

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2010

Revision: 24.11.2010



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AN ISO 9001 : 2000 & 14001 COMPANY



Manufacturers of Sodium Amide, Sodium Alkoxides, Sodium Hydride, Sodium Azide, Tetrazoles, Amino Pyridines, Pyridine Derivatives, Cyclic Compounds, Fine Chemicals, Oleo Chemicals & Oleoresins

Identification of the substance/mixture and of the company/undertaking

· Product details

- **Trade name:** sodium azide
- **Registration number** 05-2114648412-52-0000 (REACH Pre-registration no)
- **Application of the substance / the preparation**
*Inflatable vehicle safety bag propellant
 chemical intermediate*
- **Manufacturer/Supplier:**
ALKALI METALS LTD.,
B-5, Block III, IDA, Uppal, Hyderabad – 500039 INDIA
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Email: alkalimetals@alkalimetals.com
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· Further information obtainable from:

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 B.P. 39, B-2450 Meerhout innochem@innochem.be Tel No: +3214301134
 Fax: +3214301109

· Information in case of emergency:

Belgium Poison Control Centre
 0032 (0) 70 245 245

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS06 skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
 Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T+; Very toxic

R28: Very toxic if swallowed.



N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R32: Contact with acids liberates very toxic gas.

- Information concerning particular hazards for human and environment: Not applicable.

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· **Label elements**· **Labelling according to Regulation (EC) No 1272/2008**· **Hazard pictograms**

GHS06 GHS09

· **Signal word** *Danger*

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- **Hazard-determining components of labelling:** Void
- **Hazard statements**
 - H300+EUH032 Fatal if swallowed. Contact with acids liberates very toxic gas.
 - H400 Very toxic to aquatic life.
 - H410 Very toxic to aquatic life with long lasting effects.
- **Precautionary statements**
 - P273 Avoid release to the environment.
 - P264 Wash thoroughly after handling.
 - P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 - P321 Specific treatment (see on this label).
 - P405 Store locked up.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



T+ Very toxic
N Dangerous for the environment

- **Risk phrases:**
 - 28 Very toxic if swallowed.
 - 32 Contact with acids liberates very toxic gas.
 - 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:**
 - 1/2 Keep locked up and out of the reach of children.
 - 28 After contact with skin, wash immediately with plenty of soap and water.
 - 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 - 60 This material and its container must be disposed of as hazardous waste.
 - 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description**
26628-22-8 sodium azide
- **Identification number(s)**
- **EINECS Number:** 247-852-1
- **Index number:** 011-004-00-7
- **Additional information:**
 - PRODUCT CODE : SC056
 - Molecular Formula : NaN₃
 - Molecular Weight : 65 g/mol
 - Composition : 99.5 %

4 First aid measures

- **General information:**
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.

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- **After inhalation:**
In case of unconsciousness place patient stably in side position for transportation.
Remove victim to fresh air. Enforce rest. If necessary, apply mouth-to-mouth resuscitation or mechanical ventilation. Call a doctor.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
If victim is still conscious, give large amount of water and induce vomiting at once, administer activated charcoal (20 - 40 g in 10 % slurry). Get medical attention. If unconscious do NOT attempt to induce vomiting.
- **Information for doctor:** Treat symptomatically and supportively.
- **The following symptoms may occur:**
Inhalation:-
Cough. Headache. Shortness of breath. Unconsciousness. Nasal stuffiness. Blurred vision. Slowing heart beat. Fall in blood pressure.
Skin:- Redness. Blisters.
Eyes:- Redness. Pain.
Ingestion:- Abdominal pain. Nausea. Sweating.

5 Firefighting measures

- **Suitable extinguishing agents:** Metal fire powder. Cover with dry sand or cement
- **For safety reasons unsuitable extinguishing agents:**
Sodium azide reacts vigorously with water.
Do not use foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**
May form toxic hydrazoic fumes and nitrous gases in the event of fire.
Do not allow product to come into contact with water.
- **Protective equipment:**
Wear fully protective suit.
Mouth respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:**
Avoid formation of dust.
Mount respiratory protective device.
- **Measures for environmental protection:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Dispose contaminated material as waste according to item 13.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Wash thoroughly after handling.
Do not eat, drink or smoke while using this product.
- **Information about fire - and explosion protection:**
Container explosion may occur under fire conditions.
Risk of fire and explosion on contact with acids and many metals (lead, brass, copper, mercury, silver).
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool and dry place.
Heat sensitive, hence, store at room temperature + 15°C to + 25°C.

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- **Information about storage in one common storage facility:**
Do not store together with acids.
Fireproof.
Keep separated from food and feedstuffs, metals, especially lead and its compounds.
Very corrosive to aluminum, moderate to copper & lead.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific applications**
Inflatable vehicle safety bag propellant
chemical intermediate

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** Provide eye wash stations and safety shower.

- **Ingredients with limit values that require monitoring at the workplace:**

26628-22-8 sodium azide

IOELV (EU)	Short-term value: 0.3 mg/m ³ Long-term value: 0.1 mg/m ³ Skin
Ceiling (ACGIH)	0.29 mg/m ³
MAK	0.2 mg/m ³ , inhalable fraction
United Kingdom, WEL – TWA	0.1 mg/m ³ TWA (as NaN ₃)
United Kingdom, WEL – STEL	0.3 mg/m ³ STEL (as NaN ₃)
Belgium – TWA	0.1 mg/m ³ VLE
Belgium – STEL	0.3 mg/m ³ VLE
France – VME	0.1 mg/m ³ VME
France – VLE	0.3 mg/m ³ VLE
Germany	0.2 mg/m ³ TWA
Malaysia	0.29 mg/m ³ (max. as Sodium azide), 0.11 ppm (max as hydrazinic acid fume)
Netherlands	0.3 mg/m ³ STEL
Netherlands	0.1 mg/m ³ MAC
Spain	0.1 mg/m ³ VLA – ED
Spain	0.3 mg/m ³ VLA – EC, 0.1 ppm VLA – EC (as hydrazinic acid fume)

- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.

- **Respiratory protection:** Suitable respiratory protective device recommended.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**

Tightly sealed goggles

· **Body protection:**

Boots

Protective work clothing

9 Physical and chemical properties

· **General Information**· **Appearance:****Form:** Powder**Colour:** White· **Odour:** Odourless· **Change in condition****Melting point/Melting range:** 275°C (decomposes)**Boiling point/Boiling range:** Undetermined.· **Flash point:** Not applicable.· **Danger of explosion:** Product does not present an explosion hazard.· **Density at 20°C:** 1.846 g/cm³· **Solubility in / Miscibility with water at 20°C:** 420 g/l· **pH-value:** >9

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**

Thermal decomposition occurs at >275 deg C with formation of sodium metal and nitrogen.

Avoid strong heating and exposure to moisture.

· **Materials to be avoided:**

Acids, heavy metals, metallic salts, oxidizing agents, hydrazine, caustics, Carbon disulfide, Chromyl chloride.

· **Dangerous reactions** Reacts violently with acids, other incompatible materials and water.· **Dangerous decomposition products:** May form toxic hydrazoic fumes and nitrous gases in the event of fire.

11 Toxicological information

· **Acute toxicity:**· **LD/LC50 values relevant for classification:**

Oral LD50 27 mg/kg (rat)

Dermal LD50 20 mg/kg (rabbit)

· **Primary irritant effect:**· **on the skin:** May cause skin irritation.· **on the eye:** May cause eye irritation.· **Sensitization:** No sensitizing effects known.· **Subacute to chronic toxicity:**

LOCAL EFFECTS :

After inhalation of dusts/aerosols : Severe irritations of : mucous membranes, respiratory tract. Possible damages : pulmonary oedema. Latency time until onset of action.

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After skin contact : Severe irritations. Danger of skin absorption.

After eye contact : Severe irritations.

After ingestion : Irritations of mucous membranes in the mouth, pharynx oesophagus and gastrointestinal tract.

Systemic effects:- CNS disorders, cardiovascular failure, tachycardia, drop in blood pressure, coughing, dypnoea, spasm, headache, dizziness, nausea, vomiting, collapse,unconsciousness.

12 Ecological information

- **Information about elimination (persistence and degradability):** Non-biodegradability

- **Behaviour in environmental systems:**

- **Mobility and bioaccumulation potential:**

The chemical substance is determinated to be not highly bioaccumulative.

- **Ecotoxic effects:**

- **Aquatic toxicity:**

EC50	38.5 mg/l (Photobacterium phosphoreum (Bacteria))
IC50	272 mg/l (Mixed culture of algae)
LC50	0.7 mg/l/96 hr (Lepomis macrochirus)
	4.2 mg/l/48h (Daphnia pulex (Water flea))

- **Remark:** Very toxic for fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Forms toxic mixtures in water, dilution measures notwithstanding.

Herbicidal effect.

Nematocidal effect.

- **Results of PBT and vPvB assessment TO BE PROVIDED IN THE REGISTRATION DOSSIER**

13 Disposal considerations

- **Product:**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**

- **Recommendation:**

Disposal must be made according to official regulations.

Handle contaminated packaging in the same way as the substance itself.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 6.1 Toxic substances.

- **Danger code (Kemler):** -

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- **UN-Number:** 1687
- **Packaging group:** II
- **Hazard label:** 6.1
- **Special marking:** Symbol (fish and tree)
- **Description of goods:** 1687 SODIUM AZIDE
- **Tunnel restriction code** D/E

- **Maritime transport IMDG:**



- **IMDG Class:** 6.1
- **UN Number:** 1687
- **Label** 6.1
- **Packaging group:** II
- **EMS Number:** F-A,S-A
- **Marine pollutant:** No
- **Segregation groups** Azides
- **Proper shipping name:** SODIUM AZIDE

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 6.1
- **UN/ID Number:** 1687
- **Label** 6.1
- **Packaging group:** II
- **Proper shipping name:** SODIUM AZIDE

- **UN "Model Regulation":** UN1687, SODIUM AZIDE, 6.1, II

15 Regulatory information

- **Labelling according to Regulation (EC) No 1272/2008**
- **Hazard pictograms** Please refer section 2
- **Signal word** Danger
- **Hazard statements** Please refer section 2
- **Precautionary statements** Please refer section 2
- **Labelling according to EU guidelines:**
- **Code letter and hazard designation of product:**
T+ : Very Toxic
N : Dangerous for the environment
- **Risk phrases:** Please refer section 2
- **Safety phrases:** Please refer section 2
- **Chemical safety assessment** A Chemical Safety Assessment has not been carried out.

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- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**
The substance is not listed as SVHC.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department.
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
- **Sources**
 - 1) *REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006*
 - 2) *Data from European Commission Joint Research Centre Institute for Health and Consumer Protection.*
<http://ecb.jrc.ec.europa.eu/esis/>
 - 3) *ECHA - Candidate List*
http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp
 - 4) *Toxnet HSDB*
<http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?./temp/~MCuUwg:1>
 - 5) *HAZ-MAP*
http://hazmap.nlm.nih.gov/cgi-bin/hazmap_search?tbl=TblAll&queryx=26628-22-8
 - 6) *Merck Chemicals*
http://www.merck-chemicals.in/is-bin/INTERSHOP.enfinity/WFS/Merck-IN-Site/en_US/-/INR/ViewSearch-Dispatch
 - 7) *Biodegradation and Bioconcentration of Existing Chemical Substances under the Chemical Substances Control Law*
http://www.safe.nite.go.jp/data/hazkizon/pk_e_kizon_disp.html?k_no=1244
 - 8) *INCHEM*
<http://www.inchem.org/documents/icsc/icsc/eics0950.htm>

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