

1. Identification of the substance or mixture and of the supplier

GHS product identifier

Product Name	Tranexamic Acid
INCI Name	TRANEXAMIC ACID
Recommended Use of the Substance/Mixture	Spot-removing & brightenning agent, skin conditioning agent

2. Hazard statements

Classification of the substance or mixture

Skin corrosion / irritation Category 2

Serious eye damage / eye irritation Category 2

Specific target organ toxicity single exposure
Category 3

GHS label elements, including precautionary
statements

Hazard Pictogram:

Signal Word: Warning



Hazard statements

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

Precautionary Statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

3. Composition/Information on Ingredients

INCI Name	Chemical Name	CAS Number	EC Number	Purity
TRANEXAMIC ACID	trans- 4- (Aminomethyl) cyclohexanecarboxylic acid	1197- 18- 8	214- 818- 2	≥99%

4. First-Aid Measures

Description of Necessary First-Aid Measures

- **Inhalation** Remove victim to fresh air. Maintain unobstructed airway. Administer oxygen if breathing is difficult. Seek immediate medical attention.
- **Skin Contact** Remove contaminated clothing. Rinse skin thoroughly with soap and water. Seek medical advice if discomfort occurs.
- **Eye Contact** Hold eyelids apart and flush continuously with running water or normal saline. Seek immediate medical attention.
- **Ingestion** Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

Acute/Chronic Effects

- **Skin contact** May trigger skin irritation accompanied by erythema and pruritus.
- **Eye Contact** May induce ocular irritation, redness and soreness.
- **Treatment Guidance** Administer targeted interventions according to exposure route and symptoms, including skin cleansing, eye irrigation and symptomatic management.

5. Fire-Fighting Measures

- Suitable Extinguishing Media** Water fog, dry chemical powder, foam or carbon dioxide fire extinguishing agent.
- Unsuitable Extinguishing Media** Avoid direct water jet; it may splash combustible liquids and spread fire.
- Special Fire-Fighting Procedures** Firefighters shall wear self-contained breathing apparatus (SCBA) and full protective turnout gear, and conduct fire suppression from upwind position.

Special Fire / Explosion Hazards	Dust may form explosive mixtures with air.
Hazardous Thermal Decomposition Products	Combustion may generate carbon monoxide and carbon dioxide.
Protective Equipment for Firefighters	Wear self-contained breathing apparatus (SCBA) and antistatic firefighting uniform; prevent dust dispersion. Thoroughly decontaminate all protective equipment after fire suppression.

6. Accidental Release Measures

Personal Precautions and Protective Equipment	Wear N95 or higher- grade dust respirator, rubber gloves and chemical safety goggles. Avoid dust generation.
Environmental Precautions	Contain spilled material to avoid environmental contamination. Prevent spilled material from entering sewers, surface water, and groundwater.
Methods and Materials for Containment and Cleaning Up	Minor spillage: Collect material with clean shovel into dry, clean, covered containers. Remove residual material with vacuum cleaner or damp cloth. Major spillage: Cover spillage with plastic sheet or tarpaulin to prevent dust scattering. Collect with explosion-proof tools for recovery or transport to waste -disposal facilities.

7. Handling and Storage

Handling Precautions	Carry out operations in well - ventilated areas. Avoid vapour generation and inhalation. Prevent contact with incompatible substances such as oxidants. Wash hands thoroughly after operation.
Storage Requirements	Store in well - ventilated areas with tightly sealed containers. Keep in cool, dry locations.
Stacking of Fiber Drums	Do not stack drums excessively high to avoid collapse; maintain adequate ventilation around stacks.
Suitable Packaging Materials	Polyethylene or polypropylene containers (plastic bags or drums), fiber drums.
Unsuitable Packaging Materials	No special restrictions; avoid direct contact with strong acids and strong bases.

8. Exposure Controls / Personal Protection

Respiratory Protection	Wear air-purifying respirator when airborne concentration exceeds occupational exposure limits.
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Skin and Body Protection	Wear impermeable protective coveralls.
Hand Protection	Wear rubber gloves (nitrile or latex gloves).
Eye Protection	Wear chemical splash safety goggles.
Environmental Exposure Controls	Enhance mechanical ventilation; regularly monitor airborne tranexamic acid concentration in the workplace.

9. Physical and Chemical Properties

Appearance	
Physical state	Solid (crystalline powder)
Color	White to off-white
Odor	Odorless or slightly bitter
Odor Threshold	No data available
pH (1% aqueous dispersion)	5.0- 7.5
Melting Point	> 300 °C (literature value)
Boiling Point	281.88 °C
Flash Point	Not data applicable (solid)
Evaporation Rate	No data available
Flammability (Solid/Gas)	No data available
Explosive Limits (Upper/Lower)	No data available
Vapor Pressure	1.72 hPa at 25 °C
Vapor Density	No data available
Bulk Density	340 kg/m ³
Water Solubility	Freely soluble in water (approx. 1 g/6 mL)
Solubility Snapshot	Freely soluble in water and glacial acetic acid; practically insoluble in acetone and 96% ethanol
Partition coefficient (n- octanol/water)	log Pow - 2.0 to - 1.0 (predicted value)
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Surface Tension	36.59 mN/m at 1 g/L (20 °C)

10. Stability and Reactivity

Reactivity	Stable under ambient temperature and atmospheric
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Chemical Stability	pressure; may react under high temperature or in presence of strong oxidants. Chemically stable.
Hazardous Reactions	No data available
Conditions to Avoid	Moisture and high temperature.
Materials to Avoid	Strong oxidants, strong acids, strong bases.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, nitrogen oxides.

11. Toxicological Information

Acute Oral Toxicity	Practically non-toxic. Rat oral LD ₅₀ > 10000 mg/kg.
Acute Dermal Toxicity	Not available, but expected low-toxicity.
Acute Inhalation Toxicity	Not available; dust may cause respiratory tract irritation.
Skin Corrosion / Irritation	Category 2 (causes skin irritation).
Serious Eye Damage / Irritation	Category 2 (causes serious eye irritation).
Respiratory/Skin Sensitization	Allergic reactions are rare in clinical use.

In- Vitro Germ Cell Mutagenicity Tests

• Bacterial Reverse Mutation Test	Negative (non-mutagenic)
• Mammalian Cell Gene Mutation Assay	Negative (non-mutagenic)
• Mammalian Chromosomal Aberration Test	Negative (non-mutagenic)
• Carcinogenicity	No known carcinogenic risk (not listed by IARC, NTP, OSHA).
• Reproductive Toxicity	No teratogenicity observed in animal tests.
• STOT — Single Exposure	Category 3 (May cause respiratory irritation)
• STOT — Repeated Exposure	Long-term or repeated exposure may affect gastrointestinal or haematological systems (at clinical therapeutic dosage).
• Aspiration Hazard	No data available
• Potential Exposure Routes	Inhalation, dermal contact, ingestion.
• Physical and Chemical-Related Symptoms and Toxicological Characteristics	Common adverse reactions include headache, nausea, diarrhoea, dizziness and fatigue. High doses may induce convulsions and visual disturbance. Severe allergic reactions and thrombotic events occur rarely.
• Short-Term and Long-Term Exposure Effects	Short-term exposure to high-concentration dust leads to irritant symptoms; conventional cosmetic topical application bears no systemic toxicity

risk.

12. Ecological Information

Short-Term Toxicity to Fish	96- h LC ₅₀ (fish): 136000 mg/L
Long-Term Toxicity to Fish	No data available
Short-Term Toxicity to Aquatic Invertebrates	No data available
Long-Term Toxicity to Aquatic Invertebrates	No data available
Aquatic Algae Toxicity	96- h EC ₅₀ (algae): 2972.3 mg/L
Persistence and Biodegradability	Potentially biodegradable
Bioaccumulation Potential	Low (low log Pow indicates high water- solubility and low bio- accumulation tendency)
Mobility in Soil Matrix	No data available
Other Adverse Ecological Impacts	No data available

13. Disposal Considerations

Disposal Method: Dispose by incineration. Comply with national and local regulatory requirements prior to waste disposal. Landfilling is also acceptable subject to local environmental requirements (due to low toxicity). Recovery or disposal by professional hazardous- waste treatment institutions is recommended.

14. Transport Information

UN Hazard Class Number: Non-hazardous goods

Packing Group: Packing Group III (classified as general cargo for domestic land transport)

Transport Precautions: Protect cargo from direct sunlight and rain during transit. Handle packages with care during loading and unloading to prevent package breakage. Ensure intact packaging and secure loading before dispatch.

15. Regulatory Information

Domestic Regulations: Compliant with Technical Specifications for Cosmetic Safety, National Food Safety Standard – Standards for Use of Food Additives and other relevant domestic codes.

International Regulations: Compliant with EU REACH Regulation, US FDA requirements and other regional standards (subject to destination country for export shipments).

16. Other Information

Not available.

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