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Chemical Production Co.Ltd

Technical Data Sheet (TDS) – Food Grade Lactic Acid

1. Product Identification

Product Name: Food Grade Lactic Acid
Chemical Name: 2-Hydroxypropanoic Acid
Chemical Formula: $C_3H_6O_3$
CAS Number: 50-21-5
Food Additive Number: E270
Molecular Weight: 90.08 g/mol
Common Concentrations: 80% and 88%
Grade: Food Grade

2. Product Description

Food Grade Lactic Acid is a clear, colorless to pale yellow liquid widely used as an acidity regulator, acidulant, pH-control agent, and flavor-adjusting ingredient in food and beverage manufacturing.

It is completely miscible with water and integrates easily into liquid and semi-liquid food formulations. Common applications include beverages, confectionery, dairy products, bakery products, sauces, dressings, pickled vegetables, fermented foods, and selected meat-processing applications.

3. Typical Technical Specifications

Parameter	Typical Specification
Appearance	Clear, colorless to pale yellow liquid
Lactic Acid Assay	80% or 88%, depending on grade
Chemical Formula	$C_3H_6O_3$
CAS Number	50-21-5
Food Additive Code	E270
Molecular Weight	90.08 g/mol
Solubility in Water	Completely miscible
Odor	Mild to nearly odorless
Color	Low / within food-grade specification
Chloride	Within specified limit
Sulfate	Within specified limit

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Parameter	Typical Specification
Iron	Within specified limit
Heavy Metals	Within food-grade specification
Residue on Ignition	Within specified limit
Optical Purity	According to product specification

Exact specifications may vary depending on concentration, manufacturer, and production batch.

4. Typical Properties

Property	Typical Value / Description
Physical State	Liquid
Appearance	Clear liquid
Lactic Acid Content	80% / 88%
Water Solubility	Complete
Acidity	Strongly acidic
Density	Depends on concentration
Odor	Slight / characteristic
Stability	Stable under recommended storage conditions

5. Main Applications

Food Grade Lactic Acid is suitable for use in:

- Beverages and soft drinks
- Confectionery
- Dairy products
- Fermented foods
- Bakery products
- Sauces and dressings
- Pickled vegetables
- Processed foods
- Seasonings
- Meat and poultry processing
- pH adjustment systems
- Food acidification processes

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6. Functional Benefits

Food manufacturers use Food Grade Lactic Acid for several technical purposes, including:

- Acidity regulation
- pH adjustment
- Flavor enhancement
- Controlled sourness
- Processing consistency
- Improved formulation balance
- Support for product stability
- Excellent water solubility
- Easy dosing in liquid formulations

7. Lactic Acid 80% and 88%

Feature	80% Grade	88% Grade
Lactic Acid Content	Approx. 80%	Approx. 88%
Water Content	Higher	Lower
Physical Form	Liquid	Liquid
Water Solubility	Complete	Complete
Food Applications	Suitable	Suitable
Active Acid per kg	Lower	Higher
Typical Use	Food and beverage processing	Food and beverage processing

The correct concentration should be selected according to formulation requirements and dosing calculations.

8. Packaging

Typical commercial packaging options may include:

- HDPE plastic drums
- IBC tanks
- Palletized drums
- Bulk supply for large-volume orders

Packaging options can vary according to order quantity and destination.

9. Storage Conditions

- Store in a cool and dry place.
- Keep containers tightly closed.
- Protect from excessive heat.
- Avoid contamination.
- Keep away from strong alkalis and incompatible materials.
- Use suitable corrosion-resistant handling equipment.
- Follow proper food-industry storage practices.

10. Shelf Life

Shelf life depends on packaging, concentration, manufacturer, and storage conditions.

For best results, store the product in its original sealed packaging under recommended conditions and confirm the manufacturer-specific shelf life before use.

11. Quality Documentation

Commercial buyers may request:

- Technical Data Sheet
- Safety Data Sheet
- Certificate of Analysis
- Product Specification
- Country of Origin documentation
- Food-grade compliance documents where applicable

Batch-specific values should always be confirmed through the Certificate of Analysis.

12. Supplier Information

Basekim supplies **Food Grade Lactic Acid** for food and beverage manufacturers, ingredient distributors, and international commercial buyers.

Available concentrations, packaging options, documentation, and commercial terms may vary according to destination and order quantity.

For quotation requests, buyers should specify:

- Required concentration

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- Required quantity
- Packaging preference
- Destination port
- Required certificates
- Delivery terms

Important: This TDS provides general technical information. Final specifications should always be confirmed through the supplier's current product specification and batch-specific COA.

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