

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **Capping Solution B2**

Composition: 60% Lutidine in Acetonitrile

Product Number **DN-3306-G**

Synonym/Trade Name: Oligo Synthesis Cap A Solution; Acetic Anhydride Solution
Relevant identified uses of the substance or mixture and uses advised against Identified uses: solution for analysis

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SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger Hazard statement(s)

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation. Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately contaminated clothing. Rinse skin with water P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazardnone Statements

Reduced Labeling (<= 125 ml)

Pictogram
Signal word Danger
Hazard statement(s) none

Precautionary none statement(s)
Supplemental Hazardnone Statements

Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	Classification
2,6-LUTIDINE (2,6-Dimethylpyridine)	
CAS-No. 108-48-5 EC-No. 203-587-3	Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; H226, H302, H315, H319
Acetonitrile	
CAS-No. 75-05-8 EC-No. 200-835-2 Index-No. 608-001-00-3	Flam. Liq. 2; Acute Tox. 4; Eye Irrit. 2; H225, H302, H332 H312 H319

Registration 01-2119471307-38- number XXXX

*A registration number is not available for this substance as the substance or its use

are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media Suitable

extinguishing media

Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Combustible.

Fire may cause evolution of:

nitrogen oxides, Hydrogen cyanide (hydrocyanic acid) Pay attention to flashback. Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

Environmental precautions

Do not let product enter drains. Risk of explosion.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemisorb®).

Dispose of properly. Clean up affected area.

Reference to other sections

For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with workplace control parameters

Exposure controls

Personal protective equipment Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves

Splash contact Material: butyl-rubber

Minimum layer thickness: 0,7 mm Break through time: > 10 min Material tested: Butoject® (KCL 898)

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours /aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- a) Appearance Form: liquid Color: clear
- b) Odor unpleasant
- c) Odor Threshold No data available
- d) pH No data available
- e) Melting point/freezing point No data available
- f) Initial boiling point and boiling range No data available
- g) Flash point 10,0 °C - c.c.
- h) Evaporation rate No data available
- i) Flammability No data available
flammability or explosive limits (solid, gas)
- j) Upper/lower No data available
- k) Vapor pressure No data available
- l) Vapor density No data available
- m) Relative density No data available
- n) Water solubility No data available

- o) Partition coefficient: n-octanol/water
- p) Autoignition temperature No data available
- q) Decomposition temperature No data available
- r) Viscosity
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available
- u) compound density 0.879g/cm³

Other safety information
No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity Vapors may form explosive mixture with air.

Chemical stability

sensitive to moisture

The product is chemically stable under standard ambient conditions (room temperature)

Possibility of hazardous reactions

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!

Violent reactions possible with:

Oxidizing agents perchlorates perchloric acid Nitric acid

fuming sulfuric acid conc. sulfuric acid Acids Acid anhydrides

Acid chlorides

Conditions to avoid

A range from approx. 15 Kelvin below the flash point is to be rated as critical. Warming.

Incompatible materials

various plastics, Rubber

Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects Mixture Acute toxicity

Acute toxicity estimate Oral - 457,99 mg/kg (Calculation method)

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

Acute toxicity estimate Inhalation - 4 h - > 20 mg/l (Calculation method)

Symptoms: Possible symptoms:, mucosal irritations Acute toxicity estimate Dermal - > 2.000 mg/kg (Calculation method)

Skin corrosion/irritation

Mixture causes skin irritation.

Serious eye damage/eye irritation

Mixture causes serious eye irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

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

Additional Information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

2,6-Dimethylpyridine

Acute toxicity

LD50 Oral - Rat - 400 mg/kg Remarks: (RTECS)

LCLo Inhalation - Rat - 1 h - 33,42 mg/l Remarks: (RTECS)

LD50 Dermal - Rabbit - > 1.000 mg/kg Remarks: (External MSDS)

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
No data available

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

Acetonitrile Acute toxicity

LD50 Oral - Mouse - male and female - 617 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Mouse - male and female - 4 h - 6,022 mg/l (OECD Test Guideline 403)

Acute toxicity estimate Dermal - 1.500 mg/kg (Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes serious eye irritation. (OECD Test Guideline 405)

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization Buehler Test - Guinea pig Result: negative (OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test

Test system: *S. typhimurium* Result: negative Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells

Result: Positive results were obtained in some in vitro tests. Remarks: (National Toxicology Program)

Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells

Result: negative

Remarks: Sister chromatid exchange Test system: *Saccharomyces cerevisiae* Result: positive

Remarks: Cytogenetic analysis (ECHA)

Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test

Result: negative

Method: OECD Test Guideline 474 Species: Mouse - male and female Result: negative

Carcinogenicity

No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Animal testing did not show any effects on fertility.

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Mixture

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

No data available

Components

2,6-Dimethylpyridine (2,6, Lutidine)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Tetrahymen pyriformis - 694 mg/l - 72 h Remarks: (ECOTOX Database)

Toxicity to bacteria

microtox test EC50 - Photobacterium phosphoreum - 117 mg/l

- 30 min Remarks: (Lit.)

Acetonitrile

Toxicity to fish

flow-through test LC50 - Pimephales promelas (fathead minnow) - 1.640 mg/l - 96 h

Remarks: (ECHA)

Toxicity to algae

static test NOEC - Phaeodactylum tricornutum - 400 mg/l - 72 h (ISO 10253)

static test ErC50 - Phaeodactylum tricornutum - 9.696 mg/l - 72 h (ISO 10253)

Toxicity to bacteria

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: TRANSPORT INFORMATION

UN number

ADR/RID: 1993 IMDG: 1993 IATA: 1993

Proper Shipping Name

ADR/RID: FLAMMABLE LIQUID, N.O.S. (Acetonitrile 2,6-Dimethylpyridine)

IMDG: FLAMMABLE LIQUID, N.O.S. (Acetonitrile, 2,6-Dimethylpyridine)

IATA: Flammable liquid, n.o.s. (Acetonitrile, 2,6-Dimethylpyridine)

Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

Packaging group

ADR/RID: II IMDG: II IATA: II

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

No data available

SECTION 15: REGULATORY INFORMATION

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H225 Highly flammable liquid and vapor.

H226 Flammable liquid and vapor.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.
H332 Harmful if inhaled.

Relevant changes since previous version
2. Hazards identification

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. ChemGenes India Pvt. Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.
