



SAFETY DATA SHEET

According to 29 CFR 1910.1200

TRICHLOROISOCYANURIC ACID

Date of issue: September 01, 2023 Revision date: - Version: 1

SECTION 1.- IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Product form Solid
Substance name Trichloroisocyanuric acid
CAS No. 87-90-1
Formula $C_3Cl_3N_3O_3$
Synonyms Not available

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture Fertilizers

1.3 Details of the supplier of the safety data sheet

Química Pima, S.A. de C.V.
Del Cobre 20, Parque Industrial Hermosillo
Hermosillo, Sonora, México. C.P. 83297 Tel. 011 (662) 251-0010 / (662) 251-0316
ventas@qpima.com
www.qpima.com

1.4 Emergency telephone number

Emergency number CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

SECTION 2.- HAZARD IDENTIFICATION

2.1 GHS-US classification

May intensify fire; oxidizer.	2	H272
Harmful if swallowed.	4	H302
Causes skin irritation.	2	H315
Causes serious eye damage.	1	H318
Harmful if inhaled.	4	H332
May cause respiratory irritation.	1	H335
Very toxic to aquatic life.	1	H400
Very toxic to aquatic life with long-lasting effects	1	H410

2.2 Label elements

GHS-US labelling

Hazard pictograms (GHS-US)



Signal Word (GHS-US):

Danger

Hazard statement (GHS-US):

H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.



SAFETY DATA SHEET

According to 29 CFR 1910.1200

TRICHLOROISOCYANURIC ACID

Precautionary statements (GHS-US):

H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long-lasting effects.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from clothing and other combustible materials.
P221 Take any precautions to avoid mixing with combustibles
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash your hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P312 IF SWALLOWED: Rinse mouth. Call a POISON CENTER/doctor/ if you feel unwell.
P302+P352 IF ON SKIN: wash with plenty of water.
P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor/ if you feel unwell.
P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P370+P378 In case of fire: use water, chemical powder, or foam to extinguish.
P332+P313 IF SKIN irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of the contents/container in accordance with federal, state, and local laws.
No data available
Not applicable

2.3 Other hazards

2.4 Unknown acute toxicity (GHS-US)

SECCIÓN 3.- COMPOSITION / INFORMATION OF INGREDIENTS

3.1 Substance

Name	Product identifier	%
Trichloroisocyanuric acid	(CAS No.) 87-90-1	> 90

3.2 Mixture

Not applicable



SAFETY DATA SHEET

According to 29 CFR 1910.1200

TRICHLOROISOCYANURIC ACID

SECCIÓN 4.- FIRST AID MEASURE

4.1 Description of first aid measure

First-aid measures general

Check vital signs. Unconscious: keep airways clear and provide breathing assistance. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform CPR. Conscious victim with breathing difficulty: semi-upright position. Victim in shock: lying on back with legs slightly elevated. Vomiting: prevent choking or aspiration. Avoid cooling by covering the victim (without heating). Continue monitoring the victim. Provide psychological support. Keep the victim calm, and avoid physical strain. Depending on the victim's condition: seek medical attention/hospital. Never give anything by mouth to an unconscious person. If feeling unwell, seek medical attention (if possible, show the label).

First-aid measures after eye contact

Rinse the eyes immediately with water for at least 20 minutes, and keep the eyelids open to ensure thorough flushing of the eye and eyelid tissues. Rinsing the eyes within seconds is essential for maximum effectiveness. If wearing contact lenses, remove them after the first 5 minutes and then continue rinsing the eyes. Consult a doctor. It can cause serious damage to the cornea, conjunctiva, or other parts of the eye.

First-aid measures after skin contact

As a precautionary measure, thoroughly wash the exposed area for at least 20 minutes. Remove contaminated clothing. Wash contaminated clothing before using it again. Consult a doctor if any symptoms occur.

First-aid measures after inhalation

Move the victim to fresh air and keep them calm. If they are not breathing, administer artificial respiration. If they have difficulty breathing, provide oxygen. Seek medical attention immediately.

First-aid measures after ingestion

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give water to drink. If vomiting occurs, keep the person's head low to prevent aspiration. Seek medical attention.

4.2 Most important

Symptoms/injuries after inhalation

Inhalation of dust can cause irritation of the throat and respiratory tract.

Symptoms/injuries after skin contact

Upon contact with moisture, this product readily hydrolyzes to acid, which can cause burns if not promptly removed.

Symptoms/injuries after eye contact

It can cause severe damage including burns and blindness.

Symptoms/injuries after ingestión

It can cause burns to the gastrointestinal tract, drowsiness, headache, and nausea.

Chronic symptoms

No data available

4.3 Indications of any immediate medical attention and special treatment needed

Symptomatic treatment. For more information, consult a Poison Control Center.

SECCIÓN 5.- FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use dry chemical powder, foam, sand, or CO₂. Flood with water.

Unsuitable extinguishing media

No data available

5.2 Special hazard arising from the substance or mixture

Fire hazard

It can react explosively with hydrocarbons (fuels), igniting other combustible materials (wood, paper, oil, clothing, etc.).



Explosion hazard

SAFETY DATA SHEET

According to 29 CFR 1910.1200

TRICHLOROISOCYANURIC ACID

Reactivity

The container when exposed to heat can unexpectedly explode and project hazardous fragments. It can react explosively with hydrocarbons (fuels), igniting other combustible materials (wood, paper, oil, clothing, etc.).

No data available.

5.3 Advice for firefighters

Precautionary measures fire

Firefighting instructions

In case of fire/heating: stand against the wind. If exposed to fire/heat consider evacuation

Flood the fire area with water from a safe distance. Move containers from the fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. For massive fire, use fixed hose reels or regulating jets; if this is impossible, withdraw from the area and let it burn.

Protection during firefighting

Use a self-contained breathing apparatus. Structural firefighting protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations. For major spills, use protective clothing against chemicals specifically recommended by the manufacturer. This may provide little or no thermal protection.

SECCIÓN 6.- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

6.1.1 For non-emergency personnel

Protective equipment

Use the recommended protective equipment in section 8.

Emergency procedures

Avoid ignition sources. Evacuate personnel to a ventilated area.

Measures in case of dust release

Ventilate immediately, especially in low-lying areas where vapors may accumulate.

6.1.2 For emergency responders

Eliminate all sources of ignition (no smoking, no flares, sparks, or flames in the danger area). Stop the leak if you can do so without risk. All equipment used to handle the product must be grounded. Do not touch or walk on the spilled material. Flood the area with water. Do not allow spilled products to be reused. Consider the information and recommendations in sections 5 and 7. Use the recommended protective equipment in section 8.

6.2 Environmental precautions

Use closed systems when possible. Provide local exhaust ventilation where dust or fumes may be generated. Avoid spillage into drains, watercourses, or onto the ground.

6.3 Methods and material for containment and cleaning up

Method for containment

Collect the product with a shovel and place it into an appropriate container.

Method for cleaning up

Sweep or vacuum while avoiding the dispersion of dust. Lightly moistening may be necessary. Clean or wash the contaminated area thoroughly. Dispose of the water and collected residue in labeled containers for disposal as chemical waste.

6.4 Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection

SECTION 7.- HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling

Prohibited to eat, drink, or smoke during handling. Avoid contact with eyes, skin, and clothing. Wash arms, hands, and nails after handling this product. The use of gloves is recommended. Provide access to emergency showers and eye wash stations. Use equipment and clothing that prevents the accumulation of electrostatic charges. Control and prevent the formation of explosive atmospheres.



SAFETY DATA SHEET

According to 29 CFR 1910.1200

TRICHLOROISOCYANURIC ACID

Do not drink, eat, or smoke in the workplace. Always wash your hands after handling the product. Do not eat, drink, or smoke when using this product. Use local exhaust ventilation to keep airborne dust concentrations below permissible exposure levels. Wash hands before breaks and at the end of the workday. Remove and launder contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in a clean, cool, open, or well-ventilated area. Keep away from incompatible, flammable, or combustible materials. Store closed containers. Keep away from direct sunlight.

Incompatible products

Strong oxidizing and reducing agents, acids, and bases.

Heat-ignition

It can react explosively with hydrocarbons (fuels), igniting other combustible materials (wood, paper, oil, clothing, etc.).

Storage area

Store in a clean, cool, open, or well-ventilated area. Keep away from incompatible, flammable, or combustible materials. Keep away from direct sunlight.

Special rules on packaging

Store in a tightly sealed, dry, clean, and properly labeled container. Comply with applicable regulatory requirements. Secure fragile packaging in sturdy containers.

Packaging materials

No data available

7.3 Specific end use(s)

No additional information is available

SECTION 8.- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Trichloroisocyanuric acid 87-90-1	No data available	No data available	No data available

8.2 Exposure controls

Appropriate engineering controls

Keep the workplace ventilated. Normal ventilation for routine manufacturing operations is generally adequate. Local exhaust hoods should be used during operations that produce or release large quantities of product. Mechanical ventilation should be provided in low or confined areas. Eye-wash stations and showers should be available.

Personal protective equipment

Safety goggles, full-face respirator with organic vapor cartridges, gloves, protective clothing/suit/boots.

Material for protective clothing

Nitrile, butyl, or PVC.

Hand protection

Use appropriate protective gloves to prevent skin exposure. Nitrile, butyl, or PVC gloves are recommended. Do not use materials made from natural fibers.

Eye protection

Wear snug-fitting safety goggles. Use a face shield (minimum of 8 inches). Use eye protection equipment tested and approved under appropriate government standards, such as NIOSH (US) or EN 166 (EU).

Skin and body protection

Wear suitable protective clothing to minimize skin contact. Do not use materials made from natural fibers.

Respiratory protection

When risk assessment shows that respirators are appropriate, use a full-face respirator with organic vapor cartridges as a backup to existing engineering controls. If the respirator is the sole means of protection, use a self-contained breathing apparatus (SCBA). Use respirators



SAFETY DATA SHEET

According to 29 CFR 1910.1200

TRICHLOROISOCYANURIC ACID

and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls

Avoid release to the environment.

SECTION 9.- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Granular or tablet solid
Odor	Chlorine
Color	White
Molecular mass	232.41 g/mol
Odor threshold	No data available
pH	3.0 – 3.5
pH solution	1% (25 °C)
Relative evaporation rate (butyl acetate = 1)	No data available
Melting/Freezing point	249 – 251 °C (480.2 – 483.8 °F)
Boiling point	No data available
Flash point	No data available
Self-ignition temperature	225 °C (437 °F)
Decomposition temperature	No data available
Flammability (solid, gas)	Non-flammable
Vapor pressure	No data available
Relative vapor density at 20 °C	No data available
Relative density	2.07 (20 °C)
Solubility	1.2 g/100 ml in water
Log Pow	No data available
Log Kow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidizing properties	Oxidizing material
Explosive limits	No data available

9.2 Other information

No additional information is available

SECTION 10.- STABILITY AND REACTIVITY

10.1 Reactivity	This material is stable under normal handling and storage conditions.
10.2 Chemical stability	This material is stable under normal handling and storage conditions.
10.3 Possibility of hazardous reactions	This material is stable under normal handling and storage conditions.
10.4 Conditions to avoid	Static discharges, heat, pressure, shocks, vibrations, sources of ignition, and/or moisture.
10.5 Incompatible materials	Strong oxidizing and reducing agents, acids, and bases.



SAFETY DATA SHEET

According to 29 CFR 1910.1200

TRICHLOROISOCYANURIC ACID

10.6 Hazardous decomposition products In case of heating, it may release irritating and toxic vapors.

SECTION 11.- TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Likely routes of exposure	Skin and eyes contact, inhalation, and ingestion.
Acute toxicity	Will cause burns (depending on exposure time and amount).
Skin corrosión/irritation	In contact with moisture, this product readily hydrolyzes into acid, which can cause burns if not promptly removed.
Serious eye damage/irritation	It can cause severe damage, including burns and blindness.
Respiratory or skin sensitization	Inhalation of dust may cause irritation of the throat and respiratory tract.
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target toxicity (single exposure)	Inhalation toxicity is the main route of exposure.
Specific target toxicity (repeat exposure)	No data available
Aspiration hazard	After inhaling dust, respiratory passages may become irritated.

Name	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀ inhalation
Trichloroisocyanuric acid	809 mg/kg (rat)	7600 mg/kg (rabbit)	> 0.5 mg/l (4h, rat)

SECTION 12.- ECOLOGICAL INFORMATION

12.1 Toxicity

Ecology – General	No data available
Ecology – Air	No data available
Ecology – Water	This material has demonstrated toxicity to aquatic organisms: EC ₅₀ <i>O. mykiss</i> (0.08 mg/l, 96 h). EC ₅₀ <i>D. magna</i> (0.17 mg/l, 48 h) EC ₅₀ <i>P. subcapitata</i> (< 0.5 mg/l, 3 h) EC ₅₀ <i>D. rerio</i> (< 0.1 mg/l, 14 d) EC ₅₀ <i>D. magna</i> (< 0.1 mg/l, 14 d)

12.2 Persistence and degradability

Biodegradability (OECD 301): The product is expected to be biodegradable.

12.3 Bioaccumulative potential

It does not contain bioaccumulative components.

12.4 Mobility in soil

No data available

12.5 Other adverse effects

Other information

SECCIÓN 13.- INFORMACIÓN RELATIVA A LA ELIMINACIÓN DE LOS PRODUCTOS



SAFETY DATA SHEET

According to 29 CFR 1910.1200

TRICHLOROISOCYANURIC ACID

13.1 Waste treatment methods

Waste treatment methods

Both the leftover products and empty containers should be disposed of according to the current legislation on Environmental Protection specifically Hazardous Waste. You must classify the waste and dispose of it through an authorized company. Disposal procedure: controlled incineration.

Waste disposal recommendations

Dispose of following national, state, and local regulations. Dispose of product waste and containers with all possible precautions. Care should be taken when handling empty containers that have not been cleaned or rinsed. Empty containers or liners may retain product residues.

SECTION 14.- TRANSPORT INFORMATION

14.1 UN Number

2468

14.2 UN proper shipping name

TRICHLOROISOCYANURIC ACID, DRY

14.3 Class of hazards in transportation

5.1

14.4 Packaging group

II

14.3 Additional information



Other information

No supplementary information is available.

Overland transport

No additional information is available.

Transport by sea

No additional information is available.

Air transport

No additional information is available.

SECTION 15.- REGULATORY INFORMATION

International inventories

TSCA Trichloroisocyanuric acid CAS 87-90-1

TSCA – Toxic Substances Control Act Inventory Section 8(b).

DSL/NDSL - Domestic Substance List/Non-Domestic Substance List.

US Federal Regulations: Not available

SARA 311/312 Categories.

Acute Health Hazard Yes Chronic Health Hazard No Fire Hazard No

Sudden Hazardous Pressure Release No Reactive Hazard No

Clean Water Act. No data available

CERCLA. Trichloroisocyanuric acid CAS 87-90-1

Official Mexican Standard NOM-002-SCT/2011, List of the Most Commonly Transported Hazardous Substances and Materials.

SECTION 16.- OTHER INFORMATION

NFPA	NFPA health Hazard	2	NFPA fire Hazard	0	NFPA instability Hazard	2	NFPA Special hazard	-
HMIS III	Health	2	Flammability	0	Physical	2	Personal protection	E



SAFETY DATA SHEET
According to 29 CFR 1910.1200

**TRICHLOROISOCYANURIC
ACID**

Splash goggles, gloves, and vapor respirator.

E



Made for: Química Pima, S.A. de C.V. Del Cobre No. 20 Parque Industrial. Hermosillo, Sonora, México. 83297.
Date of issue: September 01, 2023
Revision date: -
Revision note: -

IMPORTANT NOTE: Information in this SDS is from available published sources and is believed to be accurate, but is not exhaustive and will be used only as a guide, which is based on current knowledge of the chemical substance or mixture and applied to the appropriate product for safety precautions. No warranty, express or implied, is made and Pima Chemicals & Fertilizers, LLC and Quimica Pima, S.A. de C.V. assumes no liability resulting from the use of this SDS. The user must determine the suitability of this information for his application.

End of Safety Data Sheet