

# MATERIAL SAFETY DATA SHEET

## N<sup>4</sup>-Aminocytidine (PPC-AC02)

Version 1.5 Page 1/1

Processing date February, 2015

### 1. NOTE

Positive Controls contain mutagenic chemicals in small quantities. Handle in accordance with NIH guidelines for the safe handling of chemical carcinogens. Wear approved gloves. Do not mouth pipette. Dispose of waste in accordance with your institutional requirements.

The following pages contain the MSDS provided by the producer of the positive control chemicals.

### 2. ORDER NUMBER AND CONTENTS

Order Number	Chemical	CAS#	Amount per vial
PPC-AC02	N <sup>4</sup> -Aminocytidine	57294-74-3	2.5 mg

The same positive control chemical can also be part of a complete AMES MPF™ mutagenicity assay kit which is sold under a different Order Number.



## N4-AMINOCYTIDINE

## 1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND THE COMPANY UNDERTAKING

Chemical Name:	N4-Aminocytidine
Product Code:	NA07954
Synonyms:	N4-Amino-D-cytidine.
Recommended uses:	For R&D purposes
Supplier:	Carbosynth Ltd, 8&9 Old Station Business Park, Compton, Berkshire, RG20 6NE, UK.
Emergency contact numbers:	Telephone: +44 (0)1635 578 444 Fax: +44 (0)1635 579 444 Mobile: +44 (0)7887 998 634

## 2. HAZARDS IDENTIFICATION

Harmful by inhalation, in contact with skin and if swallowed. May cause heritable genetic damage.

**Classification:**

According to Regulation (EC) No1272/2008.

Acute toxicity, oral (Category 4)  
Acute toxicity, dermal (Category 4)  
Acute toxicity, inhalation (Category 4)  
Germ cell mutagenicity (Category 1A)

**Labelling and precautionary statements:**

Pictogram:



Signal word:

Danger.

<b>Hazard statement(s):</b>	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H332	Harmful if inhaled.
	H340	May cause genetic defects.

**Precautionary statement(s):**

P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P281	Use personal protective equipment as required
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard symbol(s):** Xn Harmful.



## N4-AMINOCYTIDINE

<b>R-phrase(s):</b>	R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
	R46	May cause heritable genetic damage.
<b>S-phrase(s):</b>	S22	Do not breathe dust.
	S36/37/39	Wear suitable protective clothing, gloves, and eye/face protection.
	S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
	S53	Avoid exposure – obtain special instructions before use.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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Molecular Formula: $C_9H_{14}N_4O_5$	Molecular weight: 258.23	CAS Number: 57294-74-3	EINECS Number: -
Synonyms:	N4-Amino-D-cytidine.		

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**4. FIRST AID MEASURES**

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Eye contact:	Immediately flush eye with copious amounts of water for at least 15 minutes. Get medical aid immediately.
Skin contact:	In case of contact remove contaminated clothing and immediately wash affected areas with copious quantities of water and soap for at least 15 minutes. Get medical aid immediately. Wash contaminated clothing before reuse.
Inhalation:	Remove to fresh air. If not breathing give artificial respiration. Get medical aid.
Ingestion:	Never give anything by mouth to an unconscious person. Wash out mouth with water provided person is conscious. Call a physician.
Notes to Physician:	Treat symptomatically and supportively.

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**5. FIRE-FIGHTING MEASURES**

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Personal precautions:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
Extinguishing media:	In case of fire use water spray, dry chemical powder, carbon dioxide, or alcohol-resistant foam.
Special hazards arising from the substance or mixture:	Carbon monoxide, carbon dioxide, nitrogen oxides. Emits toxic fumes under fire conditions.

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**6. ACCIDENTAL RELEASE MEASURES**

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## N4-AMINOCYTIDINE

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General Information:	Use proper personal protective equipment as indicated in Section 8.
Personal precautions:	Wear self-contained breathing apparatus, eye protection and gloves. Keep personal hygiene. Avoid contact with skin and eyes. Avoid dust formation. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation. Keep unprotected persons away.
Environmental precautions:	Do not let product enter the drains.
Spills/Leaks:	Vacuum or sweep up and place the material in appropriate container for disposal and dispose of as hazardous waste. Avoid dust formation. Ventilate area, clean up spills and wash spill site after material pickup is complete, observing precautions in the Protective Equipment section.

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## 7. HANDLING AND STORAGE

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Handling:	Wear appropriate protective clothing - see Section 8. Wash thoroughly after handling. Use only under a chemical fume hood. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation. Avoid formation of dust and aerosols. Avoid prolonged or repeated exposure.
Storage:	Store in a cool, dry well-ventilated area. Keep container tightly closed. Store away from oxidizing agents. Light sensitive. Refrigerate. Keep cold. Store at 2 – 8 °C.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Personal protection equipment:**

Eye protection:	Wear appropriate protective safety glasses with side-shields conforming to EN166, chemical safety goggles or face-shield (min. 8-inch) as described by OSHA's eye and face protection regulations. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin protection:	Wear appropriate protective gloves to prevent skin exposure, as defined in EU Directive 89/686/EEC and the standard EN 374 derived from it.
Body protection:	Appropriate protective clothing, overalls.
Respiratory protection:	Where risk assessment indicates air-purifying respirators are required use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Respirators and components must be tested and approved under



## N4-AMINOCYTIDINE

Hygiene measures: appropriate government standards - NIOSH (US) or CEN (EU).  
Use good working practices. Wash hands and face thoroughly after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to pale yellow solid.  
Odour: Data not available/does not apply.  
Odour threshold: Data not available/does not apply.  
pH: Data not available/does not apply.  
Melting point: Data not available/does not apply.  
Boiling point: Data not available/does not apply.  
Flash point: Data not available/does not apply.  
Evaporation rate: Data not available/does not apply.  
Flammability: Data not available/does not apply.  
Flammability or explosive limits: Data not available/does not apply.  
Danger of explosion: Data not available/does not apply.  
Vapor pressure: Data not available/does not apply.  
Vapor density: Data not available/does not apply.  
Relative density: Data not available/does not apply.  
Solubility: Soluble (Water 50mg/ml).  
Partition coefficient: n-octanol/water Data not available/does not apply.  
Auto-ignition temperature: Data not available/does not apply.  
Decomposition temperature: Data not available/does not apply.  
Viscosity: Data not available/does not apply.

## 10. STABILITY AND REACTIVITY

Chemical stability: Stable under recommended storage conditions.  
Conditions to avoid: Data not available.  
Incompatibilities with other materials: Data not available.  
Hazardous decomposition products: Carbon monoxide, carbon dioxide, nitrogen oxides.  
Hazardous polymerization: Data not available.

## 11. TOXICOLOGICAL INFORMATION

**RTCS #:** YU8055000.  
**Acute toxicity:** Data not available.  
**Skin corrosion/irritation:** Data not available.  
**Serious eye damage/eye irritation:** Data not available.  
**Respiratory or skin sensitization:** Data not available.

## N4-AMINOCYTIDINE

<b>Germ cell mutagenicity:</b>	May cause genetic defects.
<b>Carcinogenicity: IARC:</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Genotoxicity in vitro: Hamster: Lungs: Mutation in mammalian somatic cells.	
<b>Reproductive toxicity:</b>	Data not available.
<b>Specific target organ toxicity - single exposure:</b> Data not available.	
<b>Specific target organ toxicity - repeated exposure:</b> Data not available.	
<b>Aspiration hazard:</b>	Data not available.
<b>Signs and symptoms of exposure:</b>	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
<b>Target organs:</b>	Data not available.
<b>Potential health effects:</b>	
Eye:	May cause serious eye irritation.
Skin:	Harmful by skin absorption. May cause skin irritation.
Ingestion:	Harmful if swallowed.
Inhalation:	Harmful if inhaled. May cause respiratory tract irritation.
Chronic:	No information found.

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### 12. ECOLOGICAL INFORMATION

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Data not available.

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### 13. DISPOSAL CONSIDERATIONS

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Observe all federal, state and local environmental regulations.  
Contact a licensed professional waste disposal service to dispose of this material.

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### 14. TRANSPORT INFORMATION

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#### **ADR/RID**

Not classified as hazardous for transport.

#### **IMDG**

## N4-AMINOCYTIDINE

Not classified as hazardous for transport.

### IATA

Not classified as hazardous for transport.

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### 15. REGULATORY INFORMATION

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

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### 16. ADDITIONAL INFORMATION

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Further information on PPE:

European Standard & performance category markings:

EN143 -	Particulates filter.
EN166 -	Standard applicable to all types of personal eye protectors.
EN374 -	Protects hands against chemicals and/or microorganisms.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

