

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 1 of 11

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

SODIUM STANNATE

OTHER NAMES

Na₂O·3Sn, Na₂SnO₃·3H₂O, "disodium stannate trihydrate", "sodium tin oxide trihydrate", "tin sodium oxide trihydrate", "stannate of soda"

PRODUCT USE

Mordant in dyeing, ceramics, glass, source of tin for electroplating and immersion plating, textile fireproofing, stabiliser for hydrogen peroxide, blueprint paper, laboratory reagent.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

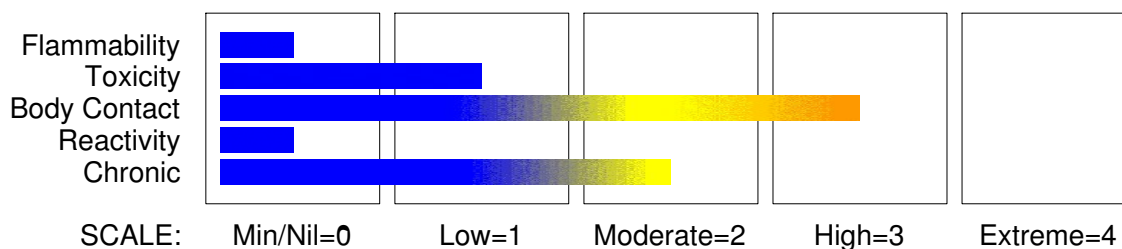
technical@sdfine.com

Telephone: 91- 22- 24959898

Telephone: 91- 22- 24959899

Fax: 91- 22- 24937232

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity (Oral) Category 5

Skin Corrosion/Irritation Category 1C

continued...

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 2 of 11

Section 2 - HAZARDS IDENTIFICATION



EMERGENCY OVERVIEW

HAZARD

DANGER

Determined by using GHS criteria:

H303 H314

May be harmful if swallowed

Causes severe skin burns and eye damage

PRECAUTIONARY STATEMENTS

Prevention

Do not breathe dust or mist.

Wash thoroughly after handling.

Wear protective gloves/clothing and eye/face protection.

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

Wash contaminated clothing before reuse.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

If on skin or hair: remove/take off immediately all contaminated clothing. Rinse with water/shower.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
sodium stannate	12058-66-1	98
sodium hydroxide	1310-73-2	2

Section 4 - FIRST AID MEASURES

SWALLOWED

For advice, contact a Poisons Information Centre or a doctor.

- If swallowed do NOT induce vomiting.

- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

continued...

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 3 of 11

Section 4 - FIRST AID MEASURES

- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- Non combustible.
 - Not considered to be a significant fire risk, however containers may burn.
 - In a fire may decompose on heating and produce toxic / corrosive fumes.
- May emit corrosive fumes.

continued...

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 4 of 11

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety glasses.
- Use dry clean up procedures and avoid generating dust.
- Sweep up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place spilled material in clean, dry, sealable, labelled container.

MAJOR SPILLS

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

sodium stannate 150 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

sodium stannate 15 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:

sodium stannate 10 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:

sodium stannate 4 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

continued...

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 5 of 11

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

Glass container.

Plastic container.

Multi-ply woven plastic or paper bag with sealed plastic liner

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.

• Check that containers are clearly labelled.

Packaging as recommended by manufacturer.

STORAGE INCOMPATIBILITY

Avoid storage with acids.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+



+



+



+



+



+

+: May be stored together

O: May be stored together with specific preventions

X: Must not be stored together

continued...

SODIUM STANNATE

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- sodium stannate: CAS:12058- 66- 1 CAS:12209- 98- 2
- sodium hydroxide: CAS:1310- 73- 2

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m3)	Revised IDLH Value (ppm)
sodium stannate	100	
sodium hydroxide	10	

MATERIAL DATA

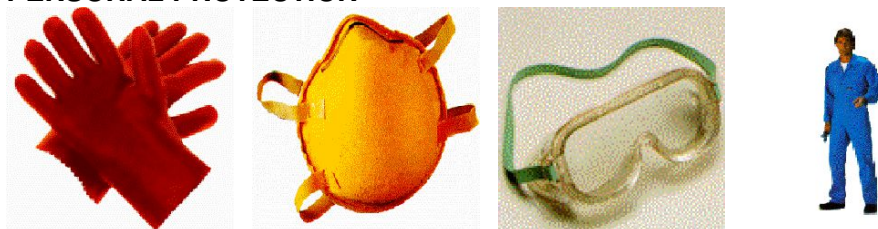
A TLV-TWA is recommended so as to minimise the risk of stannosis. The STEL (4.0 mg/m3) has been eliminated (since 1986) so that additional toxicological data and industrial hygiene experience may become available to provide a better base for quantifying on a toxicological basis what the STEL should in fact be.

INGREDIENT DATA

SODIUM HYDROXIDE:

The TLV-C is recommended based on concentrations that produce noticeable but not excessive, ocular and upper respiratory tract irritation.

PERSONAL PROTECTION



EYE

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

Wear chemical protective gloves, eg. PVC.
Wear safety footwear.

OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.

continued...

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 7 of 11

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- Eyewash unit.
- Ensure there is ready access to a safety shower.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25- 0.5 m/s (50- 100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5- 1 m/s (100- 200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1- 2.5 m/s (200- 500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening

continued...

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 8 of 11

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Odourless, white to light tan crystals; mixes with water. Insoluble in alcohol. Decomposes in air; aqueous solution is alkaline.

PHYSICAL PROPERTIES

Solid.

Mixes with water.

Molecular Weight: 266.67

Melting Range (°C): > 140 decomposes

Solubility in water (g/L): Miscible

pH (1% solution): 12

Volatile Component (%vol): Not applicable

Relative Vapour Density (air=1): Not applicable

Lower Explosive Limit (%): Not applicable

Autoignition Temp (°C): Not applicable

State: Divided solid

Boiling Range (°C): Not available.

Specific Gravity (water=1): 1.16

pH (as supplied): Not applicable

Vapour Pressure (kPa): Not applicable

Evaporation Rate: Not applicable

Flash Point (°C): Not applicable

Upper Explosive Limit (%): Not applicable

Decomposition Temp (°C): Not available.

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

By mouth most tin salts are relatively non-toxic. A number of tin "food" poisonings, producing vomiting, nausea and diarrhoea, have occurred after ingestion of fruit juices etc. with tin levels above 1400 ppm. This appears to be due to gastric irritation resulting from the activity and astringency of tin compounds, rather than systemic toxicity. Severe growth retardation occurs in rats with dietary stannous salts at levels exceeding 0.3%.

continued...

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 9 of 11

Section 11 - TOXICOLOGICAL INFORMATION

EYE

The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.

When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.

SKIN

The material can produce chemical burns following direct contact with the skin.

INHALED

Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system in a substantial number of individuals following inhalation.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

Chronic exposure to tin dusts and fume results in "stannosis" a mild form of pneumoconiosis. Chest symptoms develop several years after breathing difficulties (dyspnae) occur. No case of massive fibrosis from over-exposure to tin has been reported.

TOXICITY AND IRRITATION

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: 3457 mg/kg

IRRITATION

Nil Reported

SODIUM HYDROXIDE:

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

IRRITATION

Skin (rabbit): 500 mg/24h SEVERE

Eye (rabbit): 0.05 mg/24h SEVERE

Eye (rabbit): 1 mg/24h SEVERE

Eye (rabbit): 1 mg/30s rinsed- SEVERE

The material may produce severe irritation to the eye causing pronounced inflammation.

Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.

Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

continued...

SODIUM STANNATE

GHS Safety Data Sheet

Version No:2.0

Page 10 of 11

Section 11 - TOXICOLOGICAL INFORMATION

Section 12 - ECOLOGICAL INFORMATION

No data for sodium stannate.
Refer to data for ingredients, which follows:

SODIUM HYDROXIDE:

Prevent, by any means available, spillage from entering drains or water courses.

DO NOT discharge into sewer or waterways.

Ecotoxicity:

Fish LC50 (96h): 43mg/l

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,
IMDG

Section 15 - REGULATORY INFORMATION

REGULATIONS

No regulations applicable

No data available for sodium stannate as CAS: 12058-66-1, CAS: 12209-98-2.

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name
sodium stannate

CAS
12058- 66- 1, 12209- 98- 2

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied

continued...

SODIUM STANNATE

Page 11 of 11

Section 16 - OTHER INFORMATION

of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 12-May-2018