

Tridex Formula TX

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Tridex Formula TX

OTHER/GENERIC NAMES: Electrolyte Salt Mixture

PRODUCT USE: Electrolyte solution for use in electrochemical grinding/cutting machines.

MANUFACTURER: Tridex Technology
1555 Route 73
Pennsauken, NJ 08110, USA
United States
1-484-388-5000

FOR MORE INFORMATION CALL: 1-(484)-388-5000
(non-emergencies)
(Monday-Friday, 9:00 am to 4:30 pm EST)

IN CASE OF EMERGENCY CALL: ChemTel
(24 Hours/day, 7 days/week)
International, call collect: 1-(800)-255-3924
01-813-248-0585

2. HAZARDS IDENTIFICATION

Hazard symbols:



GHS03



GHS06



GHS07

GHS Classification:

Oxidizing solid, category 3, H272
Acute toxicity, category 3, H301
Eye irritation, category 2A, H319
STOT-SE, category 3, H335
Skin Irritation, category 3, H316
Aquatic Acute, category 2, H401

Signal Word: Danger

Hazard Statements	Precautionary Statements
H272: May intensify fire; oxidizer	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
H301: Toxic if swallowed	P220: Keep/store away from clothing and other combustible materials.
H319: Causes serious eye irritation	P280: Wear protective gloves/protective clothing/eye protection/face protection.
H335: May cause respiratory irritation	P301, 310: If swallowed: Immediately call a poison center or doctor.
H316: Causes skin irritation	P305, 351, 338: If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazard Statements (cont'd)	Precautionary Statements (cont'd)
H401: Toxic to aquatic life	P501: Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS #	EINECS #	67/548/EEC Annex 1 Index #	% (w/w)
Sodium Nitrite NaNO ₂	7632-00-0	231-555-9	007-010-00-4	25
Sodium Nitrate NaNO ₃	7631-99-4	231-554-3	Not listed	50
Sodium Gluconate	527-07-1	208-407-7	Not listed	25

OSHA Hazard Communication Standard: The ingredients listed above are considered hazardous under the *OSHA Hazard Communication Standard*.

The balance of the ingredients in this composition is considered nonhazardous by OSHA and is not listed in the European Directive 67/548/EEC Annex 1.

4. FIRST AID MEASURES

Description of first aid measures:

SKIN: Wash with plenty of soap and water to remove all product residues. Remove contaminated clothing and wash before reuse.

EYES: Immediately flush with running water, continuing for 15 minutes. If irritation persists, consult a physician.

INHALATION: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, oxygen should be administered, provided a qualified operator is present. Call a POSITION CENTER or doctor/physician if you feel unwell.

INGESTION: Call a POSITION CENTER or doctor/physician immediately. Rinse mouth and drink plenty of water. Obtain emergency medical attention.

Most important symptoms/effects, both acute and delayed:

SKIN: Prolonged contact with skin may cause irritation. May be absorbed through the skin.

EYES: Causes serious eye irritation.

INHALATION: May cause respiratory irritation.

INGESTION: May irritate mouth, esophagus and stomach. Although small quantities of both sodium nitrate and sodium nitrite are used in food preparation, swallowing moderate amounts of sodium nitrite can result in serious toxic effects, including death. Effects include irritation of the digestive tract, nausea, weakness, collapse and coma, possibly leading to death. Sodium nitrite interferes with the blood's ability to transport oxygen. Ingestion may cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood.

DELAYED EFFECTS: Sodium nitrite has no known delayed effects.

None of the ingredients in this composition are found on any of the three OSHA designated carcinogen lists: (1) NTP STATUS (2) IARC STATUS (3) OSHA LIST.

5. FIRE FIGHTING MEASURES

NFPA:

Health: 3; Flammability: 0; Reactivity: 1; Other: Oxidizer

Suitable extinguishing media:

Use flooding amounts of water or other agents. DO NOT use dry chemicals containing ammonium phosphate.

Specific hazards arising from the chemical:

Material does not burn but is an oxidizing agent and will support combustion of other materials. Product decomposes above 608°F (320°C) releasing toxic nitrogen oxides. Will explode if heated to 1000°F (537°C) in presence of reducing agents, organic materials, or cyanides. When involved in a fire material may melt, in such case, care should be taken so as not to scatter melt and to avoid contact with any combustibles.

Special firefighting precautions/instructions:

Wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment and emergency procedures:

Wear personal protection equipment (see section 8). Provide adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Methods and materials for containment/clean up:

Sweep, shovel or vacuum spilled material into to a suitable container for disposal. Avoid generating dusty conditions. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Do not allow product or residues to enter waterways and/or any source of drinking water.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid generation of dust during use and handling. Wear personal protection equipment (see section 8). Do not breathe product dusts. Avoid contact with combustible materials, acids and other incompatible materials.

Incompatible materials:

Strong acids, bases, oxidizers. Reducing agents. Ammonium salts. Amines.

Conditions for safe storage:

Store in a cool, dry, ventilated and fireproof place. Keep container closed when not in use. Do not store on wooden floors. Isolate from combustible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

None of the ingredients in this composition have an exposure limit established by ACGIH TLV, OSHA PEL, or other limits.

Engineering controls:

Use local exhaust ventilation in any areas where product dusts and/or vapors from solution may be generated. Exhaust dusts and/or vapors to outside of the building. Do not recirculate unfiltered air from ventilation system back into the building.

Personal Protective Equipment:

Skin protection: Use impervious gloves (e.g. rubber) for routine handling. Wear long sleeved shirt and pants. Impervious work aprons may be required for transfer of material from packages to process equipment.

Eye protection: Wear safety goggles in any area where dusty conditions may occur.

Respiratory protection: Not required for properly ventilated areas. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Additional recommendations: Provide eyewash and washing facilities.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Ingredient:	SODIUM NITRITE	SODIUM NITRATE
Appearance:	White to slightly yellow crystals	White crystals
Physical State:	Solid	Solid
Molecular Weight:	69.0	84.99
Chemical Formula:	NaNO ₂	NaNO ₃
Odor:	None	None
Odor Threshold:	N/A	N/A
pH:	~9 (for aqueous solution)	5.5 – 8.0 (5% aqueous solution)
Melting Point:	520°F (271.111°C)	582.8°F (306°C)
Boiling Point:	608°F (320° C)	716°F (380°C)
Flash Point:	Not flammable	Not flammable
Evaporation rate:	N/A	N/A
Flammability (solid, gas):	Not flammable	Not flammable
Upper/Lower Flammability Limits:	Not flammable	Not flammable
Vapor Pressure:	N/A	N/A
Vapor Density (air = 1.0):	N/A	N/A
Density:	2.17 g/cm ³	2.26 g/cm ³
Specific Gravity (water = 1.0):	2.17	0.90
Solubility (20°C / 68°F)	82 g/L	> 100 g/L
Partition Coefficient: N-Octanol/Water:	N/A	N/A
Auto-ignition temperature:	N/A	N/A
Decomposition temperature:	> 608°F (320°C)	> 1022°F (550°C)
Viscosity:	N/A	N/A

10. STABILITY AND REACTIVITY

Reactivity:

The mixture contains an oxidizer which reacts with combustibles and reducing agents. No hazardous reaction when handled and stored under normal provisions.

Chemical stability:

Stable under normal storage and temperature conditions. May intensify fire; oxidizer.

Possibility of hazardous reactions:

Hazardous polymerization will not occur.

Conditions to avoid:

Ignition sources, dust generation, excess heat, exposure to moist air or water and incompatible materials.

Incompatible materials:

Strong acids, bases, oxidizers. Reducing agents (particularly cyanides, thiocyanates and thiosulfates). Ammonium salts. Amines.

Hazardous decomposition products:

Nitrogen Oxides. Nitrogen compounds. Sodium compounds.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure:

Eye contact, skin contact and inhalation. Exposure by ingestion is not expected to occur through normal industrial use.

Symptoms related to the physical, chemical and toxicological characteristics (acute effects):

Skin contact:	Prolonged contact with skin may cause irritation. May be absorbed through the skin.
Eye contact:	Causes serious eye irritation.
Inhalation:	May cause respiratory irritation.
Ingestion:	Toxic if swallowed. May irritate mouth, esophagus and stomach. Although small quantities of both sodium nitrate and sodium nitrite are used in food preparation, swallowing moderate amounts of sodium nitrite can result in serious toxic effects, including death. Effects include irritation of the digestive tract, nausea, weakness, collapse and coma, possibly leading to death. Sodium nitrite interferes with the blood's ability to transport oxygen. Ingestion may cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood.

SAFETY DATA SHEET

Toxicological Data:

LD50 / LC50 data: 180 mg/kg body weight (Sodium nitrite) / >2000mg/kg body weight (Sodium Nitrate)
Germ cell mutagenicity: Not Classified
Teratogenicity: Not classified
Carcinogenicity: Not classified
Specific Target Organ Toxicity: (Repeated and/or Single exposure): Not classified
Aspiration hazard: Not classified

Delayed (subchronic and chronic) effects:

None known; no chronic effects expected under normal conditions of use. Multiple reproductive tests indicate that sodium nitrite is not teratogenic. Fetal toxicity has been demonstrated in pregnant animals fed toxic doses of sodium nitrite; this is due to the formation of methemoglobin.

Other Data:

RTECS#:
CAS# 7632-00-0: RA1225000 RA1425000
CAS# 7631-99-4: WC5600000
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

17.1 ppm/24hr./minnow/no effect/fresh water.
7.5 ppm/48 hr./mosquito fish/TLm/fresh water.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility in soil: No information available.

Other adverse effects: Harmful to aquatic life. Do not empty into drains.

13. DISPOSAL CONSIDERATIONS

Dispose of wastes and contaminated packaging in a manner consistent with national, U.S. federal, state, and local environmental control regulations.

When this product is used in a solution to cut or grind materials containing chromium, such as stainless steel, the product may react to form other toxic and/or carcinogenic materials. When operated properly, the offending material remains in the solution. Care should be exercised in disposal of the used solution.

This product meets the characteristic of ignitability under 40 CFR 261.21 and therefore has the EPA Hazardous Waste Number of D001 under the Resource Conservation and Recovery Act (RCRA) as shipped.

NOTE: Use and/or alterations to the product may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal method in compliance with applicable regulations.

14. TRANSPORT INFORMATION

The following transportation classification codes are applicable to the US DOT 49 CFR (multi-modal), IATA (air), and IMDG (sea) regulations – please consult the shipper requirements contained within each to ensure full compliance.

UN#: UN3087

Shipping Name: Oxidizing solid, toxic, n.o.s. (Sodium Nitrate / Sodium Nitrite)

Hazard Class: 5.1 (6.1)

Packing Group: III

15. REGULATORY INFORMATION

United States

Toxic substance control act (TSCA)

TSCA Inventory Status: CAS # 7632-00-0 and #7631-99-4 listed on TSCA Inventory of Chemical Substances

Other TSCA Issues: CAS # 7632-00-0 requires export notification (Section 12b) Subject to SNUR if used in metalworking fluids (40CFR721.4740).

SARA Title III/CERCLA: "Reportable Quantities" (RQs) exist for the following ingredients: Sodium nitrite (100lbs)

SARA Section 311 Hazard Classes: Immediate (acute) health hazard, fire hazard

SARA 313 Toxic Chemicals: None of the composition ingredients are listed as SARA 313 "Toxic Chemicals".

International

CAS # 7632-00-0 and/or #7631-99-4 are listed in the chemical inventories of Canada (DSL), Mexico (INSQ), European Union (EINECS), China (IECS), Japan (METI) and Korea (KECI).

16. OTHER INFORMATION

SDS Revision Date: 08/15/2016

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to the above information or that the contents of the items discussed will be error-free, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information and to test our products in order to satisfy their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.