

SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1
Page 1 of 9**Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****PRODUCT NAME**

SODIUM TRIACETOXYBOROHYDRIDE

OTHER NAMES

C6-H10-B-Na-O6

PROPER SHIPPING NAME

ORGANOMETALLIC SUBSTANCE, SOLID, WATERREACTIVE, FLAMMABLE(contains sodium triacetoxyborohydride)

PRODUCT USE■ Reducing agent.
Mild selective reducing agent.**SUPPLIER**

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V.Ind.Estate,

248, Worli Road,

Mumbai- 400030, India

www.sdfine.com

Telephone: 91- 22 24959898/99

Fax: 91- 22 2493 7232

Email: technical@sdfine.com

Section 2 - HAZARDS IDENTIFICATION**GHS Classification**

Emit Flammable Gases with Water Category 2

Serious Eye Damage Category 1

Skin Corrosion/Irritation Category 1B

**EMERGENCY OVERVIEW****HAZARD**

DANGER

Determined by using GHS criteria

H261 In contact with water releases flammable gases.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

PRECAUTIONARY STATEMENTS**Prevention****Code**

P223

Phrase

Keep away from any possible contact with water, because of violent reaction and possible flash fire.

P231+P232 Handle under inert gas. Protect from moisture.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash ... thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

continued...

SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1

Page 2 of 9

Section 2 - HAZARDS IDENTIFICATION

Code	Phrase
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P335+P334	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
P363	Wash contaminated clothing before reuse.
Storage Code	Phrase
P402+P404	Store in a dry place. Store in a closed container.
P405	Store locked up.
Disposal Code	Phrase
P501	Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
sodium triacetoxyborohydride	56553-60-7	>98
hydrolyses in water to sodium borohydride	16940-66-2	
acetic acid glacial	64-19-7	

Section 4 - FIRST AID MEASURES

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- 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.

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.

SKIN

- If skin or hair contact occurs:
- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- For acute or repeated short term exposures to boron and its compounds:
- Nausea, vomiting, diarrhoea and epigastric pain, haematemesis and blue-green discolouration of both faeces and vomitus characterise adult boron intoxication.
- Access and correct any abnormalities found in airway and circulation.
- A tidal volume of 10-15 mg/kg should be maintained.

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SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1

Page 3 of 9

Section 4 - FIRST AID MEASURES

- Emesis should be induced unless the patient is in coma, is experiencing seizures or has lost the gag reflex. If any of these are present, gastric lavage should be performed with a large-bore tube after endotracheal intubation or in the presence of continuous respiratory action.

For acute or short term repeated exposures to strong acids:

- Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the dessicating action of the acid on proteins in specific tissues.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- DO NOT USE WATER, CO2 OR FOAM ON SUBSTANCE ITSELF

For SMALL FIRES:

- Dry chemical, soda ash or lime.

For LARGE FIRES:

- DRY sand, dry chemical, soda ash;
- OR withdraw and allow fire to burn itself out.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear full protective clothing plus breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.

FIRE/EXPLOSION HAZARD

- May ignite on contact with air, moist air or water.
- May react vigorously or explosively on contact with water.
- May decompose explosively when heated or involved in fire.
- May REIGNITE after fire is extinguished.

Combustion products include:

Decomposition may produce toxic fumes of: carbon monoxide (CO), carbon dioxide (CO2), other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.
- Keep dry.
- NOTE: May develop pressure in containers; open carefully. Vent periodically.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Material from spill may be contaminated with water resulting in generation of gas which subsequently may pressure closed containers.
- Hold spill material in vented containers only and plan for prompt disposal.
- Eliminate all ignition sources.
- Cover with DRY earth, sand or other non-combustible material.
- Then cover with plastic sheet to minimise spreading and to prevent exposure to rain or other sources of water.
- Use clean, non-sparking tools to collect absorbed material and place into loosely-covered metal or plastic containers ready for disposal.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Eliminate all ignition sources (no smoking, flares, sparks or flames)
- Stop leak if safe to do so; prevent entry into waterways, drains or confined spaces.

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

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SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1
Page 4 of 9

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of overexposure occurs.
- Use in a well-ventilated area.
- Avoid contact with moisture.
- Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions)
- Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.
- Establish good housekeeping practices.
- Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.

SUITABLE CONTAINER

- Storage containers must be hermetically sealed; the product must be stored under an inert, dry gas.

For low viscosity materials and solids:

Drums and jerricans must be of the non-removable head type.

Where a can is to be used as an inner package, the can must have a screwed enclosure.

STORAGE INCOMPATIBILITY

■ Sodium borohydride:

- reacts with water, steam, moist air, alcohols, glycols, phenols, cresols, palladium dust, to produce flammable hydrogen gas
- reacts violently with acids, forming diborane gas, with the possibility of explosion
- reacts violently with oxidisers, dimethylformamide, aldehydes, ketones, metal powders, metal salts, sodium hydroxide
- may polymerise on contact with bases, acrylonitrile,.
- Incidents involving interaction of active oxidants and reducing agents, either by design or accident, are usually very energetic and examples of so-called redox reactions.

Acetic acid:

- vapours forms explosive mixtures with air (above 39 C.)
- reacts violently with bases such as carbonates and hydroxides (giving off large quantities of heat), oxidisers, organic amines, acetaldehyde, potassium tert-butoxide
- reacts (sometimes violently), with strong acids, aliphatic amines, alkanolamines, alkylene oxides, epichlorohydrin, acetic anhydride, 2-aminoethanol, ammonia, ammonium nitrate, bromine pentafluoride, chlorosulfonic acid, chromic acid, chromium trioxide, ethylenediamine, ethyleneimine, hydrogen peroxide, isocyanates, oleum, perchloric acid, permanganates, phosphorus isocyanate, phosphorus trichloride, sodium peroxide, xylene
- attacks cast iron, stainless steel and other metals, forming flammable hydrogen gas.
- Segregate from alcohol, water.
- Avoid strong bases.
- Avoid reaction with oxidising agents.
- NOTE: May develop pressure in containers; open carefully. Vent periodically.

STORAGE REQUIREMENTS

- KEEP DRY! Packages must be protected from water ingress.

FOR MINOR QUANTITIES:

- Store in an indoor fireproof cabinet or in a room of noncombustible construction and
- provide adequate portable fire-extinguishers in or near the storage area.

FOR PACKAGE STORAGE:

- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³
India Permissible Levels of Certain Chemical Substances in Work Environment	acetic acid glacial (Acetic acid)	10	25	15	37

The following materials had no OELs on our records

- sodium triacetoxyborohydride: CAS:56553- 60- 7
- sodium borohydride: CAS:16940- 66- 2

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SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1

Page 5 of 9

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

MATERIAL DATA

ACETIC ACID GLACIAL:

SODIUM TRIACETOXYBOROHYDRIDE:

- for acetic acid:

NOTE: Detector tubes for acetic acid, measuring in excess of 1 ppm, are commercially available.

Exposure at or below the TLV-TWA and TLV-STEL is thought to protect the worker against conjunctival, nose and respiratory tract irritation.

Odour Safety Factor(OSF)

OSF=21 ("ACETIC ACID, GLACIAL").

SODIUM BOROHYDRIDE:

- For diborane :

Odour Threshold Value: 1.8-3.5 ppm

IDLH Level: 15 ppm

While the primary toxic effect of diborane involves the lungs, neurological effects may also occur. The recommended TLV-TWA is thought to prevent risk of acute poisoning of the lung and cumulative effects on the nervous system.

PERSONAL PROTECTION



RESPIRATOR

• Type AB-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes
- 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], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

OTHER

- Overalls.
- Eyewash unit.
- Barrier cream.
- Skin cleansing cream.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

ENGINEERING CONTROLS

- For large scale or continuous use:

- Spark-free, earthed ventilation system, venting directly to the outside and separate from usual ventilation systems
- Provide dust collectors with explosion vents.

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

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SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1
Page 6 of 9

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Powder; reacts with water.

PHYSICAL PROPERTIES

Solid.

Acid.

State	Divided solid	Molecular Weight	211.94
Melting Range (°C)	116- 120 (decomp)	Viscosity	Not available
Boiling Range (°C)	Not available	Solubility in water (g/L)	Reacts
Flash Point (°C)	Not available	pH (1% solution)	Not available
Decomposition Temp (°C)	Not available.	pH (as supplied)	Not applicable
Autoignition Temp (°C)	Not available	Vapour Pressure (kPa)	Negligible
Upper Explosive Limit (%)	Not available.	Specific Gravity (water=1)	Not available
Lower Explosive Limit (%)	Not available	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	Negligible	Evaporation Rate	Not applicable

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- May heat spontaneously
 - Identify and remove sources of ignition and heating.
 - Incompatible material, especially oxidisers, and/or other sources of oxygen may produce unstable product(s).
 - Avoid sources of water contamination (e.g. rain water, moisture, high humidity).
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

Health hazard summary table:

Acute toxicity	Not applicable
Skin corrosion/irritation	Skin Corr. 1 B
Serious eye damage/irritation	Eye Dam. 1
Respiratory or 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

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.
- Accidental ingestion of the material may be damaging to the health of the individual.
- Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident.
- Borate poisoning causes nausea, vomiting, diarrhoea and pain in the upper abdomen. Often persistent vomiting occurs, and there may be blood in the faeces.

EYE

- The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.
- If applied to the eyes, this material causes severe eye damage.
- Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely.

SKIN

- The material can produce chemical burns following direct contact with the skin.
- Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce

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SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1

Page 7 of 9

Section 11 - TOXICOLOGICAL INFORMATION

health damage following entry through wounds, lesions or abrasions.

- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
- Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue.

INHALED

- The material is not thought to produce adverse health effects following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
- 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. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.
- Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness.

CHRONIC HEALTH EFFECTS

- Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray. Borate can accumulate in the testes and deplete germ cells and cause withering of the testicles, according to animal testing. Hair loss, skin inflammation, stomach ulcer and anaemia can all occur. Repeated swallowing or inhalation irritates the stomach, causes a loss of appetite, disturbed digestion, nausea and vomiting, red rash, dry skin and mucous membranes, reddening of the tongue, cracking of the lips, inflamed conjunctiva, swelling of the eyelids and kidney injury. Animal testing revealed prolonged ingestion causes effects to the reproductive system in both males and females. Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Chronic exposure may inflame the skin or conjunctiva.

TOXICITY AND IRRITATION

- 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. No significant acute toxicological data identified in literature search.

SKIN

acetic acid glacial	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	3C
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Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
sodium borohydride	No Data Available	No Data Available	No Data Available	No Data Available
acetic acid glacial	LOW	No Data Available	LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. A Hierarchy of Controls seems to be common - the user should investigate:
 - Reduction.

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SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1

Page 8 of 9

Section 13 - DISPOSAL CONSIDERATIONS

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

For small quantities:

- Cautiously add the material to dry butanol in an appropriate solvent.
- Reaction may be vigorous and exothermic.
- Large volumes of flammable hydrogen may be generated and venting procedures should be conducted in a flame-proof environment.
- Neutralise the solution with aqueous acid, filter and burn the liquid portion in an approved incinerator.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: DANGEROUS WHEN WET, FLAMMABLE SOLID

HAZCHEM:

4W

Land Transport UNDG:

Class or division:	4.3	Subsidiary risk:	4.1
UN No.:	3396	UN packing group:	II
Shipping Name: ORGANOMETALLIC SUBSTANCE, SOLID, WATERREACTIVE, FLAMMABLE (contains sodium triacetoxyborohydride)			

Air Transport IATA:

ICAO/IATA Class:	4.3	ICAO/IATA Subrisk:	4.1
UN/ID Number:	3396	Packing Group:	II
Special provisions:	A3		
Cargo Only			
Packing Instructions:	489	Maximum Qty/Pack:	50 kg
Passenger and Cargo		Passenger and Cargo	
Packing Instructions:	483	Maximum Qty/Pack:	15 kg
Passenger and Cargo		Passenger and Cargo	
Limited Quantity		Limited Quantity	
Packing Instructions:	Forbidden	Maximum Qty/Pack:	Forbidden

Shipping name: ORGANOMETALLIC SUBSTANCE, SOLID, WATERREACTIVE, FLAMMABLE (contains sodium triacetoxyborohydride)

Maritime Transport IMDG:

IMDG Class:	4.3	IMDG Subrisk:	4.1
UN Number:	3396	Packing Group:	II
EMS Number:	F- G, S- N	Special provisions:	274
Limited Quantities:	500 g		

Shipping name: ORGANOMETALLIC SUBSTANCE, SOLID, WATERREACTIVE, FLAMMABLE (contains sodium triacetoxyborohydride)

Section 15 - REGULATORY INFORMATION

REGULATIONS

sodium triacetoxyborohydride (CAS: 56553-60-7) is found on the following regulatory lists;

"FisherTransport Information", "India Chemical Accidents Rules - Schedule 1: List of Hazardous Chemicals", "Sigma-AldrichTransport Information"

Regulations for ingredients

continued...

SODIUM TRIACETOXYBOROHYDRIDE

GHS Safety Data Sheet

Version No:4.1.1.1

Page 9 of 9

Section 15 - REGULATORY INFORMATION

sodium borohydride (CAS: 16940-66-2) is found on the following regulatory lists;

"FisherTransport Information", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "India Chemical Accidents Rules - Schedule 1: List of Hazardous Chemicals", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments"

acetic acid glacial (CAS: 64-19-7) is found on the following regulatory lists;

"CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "FisherTransport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "India Chemical Accidents Rules - Schedule 2: Threshold Quantities", "India Chemical Accidents Rules - Schedule 3: Named Chemicals", "India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 1: List of Hazardous and Toxic Chemicals", "India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 2: Isolated storage at Installations other than those covered by Schedule 4", "India Manufacture, Storage and Import of Hazardous Chemical Rules - Schedule 3: List of Hazardous Chemicals for Application of Rules 5 and 7 to 15", "India Permissible Levels of Certain Chemical Substances in Work Environment", "International Council of Chemical Associations (ICCA) - High Production Volume List", "International Fragrance Association (IFRA) Survey: Transparency List", "International Numbering System for Food Additives", "IOFI Global Reference List of Chemically Defined Substances", "OECD List of High Production Volume (HPV) Chemicals", "OSPAR National List of Candidates for Substitution – Norway", "Sigma-AldrichTransport Information"

Section 16 - OTHER INFORMATION

- Classification of the preparation and its individual components has drawn on official and authoritative sources using available literature references.

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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 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: 29-Mar-2018