Viscosity, kinematic                        | : No data available                 |
| Viscosity, dynamic                          | : No data available                 |
| Explosive properties                        | : No data available                 |
| Oxidizing properties                        | : No data available                 |
| Explosive limits                            | : No data available                 |

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Not established.

| 10.3. Possibility of hazardous reactions               |   |  |
|--|---|--|
| Not established.                                       |   |  |
| 10.4. Conditions to avoid                              |   |  |
| Direct sunlight. Extremely high or low temperatu       | ires.   |  |
| 10.5. Incompatible materials                           |   |  |
| Strong acids. Strong bases.                            |   |  |
| 10.6. Hazardous decomposition products                 | \$  |  |
| fume. Carbon monoxide. Carbon dioxide.                 |   |  |
| SECTION 11: Toxicological information                  | tion  |  |
| 11.1. Information on toxicological effects             | 3   |  |
| Acute toxicity   | : Not classified  |  |
| Skin corrosion/irritation                              | : Causes skin irritation.   |  |
| Serious eye damage/irritation                          | pH: 1 - 2<br>: Not classified<br>pH: 1 - 2                          |  |
| Respiratory or skin sensitization                      | : Not classified  |  |
| Germ cell mutagenicity                                 | : Not classified  |  |
| Carcinogenicity  | : Not classified  |  |
| Reproductive toxicity                                  | : Not classified  |  |
| Specific target organ toxicity (single exposure)       | : Not classified  |  |
| Specific target organ toxicity (repeated exposure)     | : Not classified  |  |
| Aspiration hazard                                      | : Not classified  |  |
| Potential Adverse human health effects and<br>symptoms | : Based on available data, the classification criteria are not met. |  |
| Symptoms/injuries after skin contact                   | : Causes skin irritation.   |  |
| SECTION 12: Ecological information                     | 1   |  |
| 12.1. Toxicity   |   |  |
| No additional information available                    |   |  |
| 12.2. Persistence and degradability                    |   |  |
| Lactic Acid - 88% (50-21-5)                            |   |  |
| Persistence and degradability                          | Not established.  |  |
| 12.3. Bioaccumulative potential                        |   |  |
| Lactic Acid - 88% (50-21-5)                            |   |  |
| Bioaccumulative potential                              | Not established.  |  |

Mobility in soil No additional information available

| 12.5.      | Other adverse effects                |   |  |
|------------|--------------------------------------|---|--|
| Effect on  | ozone layer                          | : |  |
| Effect on  | the global warming                   | : | No known ecological damage caused by this product. |
| Other info | ormation                             | : | Avoid release to the environment.                  |
| SECTI      | SECTION 42: Dispessed considerations |   |  |

| SECTION 13: Disposal considerations |   |  |  |
|-------------------------------------|---|--|--|
| 13.1. Waste treatment methods       |   |  |  |
| Waste disposal recommendations      | : Dispose in a safe manner in accordance with local/national regulations. |  |  |
| Ecology - waste materials           | : Avoid release to the environment.                                       |  |  |

12.4.

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#### **SECTION 14: Transport information**

#### In accordance with DOT

Not regulated for transport

Additional information

Other information

: No supplementary information available.

#### ADR

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

#### **SECTION 15: Regulatory information**

15.1. US Federal regulations

#### Lactic Acid - 88% (50-21-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

#### 15.2. International regulations

CANADA

No additional information available

#### **EU-Regulations**

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP] Not classified

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

#### 15.2.2. National regulations

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

# SECTION 16: Other information Other information : None.

Full text of H-phrases:

| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
|---------------|--------------------------------------|
| H315          | Causes skin irritation               |

#### SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product