Section 1. Identification

Product Identifier

Product Identity	Triisopropanolamine 99%
Other Means of Identification	TIPA 99, Triisopropanolamine 99%

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Processing aid.

Details of the Supplier of the Safety Data Sheet

Company Name	Silver Fern Chemical, Inc. 121 W. De La Guerra Street, Suite B Santa Barbara, CA 93101 USA
Customer Service:	1-866-282-3384 / info@silverfernchemical.com Website - www.silverfernchemical.com
24-hour Emergency Telephone No.	**Infotrac: 1-800-535-5053; Outside USA & Canada +1-352-323-3500**

Section 2. Hazard(s) Identification

Classification of the Substance or Mixture Under OSHA's Hazard Communication Standard (1910.1200) Revised 2024 (GHS Revision 7)

Serious Eye Damage / Eye Irritation, Category 2; H319	Causes serious eye irritation.
Aquatic Toxicity (Chronic), Category 3; H412	Harmful to aquatic life with long lasting effects.

Label Elements

Warning

H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

[Prevention]
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves, eye protection, and face protection.
[Response]
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+313 If eye irritation persists: Get medical advice or attention.
[Storage]
No GHS storage statements
[Disposal]
P501 Dispose of contents or container in accordance with local and national regulations.

Other Hazards
This product contains no PBT/vPvB chemicals.
This product contains no endocrine disrupting chemicals.

Section 3. Composition/Information on Ingredients

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Triisopropanolamine CAS Number: 122-20-3 Synonyms: 1,1',1''-nitrilotripropan-2-ol	99.5 - 100.0%	Serious eye damage / eye irritation, category 2; H319	No data available.

The actual concentration or concentration range is withheld as a trade secret.
*PBT/vPvB - PBT-substance or vPvB-substance.
The full texts of the phrases are shown in Section 16.

Section 4. First Aid Measures

Description of First Aid Measures

General In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes Rinse with plenty of clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

Most Important Symptoms and Effects, Both Acute and Delayed

Overview No specific symptom data available.
Treat symptomatically. See section 2 for further details.

Eyes Causes serious eye irritation.

Section 5. Fire-Fighting Measures

Extinguishing Media

Recommended extinguishing media; alcohol resistant foam, CO_2, powder, water spray.
Unsuitable extinguishing media: Do not use; water jet.

Special Hazards Arising from the Substance or Mixture

Hazardous decomposition: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide.

Advice for Fire-Fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full-face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

ERG Guide No. ----

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Put on appropriate personal protective equipment (see section 8).
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

Environmental Precautions

Do not allow spills to enter drains or waterways.

Methods and Material for Containment and Cleaning Up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.
Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

Section 7. Handling and Storage

Precautions for Safe Handling

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for Safe Storage, Including any Incompatibilities
Incompatible materials: Do not store in: Aluminum. Carbon steel. Copper. Copper alloys. Galvanized containers. .

Specific End Use(s)
No available information.

Section 8. Exposure Controls / Personal Protection

Control Parameters

Exposure

CAS No.	Ingredient	Source	Value	Notes
122-20-3	Triisopropanolamine	OSHA	No established limit.	Regulation: DOW IHG
		ACGIH	No established limit.	Type of Listing: TWA
		NIOSH	No established limit.	Value/Notation: 10 mg/m^3

Exposure Controls

Respiratory If workers are exposed to concentrations above the exposure limit, they must use the appropriate, certified respirators.

Eyes Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

Skin Avoid skin contact. Protective gloves recommended.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of

particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical State	Crystalline solid.
Color	White.
Odor	Slightly ammoniacal.
Melting Point/Range	45 °C (113 °F) *Literature*
Freezing Point	Not applicable to solids.
Boiling Point (760 mmHg)	301 °C (574 °F) at 1,013 hPa *Literature*
Flammability (Solid, Gas)	Not expected to form explosive dust-air mixtures.
Upper/Lower Flammability or Explosive Limits	**Lower Explosive Limit:** No available information. **Upper Explosive Limit:** No available information.
Flash Point	**closed cup** 174 °C (345 °F) *Literature*
Auto-Ignition Temperature	285 °C (545 °F) *Literature*
Decomposition Temperature	No available information.
pH	10.3 *Literature* 1% aqueous solution.
Dynamic Viscosity (cSt)	100 cP at 60 °C (140 °F) *Literature*
Solubility in Water	830 g/L *Literature*
Partition Coefficient N-Octanol/Water (Log K_{ow})	**Log P_{ow}:** -0.015 *Measured*
Vapor Pressure (Pa)	0.0007 mmHg at 20 °C (68 °F) *Literature*
Relative Density (Water = 1)	0.988 at 70 °C (158 °F) / 4.00 °C *Literature*
Relative Vapor Density (Air = 1)	6.6 *Literature*
Evaporation Rate (Ether = 1)	No available information.
Oxidizing Properties	No.
Explosive Properties	No.

Liquid Density 1 g/cm^3 at 20 °C (68 °F) *Literature*

Other Information
No other relevant information.

Section 10. Stability and Reactivity

Reactivity
Hazardous Polymerization will not occur.
Chemical Stability
Stable under normal circumstances.
Possibility of Hazardous Reactions
No available information.
Conditions to Avoid
Avoid high temperatures and contact with incompatible material.
Incompatible Materials
Avoid contact with: Nitrites. Strong acids. Strong oxidizers. Product may potentially react with various halogenated organic solvents, resulting in temperature and/or pressure increases Avoid contact with metals such as: Zinc. Galvanized metals. Heating above 60°C in the presence of aluminum can result in corrosion and generation of flammable hydrogen gas. Avoid unintended contact with: Halogenated hydrocarbons.
Hazardous Decomposition Products
No hazardous decomposition data available.

Section 11. Toxicological Information

Acute Toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Triisopropanolamine - (122-20-3)	No data available.	No data available.	No data available.	No data available.	No data available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
122-20-3	Triisopropanolamine	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No;
		ACGIH	No established limit.

Classification	Category	Hazard Description
Acute Toxicity (Oral)	---	Not applicable.
Acute Toxicity (Dermal)	---	Not applicable.
Acute Toxicity (Inhalation)	---	Not applicable.
Skin Corrosion/Irritation	---	Not applicable.
Serious Eye Damage/Irritation	2	Causes serious eye irritation.
Respiratory Sensitization	---	Not applicable.
Skin Sensitization	---	Not applicable.
Germ Cell Mutagenicity	---	Not applicable.
Carcinogenicity	---	Not applicable.
Reproductive Toxicity	---	Not applicable.
STOT-Single Exposure	---	Not applicable.
STOT-Repeated Exposure	---	Not applicable.
Aspiration Hazard	---	Not applicable.

Possible routes of entry:

Symptoms and Effects, Both Acute and delayed:
No specific symptom data available.
Treat symptomatically.

Eyes Causes serious eye irritation.

Section 12. Ecological Information

Toxicity
Harmful to aquatic life with long lasting effects.
No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L
Triisopropanolamine - (122-20-3)			

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L
	No data available.	No data available.	No data available.

Persistence and Degradability
There is no data available on the preparation itself.
Bioaccumulative Potential
Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Mobility in Soil
Potential for mobility in soil is very high (Koc between 0 and 50).
Results of PBT and vPvB Assessment
This product contains no PBT/vPvB chemicals.
Other Adverse Effects
No available information.

Section 13. Disposal Considerations

Waste Treatment Methods
Observe all federal, provincial and local regulations when disposing of this substance.

Section 14. Transport Information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN Number	Not regulated.	Not regulated.	Not regulated.
UN Proper Shipping Name	Not regulated.	Not regulated.	Not regulated.
Transport Hazard Class(es)	**DOT Hazard Class:** Not applicable. **Sub Class:** Not applicable.	**IMDG:** Not applicable. **Sub Class:** Not applicable.	**Air Class:** Not applicable. **Sub Class:** Not applicable.
Packing Group	Not applicable.	Not applicable.	Not applicable.

Environmental Hazards

Marine Pollutant: No.

Special Precautions for User

No available information.

Section 15. Regulatory Information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Toxic Substance Control Act (TSCA)

CAS Number	Ingredient	Toxic Substance Control Act (TSCA)	Comments	Status
0000122-20-3	Triisopropanolamine	Yes		ACTIVE

The Following Flags are Used:

•Active - indicates commercial status designation of active
•E - indicates a substance that is the subject of a Section 5(e) Consent Order under TSCA.
•F - indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
•N - indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
•P - indicates a commenced Premanufacture Notice (PMN) substance.
•R - indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
•S - indicates a substance that is identified in a final Significant New Uses Rule.
•SP - indicates a substance that is identified in a proposed Significant New Uses Rule.
•T - indicates a substance that is the subject of a final Section 4 test rule under TSCA.
•UVCB Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials •XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
•Y1 - indicates a polymer that has a number-average molecular weight greater than 1,000 and that was exempt under the 1984 polymer exemption rule.
•Y2 - indicates a polymer that is a polyester and that was exempt under the 1984 polymer exemption rule.

Proposition 65 - Carcinogens (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 Label Warning:

This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Mass RTK Substances (>1%):

Triisopropanolamine.

New Jersey RTK Substances (>1%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Pennsylvania RTK Substances (>1%):

Triisopropanolamine.

OSHA Process Safety Management Standard Highly Hazardous Chemicals, Toxics and Reactives:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US EPA List of Regulated Substances under the Risk Management Plan (RMP) Program:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) under the Minimum Risk Exemption:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA List II or Essential Chemicals:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA - Exempt Chemical Mixtures - List 1 and 2:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US DHS Chemical Facility Anti-Terrorism Standards (CFATS):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Section 16. Other Information

Revision Date **08/01/2024**

DISCLAIMER OF RESPONSIBILITY
The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

The full text of the phrases appearing in section 3 is:

H319 Causes serious eye irritation.

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