Safety Data Sheet
Tin(IV) chloride

Section 1: Chemical Product and Company Identification

Product Name: Tin(IV) chloride

Catalog Codes: 272

CAS#: 7646-78-8

RTECS: XP8750000

Synonym: Stannic chloride

Chemical Name: Stannic Chloride

Chemical Formula: SnCl4

Contact Information:

Email: info@drm-chem.com

Address: #7, Afshar javan Alley, Sohrevardi St ,Tehran, Iran

post code: 1551818111

Tehran Sales: +98 21 88177760

Order Online: Drm-chem.com

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Tin(IV) chloride	7646-78-8	100

Toxicological Data on Ingredients: LC50 - Danio rerio (zebra fish) - > 1.000 mg/l - 96 h.

Section 3: Hazards Identification

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Skin corrosion (Sub-category 1B), H314
Serious eye damage (Category 1), H318
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Long-term (chronic) aquatic hazard (Category 3), H412
For the full text of the H-Statements mentioned in this Section, see Section 16.

Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word	Danger
Hazard statement(s)	
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
Precautionary statement(s)	
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

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/ hearing protection.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements
none

Reduced Labeling (<= 125 ml)
Pictogram

Signal word	Danger
Hazard statement(s)	
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.
Precautionary statement(s)	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 4: First Aid Measures

Description of first-aid measures
General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11

Indication of any immediate medical attention and special treatment needed
No data available

Section 5: Fire and Explosion Data

Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture
Hydrogen chloride gas
Tin/tin oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H^+, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

Reference to other sections
For disposal see section 13.

Section 7: Handling and Storage

Precautions for safe handling
For precautions see section 3.

Conditions for safe storage, including any incompatibilities
Storage conditions
Tightly closed.
Handle and store under inert gas. Air and moisture sensitive.

Storage class
Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

Section 8: Exposure Controls/Personal Protection

Control parameters

Ingredients with workplace control parameters
Exposure controls

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

Body Protection
Acid-resistant protective clothing

Respiratory protection
Recommended Filter type: Filter B-(P2)
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure
Do not let product enter drains.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

a) Appearance	Form: liquid Color: colorless
b) Odor	No data available
c) Odor	Threshold No data available
d) pH	0,2 at 60 g/l at 20 °C
e) Melting point/freezing point	Melting point/range: -33 °C - lit.
f) Initial boiling point and boiling range	114 °C - lit.
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	18.6 mm/Hg (20°C)
l) Vapor density	8,99 - (Air = 1.0)
m) Density	2,226 g/cm3 at 25 °C - lit.
Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient: n-octanol/water	- Not applicable for inorganic substances
p) Autoignition temperature	> 654 °C at 1.013,3 hPa
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: < 1 mPa.s at 25 °C
s) Explosive properties	No data available
t) Oxidizing properties	Not classified due to data which are conclusive although

	insufficient for classification.

Other safety information

Relative vapor density	8,99 - (Air = 1.0)

Section 10: Stability and Reactivity Data

Reactivity
No data available

Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions
increased reactivity with:
Alcohols
nitrates
Ethylene oxide
Strong bases
Alkali metals
Metals
(in the presence of atmospheric oxygen and/or moisture)
Violent reactions possible with:
Water

Conditions to avoid
no information available

Incompatible materials
Aluminum, Metals, Oxidizing agents

Hazardous decomposition products
In the event of fire: see section 5

Section 11: Toxicological Information

Information on toxicological effects
Acute toxicity
Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Causes skin burns. (Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: lymphocyte
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (ECHA)

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation. - Respiratory Tract

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: XP8750000
Inorganic tin salts are poorly absorbed into the body. When parenterally administered tin salts are highly toxic. Tin oxide inhaled as a dust or fume leads to a benign pneumoconiosis with no sign of interference with pulmonary function. Deposited dust appears nodular with the particles being mostly extracelluar. No necrosis, foreign-body giant-cell reaction, or collagen formation has been seen. Tin salts that have gained access to the blood stream are highly toxic and produce neurologic damage and paralysis. With most common tin salts, the toxicity profile is complicated by hydrolysis in body fluids producing unphysiologic pH values. The reported symptoms of hyperemia, vascular changes with bleeding in the central nervous system, liver, heart, and other organs may be due to tin itself or to the unphysiological pH changes. Ingestion produces vomiting due to the gastric irritation from the activity and astringency of tin compounds. Injection of inorganic tin salts produces diarrhea, muscle paralysis, and twitching., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Inhalation of high concentrations may cause:, Cough, chest pain, Breathing difficulties, pulmonary edema
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

Toxicity
Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 1.000 mg/l - 96 h
(OECD Test Guideline 203)

Persistence and degradability
The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential
No data available

Mobility in soil
No data available

Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects
No data available

Section 13: Disposal Considerations

Waste treatment methods

Product
Waste material must be disposed of in accordance with the national and local regulations.
Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself

Section 14: Transport Information

UN number
ADR/RID: 1827 IMDG: 1827 IATA: 1827

UN proper shipping name
ADR/RID: STANNIC CHLORIDE, ANHYDROUS
IMDG: STANNIC CHLORIDE, ANHYDROUS
IATA: Stannic chloride, anhydrous

Transport hazard class(es)
ADR/RID: 8 IMDG: 8 IATA: 8

Packaging group

ADR/RID: II	IMDG: II	IATA: II

Environmental hazards

ADR/RID: no	IMDG Marine pollutant: no	IATA: no

Special precautions for user
No data available

Section 15: Other Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Other regulations
Take note of Dir 94/33/EC on the protection of young people at work.

Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

Section 16: Other Information

References: Not available

Other Special Considerations: Not available

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