


MATERIAL SAFETY DATA SHEET (MSDS)
according to Regulation (EC) No. 1907/2006
Version 2.0 Revision Date 01.06.2015

1.0 Identification of the substance/preparation and of the company/enterprise

- 1.1 Product identifiers** Sodium triacetoxyborohydride (STAB)
EINECS none
CAS 56553-60-7
RTECS none
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
 Reduction of aldehydes to alcohols in presence of ketones, ethers and double bonds.
- 1.3 Details of the supplier of the safety data sheet**
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- 1.4 Emergency telephone number** (+7)-8313-249 750/ 630

2.0 Hazards Identification

2.1 Classification of the substance or mixture Regulation (EC) No 1272/2008 Annex VI Table

Classification		Labelling		
Hazard Class and Category Code(s)	Hazard Statement Code(s)	Pictogram Signal Word Code(s)	Hazard Statement Code(s)	Suppl. Hazard statement code(s)
Water-reactive 2	H261	 Danger	H261	-

- 2.2 Label elements**
- Hazard Statement(s):**
 H261 In contact with water releases flammable gas.
- Precautionary statement(s):**
 P231 + P232 Handle under inert gas. Protect from moisture.
 P422 Store contents under inert gas.

3.0 Composition / information on ingredients. Hazards

Sodium triacetoxyborohydride	100 wt%
Trade names/Synonyms	STAB
CAS-No.	56553-60-7
EINECS	none
RTECS	none
Chemical formula	NaBH(OCOCH ₃) ₃
Molar mass	211.94
Classification:	Water-reactive 2; H261

4.0 First Aid Measures

- 4.1 Description of first aid measures**
After skin contact

Wash off immediately with plenty of water.

After eyes contact

Rinse out the eyes with plenty of water with the eyelids held open. Immediately summon eye specialist.

After ingestion

Make victim drink plenty of water, induce vomiting. Consult a doctor immediately.

After inhalation

If inhaled, remove to fresh air. If not breathing give artificial respiration.

If breathing is difficult, give oxygen.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed

No data available.

5.0 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Powder extinguisher.

Unsuitable extinguishing media

Don't use water and halogenated extinguishing agents.

5.2 Special hazards arising from the substance or mixture

Evolves big quantity of hydrogen when decomposed.

Combustion products

Development of hazardous combustion gases or vapours possible in case of fire.

5.3 Precautions for fire-fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

5.4 Further information

No data available.

6.0 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Suitable protective clothing.

6.2 Environmental precautions

Don't allow to enter sewerage system.

6.3 Methods and materials for containment and cleaning up

Collect dry. Avoid generation of dust. Rinse off small quantities with plenty of water.

6.4 Reference to other sections: For disposal see section 13.

7.0 Handling and Storage

7.1 Precautions for safe handling

Eating, drinking, smoking as well as keeping of food in the working area is forbidden.

Handle under dry nitrogen gas.

7.2 Conditions for safe storage, including any incompatibilities

Store only in original, tightly closed container, in a dry, well ventilated place; do not expose to high temperatures. Store in a closed system under dry nitrogen gas.

Special requirements

Don't store with oxidizing and acid substances and with heavy metal compounds. Avoid penetration of moisture.

7.3 Other information

Take precautionary measures against static discharges.

8.0 Exposure Control and Personal Protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Refer to section 7.

Exposure control for hazardous components:

Name	CAS No.
Acetic acid	64-19-7

Personal protective equipment

Respiratory	: breathing mask
Hand protection	: rubber gloves
Eye protection	: closely fitting goggles
Skin protection	: protective clothing

Industrial hygiene:

During processing ensure efficient exhaust ventilation in the working area. Wash hands before breaks and after handling the substance. Keep working clothes separate. Change contaminated or soaked clothing.

9.0 Physical and Chemical Properties**9.1 Information on basic physical and chemical properties**

Form	: powder or granules
Colour	: white
Odour	: slight odour of acetic acid
pH	: not available
Boiling point	: not available, decomposition
Flash point	: not available, decomposition
Oxidizing properties	: not available
Explosive properties	: not available
Lower limit of the melting range	: not available
Vapor pressure	: not available
Partition coefficient	: not available
Viscosity	: not available
Vapor density	: not available
Bulk density	: 300-350 kg/m ³ (powder) and 600-700 kg/m ³ (granules)
Decomposition temp.	: not available
Surface tension	: not available
Conductivity	: not available
Enthalpy of Vaporization	: not available
Solubility in water	: decomposed
Solubility	: not available

9.2 Other safety information

Ignition temperature	: not available
Lower limit of the melting range	: 114-120 °C (decomposition)

** The above information is not intended for use in preparing product specifications.
Contact JSC AVIABOR before making specifications.*

10.0 Stability and Reactivity**10.1 Reactivity**

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

Reacts with water.

10.4 Conditions to avoid

Stable. Keep away from heat, sparks, and flame.

10.5 Incompatible materials

Water, air, acids, alcohols, oxidizing and halogenated agents.

10.6 Hazardous decomposition products

Hydrogen, carbon dioxide, carbon monoxide, boron oxides.

11.0 Toxicological Information**11.1 Information on toxicological effects****Acute toxicity**

No data available.

Irritation and corrosion

No data available.

Skin corrosion/ irritation

No data available.

Serious eye damage/ eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1 % is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available.

Specific target organ toxicity – single exposure

No data available.

Specific target organ toxicity – repeated exposure

No data available.

Aspiration hazard

No data available.

Route of exposure

After skin contact : irritant

After eye contact : irritant

After inhalation : toxic

After ingestion : toxic

Additional information

RTECS : none

12.0 Ecological Information**12.1 Toxicity**

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

13.0 Disposal Consideration**13.1 Waste treatment methods**

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14.0 Transport Information

14.1 UN-Number

1409

14.2 UN proper shipping name

Metal hydrides, water-reactive, n.o.s. (Sodium triacetoxyborohydride)

14.3 Transport hazard class(es)

GGVS/GGVE/ADR/RID: 4.3, Hazard Identification: none, Classification: W2, Tunnel Code: (E)

IMO/GGVSee: 4.3, MFAG: 760, EmS: F-G, S- N; Stowage category: D

ICAO/IATA: 4.3, PAX: F, CAO: 487

14.4 Packaging group

GGVS/GGVE/ADR/RID: I IMO/GGVSee: I ICAO/IATA: I

14.5 Environmental hazards

GGVS/GGVE/ADR/RID: No IMO/GGVSee: No ICAO/IATA: No

14.6 Special precautions for user

See section 7.0

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

The substance is not intended to be transported in bulk.

15.0 Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available.

15.2 Chemical Safety Assessment

No data available.

16.0 Other Information

This material safety data sheet was prepared in compliance with laws, regulations and administrative provisions relative to classification, packaging and labeling of dangerous substances and preparations.

This information is to the best of Aviator's current knowledge and is intended to describe the product only in terms of health and safety and environmental requirements. Since the conditions of use are beyond our control, any recommendations or suggestions are made without guarantee and we disclaim any liability for loss or damage suffered from use of this information. Customers must satisfy themselves that the product is suitable for a particular purpose.

Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents.