SAFETY DATA SHEET
Aclacinomycin A

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product name Aclacinomycin A
Product number AA08264
Synonyms; trade names Aclarubicin
CAS number 57576-44-0

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Laboratory reagent. Manufacture of substances. Research and development.

1.3. Details of the supplier of the safety data sheet
Supplier Carbosynth Ltd
8&9 Old Station Business Park
Compton
Berkshire
RG20 6NE
UK
+44 1635 578444
+44 1635 579444
info@carbosynth.com

1.4. Emergency telephone number
Emergency telephone +44 7887 998634

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards Not Classified
Health hazards Acute Tox. 3 - H301
Environmental hazards Not Classified

2.2. Label elements
Pictogram

Signal word Danger
Hazard statements H301 Toxic if swallowed.
Aclacinomycin A

Precautionary statements

P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321 Specific treatment (see medical advice on this label).
P330 Rinse mouth.
P501 Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Product name</th>
<th>Aclacinomycin A</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number</td>
<td>57576-44-0</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>C₄₂H₅₃NO₁₅</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Get medical advice/attention if you feel unwell.

Inhalation
Remove person to fresh air and keep comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if symptoms are severe or persist.

Ingestion
Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if symptoms are severe or persist.

Skin contact
Remove contaminated clothing. Rinse with water. Continue to rinse for at least 15 minutes. Wash contaminated clothing before reuse. Get medical attention if symptoms are severe or persist.

Eye contact
Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist.

4.2. Most important symptoms and effects, both acute and delayed

General information
See Section 11 for additional information on health hazards.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards
None known.

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters
Aclacinomycin A

### Special protective equipment for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Use protective equipment appropriate for surrounding materials.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions**
Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of dust and vapours. Provide adequate ventilation. Keep unnecessary and unprotected personnel away from the spillage.

**Environmental precautions**
Avoid discharge into drains or watercourses or onto the ground.

#### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up**
Wear protective clothing as described in Section 8 of this safety data sheet. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. Clear up spills immediately and dispose of waste safely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

#### 6.4. Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions**
Wear protective clothing as described in Section 8 of this safety data sheet. Wash hands thoroughly after handling. Provide adequate ventilation. Avoid generation and spreading of dust. Avoid contact with skin and eyes. Avoid inhalation of dust and vapours. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product.

**Storage precautions**
Keep container tightly closed. Store at room temperature.

#### 7.3. Specific end use(s)

**Specific end use(s)**
The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

**Occupational exposure limits**
No exposure limits known for ingredient(s).

#### 8.2. Exposure controls

**Appropriate engineering controls**
Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection**
Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Aclacinomycin A

Hand protection
Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection
Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection
Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Particulate filters should comply with European Standard EN143. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls
Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Colour</td>
<td>Yellow to Orange</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odour threshold</td>
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</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
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<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
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<tr>
<td>Upper/lower flammability or explosive limits</td>
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<tr>
<td>Vapour pressure</td>
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<tr>
<td>Vapour density</td>
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<tr>
<td>Relative density</td>
<td>No data available</td>
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<tr>
<td>Solubility(ies)</td>
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<tr>
<td>Partition coefficient</td>
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<tr>
<td>Auto-ignition temperature</td>
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<tr>
<td>Decomposition Temperature</td>
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<tr>
<td>Viscosity</td>
<td>No data available</td>
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<tr>
<td>Explosive properties</td>
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</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
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</tbody>
</table>

9.2. Other information

Molecular weight
811.87

SECTION 10: Stability and reactivity
Aclacinomycin A

10.1. Reactivity
Reactivity
No data available.

10.2. Chemical stability
Stability
Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
Conditions to avoid
Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials
Materials to avoid
Strong oxidising agents.

10.6. Hazardous decomposition products
Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 58.56
Species Rat
Notes (oral LD₅₀) Acute Tox. 3 - H301 Toxic if swallowed.
ATE oral (mg/kg) 58.56

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity None of the ingredients are listed or exempt.
Aclacinomycin A

Reproductive toxicity

Reproductive toxicity - fertility

Based on available data the classification criteria are not met.

Reproductive toxicity - development

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure

Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard

Not relevant. Solid.

General information

Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

Dust may irritate the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

Ingestion

May cause stomach pain or vomiting. May cause severe internal injury.

Skin contact

Prolonged contact may cause dryness of the skin.

Eye contact

Dust may cause slight irritation.

Route of exposure

Ingestion Inhalation Skin and/or eye contact

Target organs

No specific target organs known.

SECTION 12: Ecological information

Ecotoxicity

Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity

Based on available data the classification criteria are not met.

12.2. Persistence and degradability

Persistence and degradability

The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

No data available.

12.4. Mobility in soil

Mobility

No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

Other adverse effects

None known.

SECTION 13: Disposal considerations
Aclacinomycin A

13.1. Waste treatment methods

**General information**
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered.

### SECTION 14: Transport information

#### 14.1. UN number

<table>
<thead>
<tr>
<th>UN No. (ADR/RID)</th>
<th>3462</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN No. (IMDG)</td>
<td>3462</td>
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<tr>
<td>UN No. (ICAO)</td>
<td>3462</td>
</tr>
<tr>
<td>UN No. (ADN)</td>
<td>3462</td>
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</tbody>
</table>

#### 14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>Proper shipping name (ADR/RID)</th>
<th>TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (Aclacinomycin A)</th>
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<tbody>
<tr>
<td>Proper shipping name (IMDG)</td>
<td>TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (Aclacinomycin A)</td>
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<tr>
<td>Proper shipping name (ICAO)</td>
<td>TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (Aclacinomycin A)</td>
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<tr>
<td>Proper shipping name (ADN)</td>
<td>TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. (Aclacinomycin A)</td>
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#### 14.3. Transport hazard class(es)

<table>
<thead>
<tr>
<th>ADR/RID class</th>
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<tr>
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<td>IMDG class</td>
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</tr>
<tr>
<td>ICAO class/division</td>
<td>6.1</td>
</tr>
<tr>
<td>ADN class</td>
<td>6.1</td>
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</table>

**Transport labels**

#### 14.4. Packing group

<table>
<thead>
<tr>
<th>ADR/RID packing group</th>
<th>III</th>
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</thead>
<tbody>
<tr>
<td>IMDG packing group</td>
<td>III</td>
</tr>
<tr>
<td>ADN packing group</td>
<td>III</td>
</tr>
<tr>
<td>ICAO packing group</td>
<td>III</td>
</tr>
</tbody>
</table>

#### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant No.**

#### 14.6. Special precautions for user

**EmS**

F-A, S-A
Aclacinomycin A

**ADR transport category** 2

**Emergency Action Code** 2X

**Hazard Identification Number (ADR/RID)** 60

**Tunnel restriction code** (E)

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**SECTION 15: Regulatory information**

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

**National regulations**
Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) [*CDG 2009*].
EH40/2005 Workplace exposure limits.

**EU legislation**

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

**SECTION 16: Other information**

<table>
<thead>
<tr>
<th>Abbreviations and acronyms used in the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</td>
</tr>
<tr>
<td>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</td>
</tr>
<tr>
<td>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</td>
</tr>
<tr>
<td>IATA: International Air Transport Association.</td>
</tr>
<tr>
<td>IMDG: International Maritime Dangerous Goods.</td>
</tr>
<tr>
<td>CAS: Chemical Abstracts Service.</td>
</tr>
<tr>
<td>ATE: Acute Toxicity Estimate.</td>
</tr>
<tr>
<td>LC₅₀: Lethal Concentration to 50 % of a test population.</td>
</tr>
<tr>
<td>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</td>
</tr>
<tr>
<td>EC₅₀: 50% of maximal Effective Concentration.</td>
</tr>
<tr>
<td>PBT: Persistent, Bioaccumulative and Toxic substance.</td>
</tr>
<tr>
<td>vPvB: Very Persistent and Very Bioaccumulative.</td>
</tr>
</tbody>
</table>

**Training advice**
Only trained personnel should use this material.

**Revision date** 15/12/2017

**Revision** 2

**Supersedes date** 03/04/2017

**SDS number** 144926

**Hazard statements in full** H301 Toxic if swallowed.
Aclacinomycin A