Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
Parish
Synonyms
Phenmedipham 320 SC
Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended Use Herbicide
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet
Supplier Address ADAMA Agricultural Solutions UK Ltd
Unit 15, Thatcham Business Village Colthrop Way,
Thatcham Berkshire RG19 4LW, UK : 01635 860555
Fax: 01635 861555
For further information, please contact
Email address ukenquiries@adama.com

1.4. Emergency telephone number
Emergency Telephone National Chemical Emergency Centre (UK):
Tel: 01865 407333 (24 hours)

Section 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Serious eye damage/eye irritation Category 1 - (H318)
Acute aquatic toxicity Category 1 - (H400)
Hazardous to the Aquatic Environment - Chronic Hazard Category 1 - (H410)

2.2. Label elements
Labeling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms
Signal word
Danger

Hazard Statements
H318 - Causes serious eye damage  
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements
P102 - Keep out of reach of children  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P501 - Dispose of contents/container to an approved waste disposal plant

EU Specific Hazard Statements
EUH208 - Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction  
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Additional phrases for PPP
SP1 - Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

2.3. Other hazards
No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight-%</th>
<th>CAS No</th>
<th>EC No</th>
<th>Index No</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>M-Factor</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenmedipham</td>
<td>27-31</td>
<td>13684-63-4</td>
<td>237-199-0</td>
<td>616-106-00-0</td>
<td>Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)</td>
<td>M=1</td>
<td></td>
</tr>
<tr>
<td>1,2-Benzisothiazolin-3-one</td>
<td>&lt;0.5</td>
<td>2634-33-5</td>
<td>220-120-9</td>
<td>613-088-00-6</td>
<td>Acute Tox. 4 (H302)  Skin Irrit. 2 (H315)  Eye Dam. 1 (H318)  Skin Sens. 1 (H317)  Aquatic Acute 1 (H400)</td>
<td>M=1</td>
<td></td>
</tr>
<tr>
<td>Alcohol C13-iso, ethoxylated</td>
<td>11-15</td>
<td>9043-30-5</td>
<td>-</td>
<td>-</td>
<td>Eye Dam. 1 (H318)  Acute Tox. 4 (H302)</td>
<td></td>
<td>02-2119492447-27-0000</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!

Inhalation
Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated
clothes and shoes. Consult a physician if necessary.

**Eye contact**
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Ingestion**
Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.

**Self-protection of the first aider**
Use personal protective equipment as required.

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

**Symptoms**
None known

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

**Note to physicians**
Treat symptomatically.

## Section 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

**Suitable Extinguishing Media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**
No information available.

### 5.2. Special hazards arising from the substance or mixture

No specific hazard known.

### 5.3. Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

## Section 6: ACCIDENTAL RELEASE MEASURES

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

**Personal precautions**
Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**For emergency responders**
Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

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

**Methods for cleaning up**
Take up mechanically, placing in appropriate containers for disposal.

### 6.4. Reference to other sections

**Other Information**
See also section 8,13
Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Use personal protective equipment as required. Use only with adequate ventilation.

General Hygiene Considerations
When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.2. Exposure controls

Engineering Controls  Ensure adequate ventilation, especially in confined areas.

Personal protective equipment
Eye/face protection  Tight sealing safety goggles.

Hand Protection  Gloves made of plastic or rubber.

Body Protection  Suitable protective clothing.

General Hygiene Considerations  When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

Environmental exposure controls  Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>opaque white</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Faint characteristic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>3.65 - 4.65</td>
<td>CIPAC MT 75</td>
<td>solution (1 %)</td>
</tr>
<tr>
<td>Melting point/freezing point °C</td>
<td>----</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling point/boiling range °C</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point °C</td>
<td>&gt; 79</td>
<td>CIPAC MT 12.2</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable for liquids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>explosive limits</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9.2. Other information

10. Other information

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

No information available

10.6. Hazardous decomposition products

None under normal use conditions.

### Section 10: STABILITY AND REACTIVITY

- **Vapor pressure** kPa: ****
- **Vapor density** : No data available
- **Relative density** : 1.0977
- **Solubility(ies) mg/l** : ****
- **Partition Coefficient (n-octanol/water) Log Pow**
  - Autoignition temperature °C: 485
  - Decomposition temperature °C: No data available
  - Kinematic viscosity mm2/s 40 °C: 48.8
  - Explosive properties: Not an explosive
  - Oxidizing properties: Not oxidizing

- **Relative density** g/ml: 1.0977
  - CIPAC MT 3.3.2
  - g/ml: 20 °C
- **Surface tension** mN/m: ****
- **Vapor density** kPa: ----
- **Surface tension** mN/m: ----
- **Partition Coefficient (n-octanol/water) Log Pow**
  - Autoignition temperature °C: 485
  - Decomposition temperature °C: No data available
  - Kinematic viscosity mm2/s 40 °C: 48.8
  - Explosive properties: Not an explosive
  - Oxidizing properties: Not oxidizing

### Section 11: TOXICOLOGY INFORMATION

#### 11.1. Information on toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Value</th>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 mg/kg</td>
<td>&gt; 2500</td>
<td>Rat</td>
<td>OECD 423</td>
</tr>
<tr>
<td>Dermal LD50 mg/kg</td>
<td>&gt; 4000</td>
<td>Rat</td>
<td>OECD 402</td>
</tr>
<tr>
<td>Inhalation LC50 mg/l/4h</td>
<td>&gt; 5.04</td>
<td>Rat</td>
<td>OECD 403</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Non-irritating to the skin</td>
<td>Rabbit</td>
<td>OECD 404</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory/skin sensitization</td>
<td>Not a skin sensitizer</td>
<td>Guinea pig</td>
<td>OECD 406</td>
</tr>
</tbody>
</table>

**Chronic toxicity**

- **Germ cell mutagenicity**
- **Chemical Name**
  - Phenmedipham: Not classified

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Carcinogenicity
Chemical Name
Phenmedipham : Not Carcinogenic

Reproductive toxicity
Chemical Name
Phenmedipham : Not toxic for the reproductive system

STOT - single exposure
Chemical Name
Phenmedipham : No data available

STOT - repeated exposure
Chemical Name
Phenmedipham : No data available

Aspiration hazard
Chemical Name
Phenmedipham : No data available

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Values</th>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish 96-hour LC50 mg/l</td>
<td>10.9</td>
<td>Oncorhynchus mykiss</td>
<td>OECD 203</td>
<td></td>
</tr>
<tr>
<td>Crustacea 48-hour EC50 mg/l</td>
<td>33</td>
<td>Daphnia magna</td>
<td>OECD 202</td>
<td></td>
</tr>
<tr>
<td>Algae 72-hour EC50 mg/l</td>
<td>0.44</td>
<td>P. subcapitata</td>
<td>OECD 201</td>
<td></td>
</tr>
</tbody>
</table>

Terrestrial Toxicity

Birds Oral LD50 mg/kg
Chemical Name
Phenmedipham : > 2100 Mallard duck

Bees Oral LD50 μg/bee
Chemical Name
Phenmedipham : > 100

12.2. Persistence and degradability

Abiotic Degradation

<table>
<thead>
<tr>
<th>Water DT50 days</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenmedipham</td>
<td>0.11 - 0.18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Soil DT50 days
Chemical Name
Phenmedipham : 37

Biodegradation
Chemical Name
Phenmedipham : Not readily biodegradable

12.3. Bioaccumulative potential


Partition Coefficient (n-octanol/water) Log Pow
Chemical Name
Phenmedipham
Values
2.7
Method
Remarks
pH 6.4, 20-25 ° C

Bioconcentration factor (BCF)
Chemical Name
Phenmedipham
Values
165

12.4. Mobility in soil
Mobility in soil
Adsorption/Desorption
Chemical Name
Phenmedipham
Values
888
Method
Koc

12.5. Results of PBT and vPvB assessment
Results of PBT and vPvB assessment
The components in this formulation do not meet the criteria for classification as PBT or vPvB

12.6. Other adverse effects
Other adverse effects
No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste from residues/unused products
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging
Improper disposal or reuse of this container may be dangerous and illegal.
Other Information
Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORTATION INFORMATION

IMDG/IMO
14.1 UN/ID No *
3082
14.2 Proper shipping name
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Phenmedipham)
14.3 Hazard Class
9
14.4 Packing Group
III
14.5 Marine pollutant
Yes
14.6 Special precautions for user

RID/ADR
14.1 UN/ID No *
3082
14.2 Proper shipping name
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Phenmedipham)
14.3 Hazard Class
9
14.4 Packing Group
III
14.5 Environmental hazard
Yes
14.6 Special precautions for user

ICAO/IATA
14.1 UN/ID No *
3082
14.2 Proper shipping name
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Phenmedipham)
14.3 Hazard Class
9
14.4 Packing Group
III
14.5 Environmental hazard
Yes
14.6 Special precautions for user
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable

* Note: UN3077 & UN3082 – These products may be transported as non-dangerous goods under the special provisions of IMDG Code 2.10.2.7; ADR SP375 and ICAO/IATA A197 when packed in single or inner packaging of up to 5L for liquids or 5 kg or less for solids.

**Section 15: REGULATORY INFORMATION**

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

15.2. Chemical safety assessment

A chemical safety assessment according to regulation (EC) No. 1907/2006 is not required. A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009.

**Section 16: OTHER INFORMATION**

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

H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Revision Note

Changes made to the last version are labeled with this sign ***.

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

List of Acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CAS Number - Chemical Abstracts Service number
EC Number - EINECS and ELINCS Number
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
IATA - International Air Transport Association
ICAO - TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
OECD - Organization for Economic Co-operation and Development
PBT - Persistent, Bioaccumulative and Toxic substance
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
STOT - Specific Target Organ Toxicity
vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

The information provided in this Material 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.

End of Safety Data Sheet