

## Safety Data Sheet: Lactic Acid 80%

### 1. Identification

|                   |                                                                                                                                                                                                                                                                                  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product           | Lactic Acid 80%; CAS 50-21-5; EC 200-018-0                                                                                                                                                                                                                                       |
| Use               | Industrial organic-acid formulation, acidification and descaling.                                                                                                                                                                                                                |
| Company           | Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)                                                                                                                                                                                                                                      |
| Address           | Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China                                                                                                                                                                                    |
| Telephone / email | +86-21-54265599 / sales@zxchem.com.cn                                                                                                                                                                                                                                            |
| Emergency contact | ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.                                                                                                                                                    |
| Scope             | Reference safety information for Lactic Acid 80%. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation. |

### 2. Hazards Identification

|                       |                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classification        | Skin corrosion Category 1C; serious eye damage Category 1.                                                                                                                                              |
| Signal word / symbols | Danger; GHS05                                                                                                                                                                                           |
| Hazard statements     | H314: severe skin burns and eye damage. H318: serious eye damage.                                                                                                                                       |
| Prevention            | Use adequate ventilation; avoid inhaling mist. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area. |
| Response              | After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.                |
| Environment           | Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.                                                                                                 |



### 3. Composition / Information on Ingredients

|                      |                                                                                                                                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reference ingredient | Reference material: lactic acid, CAS 50-21-5, 80–90%, with water 10–20%. Supplied grade ≥80% acid and L-isomer ≥98% of total acid. The DL reference is not used to define supplied optical composition.         |
| Supply grade         | Lactic acid ≥80%; L-isomer ≥98% of acid                                                                                                                                                                         |
| Applicability        | The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document. |

#### 4. First-Aid Measures

|                   |                                                                                                                                                                                                  |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General</b>    | Protect rescuers and obtain immediate medical assistance after significant exposure. Show the product information to medical personnel.                                                          |
| <b>Inhalation</b> | Move to fresh air without exposing rescuers. Obtain urgent medical care for respiratory symptoms. Assisted ventilation should be provided by trained personnel using suitable medical equipment. |
| <b>Skin</b>       | Immediately remove contaminated clothing while flushing with plenty of water for at least 15 minutes. Obtain urgent treatment for chemical burns.                                                |
| <b>Eyes</b>       | Immediately rinse gently with water, including under the eyelids, for at least 15 minutes. Remove contact lenses when easy, continue rinsing and obtain urgent medical treatment.                |
| <b>Ingestion</b>  | Rinse the mouth, do not induce vomiting and call emergency medical services. Give nothing by mouth to an unconscious person. Corrosive injury and gastrointestinal perforation are concerns.     |
| <b>Treatment</b>  | Treatment is directed by medical personnel. Do not perform gastric lavage or induce vomiting without clinical direction.                                                                         |

#### 5. Fire-Fighting Measures

|                            |                                                                                                                                                    |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Extinguishing media</b> | Use water spray, foam, dry chemical or carbon dioxide suited to the surrounding fire.                                                              |
| <b>Hazards</b>             | Thermal decomposition and fire can produce carbon oxides and irritating fumes.                                                                     |
| <b>Protection</b>          | Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains. |

#### 6. Accidental Release Measures

|                    |                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personnel</b>   | Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and mist exposure.             |
| <b>Environment</b> | Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority.        |
| <b>Cleanup</b>     | Stop the leak if safe. Absorb liquid with a compatible inert material and collect in closed labelled containers. Do not wash into drains. |

#### 7. Handling and Storage

|                          |                                                                                                                                                                                                                                                              |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b>          | Use acid-compatible closed transfer and local ventilation. Wear chemical-resistant gloves, splash goggles, a face shield for splash-prone work and protective clothing. Avoid skin, eye and mist exposure; provide eyewash and emergency washing facilities. |
| <b>Storage</b>           | Store tightly closed in a cool, ventilated area in acid-compatible packaging. Protect from contamination and excessive heat. Keep separate from strong bases, oxidizers and reducing agents.                                                                 |
| <b>Incompatibilities</b> | Strong bases, strong oxidizing agents and strong reducing agents.                                                                                                                                                                                            |
| <b>Specific use</b>      | Determine acidity, compatibility and appropriate process controls before industrial use.                                                                                                                                                                     |

## 8. Exposure Controls / Personal Protection

|                               |                                                                                                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure limits</b>        | The selected reference does not establish a product-specific occupational limit. Control corrosive acid mist and comply with local requirements.   |
| <b>Engineering controls</b>   | Use local extraction where mist can be generated. Maintain accessible eyewash and emergency washing facilities.                                    |
| <b>Personal protection</b>    | Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks. |
| <b>Respiratory protection</b> | Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.    |
| <b>Hygiene</b>                | Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.                                        |

## 9. Physical and Chemical Properties

|                                                  |                                                                                                                                                     |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Appearance</b>                                | Clear, colorless to pale yellow viscous liquid                                                                                                      |
| <b>Formula / molecular weight</b>                | C3H6O3 / 90.08 g/mol (active component)                                                                                                             |
| <b>Physical form</b>                             | Viscous liquid                                                                                                                                      |
| <b>Relative density, reference</b>               | Approximately 1.2                                                                                                                                   |
| <b>Water response</b>                            | Miscible aqueous acid                                                                                                                               |
| <b>Boiling point, reduced pressure reference</b> | 122°C at 15 mmHg                                                                                                                                    |
| <b>Other properties</b>                          | Reported properties are manufacturer-reference values, not purchasing acceptance limits. Properties of a formulated or diluted material may differ. |

## 10. Stability and Reactivity

|                          |                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------|
| <b>Stability</b>         | Handle and store under the recommended conditions. Prevent contamination and unnecessary heating. |
| <b>Incompatibilities</b> | Strong bases, strong oxidizing agents and strong reducing agents.                                 |
| <b>Decomposition</b>     | Thermal decomposition and fire can produce carbon oxides and irritating fumes.                    |

## 11. Toxicological Information

|                                 |                                                                                                                                                                                                               |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure effects</b>         | Corrosive to skin and eyes. Mist may damage the respiratory tract. Ingestion may cause severe gastrointestinal injury.                                                                                        |
| <b>Reference classification</b> | Skin corrosion Category 1C; serious eye damage Category 1.                                                                                                                                                    |
| <b>Toxicological data</b>       | lactic-acid component reference: oral rat LD50 3,543 mg/kg; dermal rabbit LD50 >2,000 mg/kg. Corrosive injury is the principal exposure concern; numerical reference values do not establish a safe exposure. |

## 12. Ecological Information

|                              |                                                                                                                                                          |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental effects</b> | Acid release can lower water pH and harm aquatic systems. Prevent discharge to waterways and drains; collect spilled liquid and manage effluent acidity. |
| <b>Controls</b>              | Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.                                           |
| <b>Assessment</b>            | No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.                                 |

**13. Disposal Considerations**

|                  |                                                                                                                                                          |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product</b>   | Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements. |
| <b>Packaging</b> | Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.      |

**14. Transport Information**

|                              |                                                                                                                                                         |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>        | Class 8 — Corrosive                                                                                                                                     |
| <b>UN number</b>             | UN 3265                                                                                                                                                 |
| <b>Shipping name</b>         | Corrosive liquid, acidic, organic, n.o.s. (Lactic acid)                                                                                                 |
| <b>Class / packing group</b> | DOT, ADR/RID, IMDG and IATA: Class 8, packing group III.                                                                                                |
| <b>Transport precautions</b> | Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment. |

**15. Regulatory Information**

|                     |                                                                                                                                          |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Identity</b>     | Lactic Acid 80%; CAS 50-21-5; EC 200-018-0                                                                                               |
| <b>HS reference</b> | 291811; reference heading rather than a destination customs ruling.                                                                      |
| <b>Compliance</b>   | Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish finished-product authorization. |
| <b>Assessment</b>   | No ZXCHEM-specific chemical safety assessment or destination registration is asserted.                                                   |

**16. Other Information**

|                        |                                                                                                                                                                                                                                  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hazard meanings</b> | H314: severe skin burns and eye damage. H318: serious eye damage.                                                                                                                                                                |
| <b>Limitations</b>     | Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.                                               |
| <b>Revision</b>        | 2026.2; prepared 2026-10-06. Customer-document branding and title corrected; technical safety data retained.                                                                                                                     |
| <b>Document scope</b>  | Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate. |

Revision: 2026.2 | Revision date: 2026-10-06