

MATERIAL SAFETY DATA SHEET

SODIUM TERTIARY BUTOXIDE

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: SODIUM TERTIARY BUTOXIDE

Company Identification

Alkali Metals Ltd.,
Plot B-5, Block III, Uppal I.D.A,
Hyderabad - 500 039, India
For information call : +91 40 2756 3002 / 2756 2932 / 2720 1179
Email :- alkalimetals@alkalimetals.com

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	%	EINECS#
865-48-5	SODIUM TERTIARY BUTOXIDE	app.98	212-741-9

Hazard Symbols: F C

SECTION 3 - HAZARDS IDENTIFICATION - EMERGENCY OVERVIEW

Appearance : White, free-flowing powder.

Danger : Causes eye burns. Causes digestive tract burns. Causes respiratory tract burns. **Corrosive**:- Air sensitive. Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.

Target Organs:- None known.

Potential Health Effects:- Eye:-Contact with eyes may cause severe irritation, and possible eye burns. May cause eye injury.

Skin:- Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.

Ingestion:-Causes gastrointestinal tract burns.

Inhalation:- May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema.

Chronic:- Prolonged or repeated skin contact may cause dermatitis.

SECTION 4 - FIRST AID MEASURES

Eyes:-Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin:-Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:-Never give anything by mouth to an unconscious person. Get medical aid immediately. DO NOT induce vomiting. Allow the victim to rinse his mouth and then to drink 2-4 cupfuls of water, and seek medical advice.

Inhalation:-Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:-Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

General Information:-As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Combustion generates toxic fumes. Material will not burn. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

Extinguishing Media:- Do not use water directly on fire. For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature:- Not available. **Flash Point :-** Not available.

NFPA Rating:- Not published. **Explosion Limits, Lower & Upper:-** Not available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information:- Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:-Sweep up, then place into a suitable container for disposal.

SECTION 7 - HANDLING and STORAGE

Handling:-Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not get on skin or in eyes. Avoid ingestion and inhalation. Do not ingest or inhale.

Storage:- Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Keep away from water.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:-Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits			
Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
SODIUM TERTIARY BUTOXIDE	None listed	none listed	none listed

OSHA Vacated PELs:- SODIUM TERTIARY BUTOXIDE:- No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:-Wear safety glasses and chemical goggles if splashing is possible. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin:- Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:-Wear appropriate protective clothing to minimize contact with skin.

Respirators:- Wear a NIOSH/MSHA-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Solid
Odour	:	Odourless
Vapor Pressure		Not applicable
Evaporation Rate		Not applicable.
Boiling Point		Decomposes
Decomposition Temp.		Not available
Specific Gravity /Density		1.04

Appearance		White, free-flowing, Powder
PH		Not available.
Vapor Density		Not applicable.
Viscosity		Not applicable.
Freezing/Melting Point		Not applicable
Solubility		Decomposes
Molecular Formula		(CH ₃) ₃ CONa
Molecular Weight		74

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:-Stable under normal temperatures and pressures. **Conditions to**

Avoid:-

Incompatible materials, moisture, exposure to air, contact with water, oxidizers.

Incompatibilities with other Materials:- Reacts violently with acids, water. **Hazardous**

Decomposition Products:- Carbon monoxide, carbon dioxide. **Hazardous**

Polymerization:- Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

LD50/LC50:- Not available.**Carcinogenicity:-**SODIUM TERTIARY BUTOXIDE-Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology:-No data available.

Teratogenicity:-No data available.

Reproductive Effects:-No data available.

Neurotoxicity:-No data available.

Mutagenicity:-No data available.

Other Studies:- No data available.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:-Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: Not listed.

RCRA D-Series Chronic Toxicity Reference Levels: Not listed.

RCRA F-Series: Not listed.

RCRA P-Series: Not listed.

RCRA U-Series: Not listed.

Not listed as a material banned from land disposal according to RCRA.

SECTION 14 - TRANSPORT INFORMATION

US DOT :- Shipping Name: SODIUM TERTIARY BUTOXIDE, Hazard Class: 4.2,

UN Number:- UN1325, Packing Group:- II

IMO :- No information available.

IATA :- Hazard Class :- 4.1 Packing Group :-II

RID/ADR :- Hazard Class :- 4.1, Packing Group :- 6b

SECTION 15 - REGULATORY INFORMATION

TSCA :- CAS# 865-48-5 is listed on the TSCA inventory.

Health & Safety Reporting List :-None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules :- None of the chemicals in this product are under a Chemical Test Rule.

Section 12b :-None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule :-None of the chemicals in this material have a SNUR under TSCA.

SARA :-Section 302 (RQ), final RQ = 1000 pounds (454 kg)

Section 302 (TPQ) :- None of the chemicals in this product have a TPQ.

SARA Codes :- CAS # 124-41-4: acute, flammable.

Section 313 :- No chemicals are reportable under Section 313.

Clean Air Act :- This material does not contain any hazardous air pollutants or Class 1 Ozone depleters or Class 2 Ozone depleters.

Clean Water Act:- CAS# 124-41-4 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants or as Toxic pollutants under the CWA.

OSHA:-None of the chemicals in this product are considered highly hazardous by OSHA.

INTERNATIONAL :-European Labeling in Accordance with EC Directives. Hazard Symbols:- F C, Safety Phrases:- S 16 Keep away from sources of ignition - No smoking. S 24/25 Avoid contact with skin and eyes. S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 8 Keep container dry. S 28B After contact with skin, wash immediately with plenty of water and soap. S 43A In case of fire, use dry chemical (never use water).

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

MATERIAL SAFETY DATA SHEET

SODIUM N-BUTOXIDE

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: SODIUM N-BUTOXIDE

Company Identification

Alkali Metals Ltd.,
Plot B-5, Block III, Uppal I.D.A,
Hyderabad - 500 039, India
For information call :- +91 40 27563002 / 27562932 / 27201179
Email :- alkalimetals@alkalimetals.com

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	%	EINECS#
865-48-5	SODIUM N-BUTOXIDE	app.98	212-741-9

Hazard Symbols: F C

SECTION 3 - HAZARDS IDENTIFICATION - EMERGENCY OVERVIEW

Appearance:- White, free-flowing powder.

Danger:- Causes eye burns. Causes digestive tract burns. Causes respiratory tract burns.

Corrosive:- Air sensitive. Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.

Target Organs:- None known.

Potential Health Effects:- Eye:-Contact with eyes may cause severe irritation, and possible eye burns. May cause eye injury.

Skin:- Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.

Ingestion:-Causes gastrointestinal tract burns.

Inhalation:- May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema.

Chronic:- Prolonged or repeated skin contact may cause dermatitis.

SECTION 4 - FIRST AID MEASURES

Eyes:-Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin:-Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:-Never give anything by mouth to an unconscious person. Get medical aid immediately. DO NOT induce vomiting. Allow the victim to rinse his mouth and then to drink 2-4 cupfuls of water, and seek medical advice.

Inhalation:-Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:-Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

General Information:-As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Combustion generates toxic fumes. Material will not burn. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

Extinguishing Media:- Do not use water directly on fire. For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature:- Not available. **Flash Point :-** Not available.

NFPA Rating:- Not published. **Explosion Limits, Lower & Upper:-** Not available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information:- Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:-Sweep up, then place into a suitable container for disposal.

SECTION 7 - HANDLING and STORAGE

Handling:-Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not get on skin or in eyes. Avoid ingestion and inhalation. Do not ingest or inhale.

Storage:- Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Keep away from water.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:-Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits			
Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
SODIUM TERTIARY BUTOXIDE	None listed	none listed	none listed

OSHA Vacated PELs:- SODIUM N-BUTOXIDE:- No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:-Wear safety glasses and chemical goggles if splashing is possible. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin:- Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:-Wear appropriate protective clothing to minimize contact with skin.

Respirators:- Wear a NIOSH/MSHA-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid	Appearance	White, free-flowing Powder	
Odour	Odourless	pH	Not available.
Vapor Pressure	Not applicable	Vapor Density	Not applicable.
Evaporation Rate	Not applicable.	Viscosity	Not applicable.
Boiling Point	Decomposes	Freezing/Melting Point	Not applicable
Decomposition Temp.	Not available	Solubility	Decomposes
Specific Gravity /Density	1.04	Molecular Formula	(CH ₃) ₃ CONa
		Molecular Weight	74

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:-Stable under normal temperatures and pressures. **Conditions to**

Avoid:-

Incompatible materials, moisture, exposure to air, contact with water, oxidizers.

Incompatibilities with other Materials:- Reacts violently with acids, water. **Hazardous**

Decomposition Products:- Carbon monoxide, carbon dioxide. **Hazardous**

Polymerization:- Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

LD50/LC50:- Not available. **Carcinogenicity:-**SODIUM N-BUTOXIDE-Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology:-No data available.

Teratogenicity:-No data available.

Reproductive Effects:-No data available.

Neurotoxicity:-No data available.

Mutagenicity:-No data available.

Other Studies:- No data available.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:-Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: Not listed.

RCRA D-Series Chronic Toxicity Reference Levels: Not listed.

RCRA F-Series: Not listed.

RCRA P-Series: Not listed.

RCRA U-Series: Not listed.

Not listed as a material banned from land disposal according to RCRA.

SECTION 14 - TRANSPORT INFORMATION

US DOT :- Shipping Name: SODIUM N-BUTOXIDE, Hazard Class: 4.2,
UN Number:- UN1325, Packing Group:- II

IMO :- No information available.

IATA :- Hazard Class :- 4.1 Packing Group :-II

RID/ADR :- Hazard Class :- 4.1, Packing Group :- 6b

SECTION 15 - REGULATORY INFORMATION

TSCA :- CAS# 865-48-5 is listed on the TSCA inventory.

Health & Safety Reporting List :-None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules :- None of the chemicals in this product are under a Chemical Test Rule.

Section 12b :-None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule :-None of the chemicals in this material have a SNUR under TSCA.

SARA :-Section 302 (RQ), final RQ = 1000 pounds (454 kg)

Section 302 (TPQ) :- None of the chemicals in this product have a TPQ.

SARA Codes :- CAS # 124-41-4: acute, flammable.

Section 313 :- No chemicals are reportable under Section 313.

Clean Air Act :- This material does not contain any hazardous air pollutants or Class 1 Ozone depleters or Class 2 Ozone depleters.

Clean Water Act:- CAS# 124-41-4 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants or as Toxic pollutants under the CWA.

OSHA:-None of the chemicals in this product are considered highly hazardous by OSHA.

INTERNATIONAL :-European Labeling in Accordance with EC Directives. Hazard Symbols:- F C, Safety Phrases:- S 16 Keep away from sources of ignition - No smoking. S 24/25 Avoid contact with skin and eyes. S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 8 Keep container dry. S 28B After contact with skin, wash immediately with plenty of water and soap. S 43A In case of fire, use dry chemical (never use water).

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.