

DN-3306-F  
Version: 2013Cap B 2  
Revision: 2022**Material Safety Data Sheet****SECTION 1.****CHEMICAL PRODUCT CHEMICAL IDENTIFICATION**

Product Name: **Capping Solution B2**  
Chemical Name/Combination: 60% Symmetrical Collidine in Acetonitrile (v:v)  
Catalog Number: **DN-3306-F**  
Synonym/Trade Name: Capping Solution B2/CAP B2,  
2,4,6-Trimethylpyridine Solution for DNA/RNA Synthesis  
Identified uses: Reagent for analysis  
Manufacturer or supplier's: ChemGenes India Pvt. Ltd  
207, Regency Plaza, 5-Park Road  
Lucknow-226 001, U.P, India,  
Ph: +91 86874 21036,  
Email: info@chemgenesindia.com

**SECTION 2.****COMPOSITION, INFORMATION ON INGREDIENTS**

Component: Collidine  
CAS#: N/A  
Percentage: 60%  
M.W.: 121.18

Component: Acetonitrile  
CAS#: 75-05-8  
EC # (EINECS): N/A  
Percentage: 40%  
M.W.: 41.05

**SECTION 3.****HAZARDS IDENTIFICATION**

NFPA Ratings (SCALE 0-4): Health=2 Fire=3 Reactivity=0

**Emergency Overview**

Physical Description: colorless liquid Odor: Sweet ether-like odor

Major Health Hazards: Respiratory tract irritation, eye irritation, blood damage.

**Physical Hazards**

Flammable liquid and vapor. Vapor may cause flash fire.

**Potential Health Effects****Inhalation:**Short Term Exposure: Irritation, nausea, stomach pain, loss of voice, chest pain,  
difficulty breathing, wheezing, headache, symptoms of  
drunkenness, disorientation, convulsions, coma.

Long Term Exposure: Lung damage, blood disorders.

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**Skin Contact:**

Short Term Exposure: Irritation, absorption may occur, same as effects reported in short term inhalation.

Long Term Exposure: Same as effects reported in short term inhalation.

**Eye Contact:**

Short Term Exposure: Irritation, tearing.

Long Term Exposure: Same as effects reported in short term exposure.

**Ingestion:**

Short Term Exposure: Same as effects reported in short term exposure. Bluish skin color.

Long Term Exposure: No information on significant adverse effects.

**SECTION 4. FIRST AID MEASURES**

Inhalation: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get professional medical assistance immediately.

Skin Contact: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Thoroughly dry and clean contaminated clothing and shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water or normal saline for at least 15 minutes. Then get medical attention immediately.

Ingestion: If a large amount is swallowed. Get medical assistance immediately.

**SECTION 5. FIRE FIGHTING MEASURES**

Fire and Explosion Hazards: Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive.

Extinguishing Media: Alcohol resistant foam, carbon dioxide, regular dry chemical and water.

Fire Fighting: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks.

For fires in cargo or storage area: Cool containers with water

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from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire.

Flood water spray. Do not scatter spilled material with high-pressure water streams. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Flash Point: 43 F (6°C) (OC, acetonitrile)  
Lower Flammable Limit: 4.4%  
Upper Flammable Limit: 16.0%

Flammability Class (OSHA): N/A

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Occupational Release:

Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leaks if possible without personal risk. Reduce vapors with water spray. Do not get water inside container.

Small spills: absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Notify local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at 800-424-8802 (USA) or 202-426- 2675 (USA).

#### **SECTION 7. HANDLING STORAGE**

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. See original container for storage recommendations. Keep separated from incompatible substances.

#### **SECTION 8. EXPOSURE CONTROLS, PERSONAL PROTECTION**

##### **Exposure limits**

Acetonitrile:

- 40 ppm (70 mg/m<sup>3</sup>) OSHA TWA
- 40 ppm (67 mg/m<sup>3</sup>) ACGIH TWA
- 60 ppm (101 mg/m<sup>3</sup>) ACGIH STEL
- 20 ppm (34 mg/m<sup>3</sup>) NIOSH recommended TWA

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Ventilation: Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Eye Protection: Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Clothing: Wear appropriate chemical resistant clothing. Gloves: Wear appropriate chemical resistant gloves.

Respirator: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any chemical cartridge respirator with organic vapor cartridges.

Any chemical cartridge respirator with a full face piece and organic vapor cartridges. Any air-purifying respirator with a full face piece and an organic vapor canister.

For Unknown Concentrations of Immediately Dangerous to Life of Health-

Any supplied-air respirator with full face piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full face piece.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Description: Liquid

Color: Clear, Colorless

Odor: Ether odor

Boiling Point: N/A

Freezing Point: N/A

Vapor Pressure: N/A

Vapor Density (air=1): 1.3 (Acetonitrile)

Specific Gravity: N/A

Water Solubility: N/A

PH: N/A

Volatility: 96%

Odor Threshold: N/A

Evaporation Rate: 5.8 (butyl acetate=1) Coefficient of Water/Oil Distribution: N/A

Density 0.866g/cm<sup>3</sup>

## SECTION 10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Conditions to Avoid: Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Avoid inhalation of material or combustion by-

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products. Keep out of water supplies and sewers.  
Incompatibilities: Acids, metals, bases, oxidizing materials, combustible materials, and reducing agents.

Hazardous Decomposition:

Thermal decomposition products: cyanides, oxides of carbon, oxides of nitrogen.

Polymerization: Will not polymerize.

### **SECTION 11. TOXICOLOGICAL INFORMATION**

Irrigation Data for Acetonitrile:

500mg open skin-rabbit mild; 100 ul/24 hours eyes-rabbit moderate.

Toxicity Data for Acetonitrile:

500 mg/kg oral-woman TDLo; 800 mg/kg oral-child TDLo; 571 mg/kg oral-man TDLo; 64 mg/kg oral-man TDLo; 160 ppm/4 hours inhalation-human TCLo; 2460 mg/kg oral- rat LD50; 7551 ppm/8 hours inhalation-rat LC50; 269 mg/kg oral-mouse LD50; 2693 ppm/1 hours inhalation-mouse LC50; 50 mg/kg oral-rabbit LD50; 2828 ppm/4 hours inhalation-rabbit LC50; > 2gm/kg skin-rabbit LD50.

Carcinogen Status: ACGIH: A4-Not classifiable as a Human Carcinogen.

Local Effects: irritant: inhalation, eye.

Acute Toxicity Level: Moderately Toxic: ingestion

Slightly Toxic: inhalation

Target Organs: Blood.

Medical Conditions Aggravated By Exposure: Central nervous system disorders, heart or cardiovascular disorders, kidney disorders, liver disorders, skin disorders and allergies.

Additional:

Tumorigenic Data: 400 ppm inhalation-rat TLCo/6 hours – 2 year intermittent.

Mutagenic Data: Sex chromosome loss and non disjunction – Drosophila

Melanogaster inhalation 131 ppm; sex chromosome loss and non disjunction – Saccharomyes cerevisiae 47600 ppm; sister chromatid exchange – hamster ovary 5gm/L Reproductive

Effects Data: 1800 ppm inhalation-rat TCLo/6 hours 6-2 days pregnant female continuous; 390 mg/kg oral-rabbit TDLo 6-18 days pregnant female continuous.

### **SECTION 12. ECOLOGICAL INFORMATION**

N/A

### **SECTION 13. DISPOSAL CONSIDERATIONS**

Dispose in accordance with all applicable regulations. Subject to disposal regulations:

U.S. EPA 40 CFR 262. Hazardous Waste #: U003.

### **SECTION 14. TRANSPORT INFORMATION**

Hazard Classification:

Class 3,

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Packaging Group II,  
Proper shipping Name Flammable liquids, n.o.s.  
UN Number: UN 1993  
Shipping Name: Symmetrical Collidine in Acetonitrile

### SECTION 15. REGULATORY INFORMATION

U.S. Regulations: CERCLAA sections 102a/103 Hazardous substances (40 CFR 302.4):  
Acetonitrile: 5000 LBS RQ  
SARA Title III section 302 extremely hazardous substances (40 CFR 355.30) not regulated.  
SARA Title III section 304 extremely hazardous substances (40 CFR 355.40) not regulated  
SARA Title III section 311/312 extremely hazardous categories (40 CFR 370.21):  
cute: Yes  
Chronic: No  
Fire: Yes  
Reactive: No  
Sudden Release: No  
SARA Title III Section 313 (40 CFR 372.65): Acetonitrile  
OSHA Process safety (29 CFR 1910.119): Not regulated.  
National Inventory Status: U.S. Inventory (TSCA): Not listed on inventory. This product is sold for Research and Development Use Only.  
TSCA 12(b) Export Notification: Not listed.

### SECTION 16. OTHER 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.

-----End of MSDS-----