



# SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

## Anthem

Revision date 15-Mar-2022

Version 1 Supersedes Date: 10-May-2022

Product Code(s)

HRB01013-44

Print Date 10-May-2022

AG-P4-400 SC / FSG01100H

27801

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

### 1.1. Product identifier

## Anthem

### Other means of identification

Synonyms

Pendimethalin 400 SC

Pure substance/mixture

Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use

Herbicide; Professional use

Uses advised against

No information available

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

ADAMA Agricultural Solutions UK Ltd  
Third Floor East  
1410 Arlington Business Park  
Theale  
READING  
RG7 4SA  
Tel: 01635 860555  
Fax: 01635 861555

### For further information, please contact

E-mail address

ukenquiries@adama.com

### 1.4. Emergency telephone number

Emergency Telephone

National Chemical Emergency Centre (UK):  
Tel: 01865 407333 (24 hours)  
National Poisons Information Centre (Republic of Ireland)  
Tel: 01 809 2166 (8am – 10pm 7 days a week)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**  
**Hazard pictograms**



<b>Signal word</b>	Warning
<b>Hazard statements</b>	H410 - Very toxic to aquatic life with long lasting effects
<b>Precautionary Statements</b>	P102 - Keep out of reach of children P501 - Dispose of contents/ container to an approved waste disposal plant
<b>EU Specific Hazard Statements</b>	EUH208 - Contains ( Pendimethalin, 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
<b>Additional phrases for PPP</b>	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**

<b>PBT &amp; vPvB</b>	The product does not contain any substance(s) classified as PBT or vPvB.
<b>Endocrine Disruptor Information</b>	None known.
<b>Persistent Organic Pollutants</b>	Not applicable.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Not applicable

**3.2 Mixtures**

Chemical name	CAS No	EC No	Index No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	REACH Registration Number
Pendimethalin	40487-42-1	254-938-2	609-042-00-X	32-37	Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)		M = 100 M = 10	No data available
Poly(oxy-1,2-ethanediyl), .alpha.-[tris(1-phenylethyl)phenyl]-.omega.-hydroxy-	99734-09-5	-		3-5	Aquatic Chronic 3 (H412)			No data available
1,2-Benzisothiazolin-3-	2634-33-5	220-120-9	613-088-00-6	<0.03	Skin Irrit. 2	Skin Sens. 1 ::		01-212076154

one					(H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 4 (H302) Aquatic Acute 1 (H400)	C>=0.05%		0-60-XXXX
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Acute toxicity estimates (ATEs) according to Part 3 of Annex VI to Regulation (EC) No 1272/2008 are indicated in this table, if available.

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First aider: Pay attention to self-protection.
<b>Inhalation</b>	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a doctor.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a doctor.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a doctor if necessary.
<b>Ingestion</b>	Rinse mouth. Drink plenty of water. If symptoms persist, call a doctor.
<b>Self-protection of the first aider</b>	Use personal protective equipment as required.

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

<b>Symptoms</b>	None known.
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### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Note to doctors</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Small Fire</b>	Dry chemical, CO2, water spray or regular foam
<b>Large Fire</b>	Do not scatter spilled material with high pressure water streams Dyke fire-control water for later disposal Water spray, fog or regular foam Move containers from fire area if you can do it without risk
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.

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

<b>A fire or explosion</b>	Some may burn but none ignite readily Containers may explode when heated Some may be transported hot No information available.
<b>Specific hazards arising from the chemical</b>	
<b><u>5.3. Advice for firefighters</u></b>	
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## **SECTION 6: Accidental release measures**

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

<b>Personal precautions</b>	Ensure adequate ventilation.
<b>Health risk</b>	Contact may cause burns to skin and eyes Runoff from fire control may cause pollution Fire may produce irritating, corrosive and/or toxic gases Inhalation of material may be harmful Some liquids produce vapours that may cause dizziness or suffocation
<b>Spill or leak statements</b>	Do not touch or walk through spilled material Prevent dust cloud Stop leak if you can do it without risk
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

### **6.2. Environmental precautions**

<b>Environmental precautions</b>	See Section 12 for additional Ecological Information.
Incineration	If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 metres (1/2 mile) in all directions; also, consider initial evacuation for 800 metres (1/2 mile) in all directions
Spill	Increase, in the downwind direction, as necessary, the isolation distance shown under "Public safety"

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

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Take up mechanically, placing in appropriate containers for disposal.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

### **6.4. Reference to other sections**

<b>Reference to other sections</b>	See section 8 for more information. See section 13 for more information.
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## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

<b>Advice on safe handling</b>	Ensure adequate ventilation.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.

### **7.2. Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Keep container tightly closed in a dry and well-ventilated place.
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### 7.3. Specific end use(s)

#### Identified uses

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

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical name	United Kingdom
Glycerol 56-81-5	TWA: 10 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup>
Sodium hydroxide 1310-73-2	STEL: 2 mg/m <sup>3</sup>

#### Derived No Effect Level (DNEL)

No information available.

#### Predicted No Effect Concentration (PNEC)

No information available.

### 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

Suitable chemical resistant gloves (EN 374) also with prolonged, direct contact (recommendation: protection index 6, corresponding > 480 minutes Permeability time (permeation) according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm).

##### Skin and body protection

Use suitable protective clothing and equipment if required, such as safety goggles certified to EN 166, gloves certified to EN 374, protective boots certified to EN 13832, and/or a water repellent woven coverall with 65% polyester and 35 % cotton.

##### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

##### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

##### Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Property	Values	Method	Remarks
Appearance			
Physical state	: Liquid		
Colour	: Yellowish brown		
Odour	: Slight Aromatic		
Odour threshold	: No data available		
pH	: 5.5 - 7.5	CIPAC MT 75.3	solution (1%)
Melting point / freezing point °C	: No data available		
Boiling point / boiling range °C	: No data available		
Flash point °C	: > 100	EEC A.9	

Evaporation rate	:	No data available	
Flammability (solid, gas)	:	Not applicable for liquids	
Upper/lower flammability or explosive limits	:	No data available	
Vapour pressure kPa	:	No data available	
Vapour density	:	No data available	
Relative density	:	1.061 - 1.161	EEC A.3
Solubility(ies) mg/l	:	No data available	
Partition coefficient Log Pow	:		See Section 12 for additional Ecological Information
Autoignition temperature °C	:	390	EEC A.15
Decomposition temperature °C	:	----	No data available
Kinematic viscosity mm <sup>2</sup> /s 40 °C	:	2.12*10 <sup>-4</sup>	OECD 114
Surface tension	:	38.46	EEC A.5
Particle Size	:	Not applicable	20°C

## 9.2. Other information

Bulk density g/ml : ----

### 9.2.1. Information with regards to physical hazard classes

Explosive properties : Not an explosive  
Oxidising properties : Not oxidizing

### 9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity No information available.

### 10.2. Chemical stability

Stability Stable under normal conditions.

### Explosion data

Sensitivity to mechanical impact None.  
Sensitivity to static discharge None.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

### 10.5. Incompatible materials

Incompatible materials None known based on information supplied.

### 10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

### Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: > 2000	Rat	OECD 423	No data available
Dermal LD50 mg/kg	: > 2000	Rat	OECD 402	
Inhalation LC50 mg/l	: ----			
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404	
Serious eye damage/eye irritation	: Not irritating to eyes	Rabbit	OECD 405	
Sensitisation	: Not a skin sensitiser	Guinea pig	OECD 406	

### Chronic toxicity

#### **Germ cell mutagenicity**

##### **Chemical name**

Pendimethalin : Not classified

#### **Carcinogenicity**

##### **Chemical name**

Pendimethalin : Not Carcinogenic

#### **Reproductive toxicity**

##### **Chemical name**

Pendimethalin : H361d - Suspected of damaging the unborn child

#### **STOT - Single Exposure**

##### **Chemical name**

Pendimethalin : No data available

#### **STOT - Repeated Exposure**

##### **Chemical name**

Pendimethalin : No data available

#### **Aspiration hazard**

##### **Chemical name**

Pendimethalin : No data available

### 11.2. Information on other hazards

#### **11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

#### **11.2.2. Other information**

**Other adverse effects** No information available.

## **SECTION 12: Ecological information**

### 12.1. Toxicity

<u>Acute toxicity</u>	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish 96-hour LC50 mg/l	: 14.7	Oncorhynchus mykiss	OECD 203	7 days
Crustacea 48-hour EC50 mg/l	: 6.55	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 0.12	P. subcapitata	OECD 201	
Other plants EC50 mg/l	: 0.034	Lemna gibba	OECD 221	
<u>Chronic aquatic toxicity</u>	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish NOEC mg/l	: No data available			
Crustacea NOEC mg/l	: No data available			
Algae NOEC mg/l	: No data available			
Other plants NOEC mg/l	: No data available			

**Terrestrial Toxicity**  
**Birds Oral LD50 mg/kg**

**Chemical name**  
Pendimethalin : 1421 Mallard duck

**Bees Oral LD50 µg/bee**

**Chemical name**  
Pendimethalin : > 101.2 EPPO 170

**12.2. Persistence and degradability**

**Abiotic Degradation**

**Water DT50 days**

**Chemical name**  
Pendimethalin : 31.8

**Soil DT50 days**

**Chemical name**  
Pendimethalin : 182 SETAC

**Biodegradation**

**Chemical name**  
Pendimethalin : No information available

**12.3. Bioaccumulative potential**

**Partition Coefficient  
(n-octanol/water) Log Pow**

<b>Chemical name</b>	<b><u>Values</u></b>	<b><u>Method</u></b>	<b><u>Remarks</u></b>
Pendimethalin	: 5.4	EEC A.8	

**Bioconcentration factor (BCF)**

**Chemical name**  
Pendimethalin : 1536

**12.4. Mobility in soil**

**Adsorption/Desorption**

<b>Chemical name</b>	<b><u>Values</u></b>	<b><u>Method</u></b>	<b><u>Remarks</u></b>
Pendimethalin	: 13792		KOC

**Endocrine Disruptor Information**

**12.5. Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**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: Transport information

### ADR

14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pendimethalin)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pendimethalin), 9, III
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 601, 375
Classification code	M6

### RID

14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pendimethalin)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pendimethalin), 9, III
Environmental hazard	Yes
Special Precautions for Users	
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 375, 601
Classification code	M6

### IMDG

14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pendimethalin)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pendimethalin), 9, III, Marine pollutant
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
14.5 Marine pollutant	P
Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	274, 335, 969
EmS-No	F-A, S-F
IMDG Stowage and segregation	Category A No information available
14.7 Maritime transport in bulk according to IMO instruments	No information available

### IATA

14.1 UN number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pendimethalin)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Pendimethalin), 9, III
14.5 Environmental hazard	Yes
14.6 Special Precautions for Users	
Special Provisions	A97, A158, A197
ERG Code	9L



\* 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

Trade name / designation	Registration Number(s)	Date
Not Applicable	Not Applicable	Not Applicable

#### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

#### Persistent Organic Pollutants

Not applicable

### 15.2. Chemical safety assessment

Chemical Safety Report	A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009
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## SECTION 16: Other information

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Full text of H-Statements referred to under section 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  
H412 - Harmful to aquatic life with long lasting effects

#### Legend

SVHC: Substances of Very High Concern for Authorisation:

#### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA Ceiling	TWA (time-weighted average) Maximum limit value	STEL *	STEL (Short Term Exposure Limit) Skin designation
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**Revision date** 15-Mar-2022

**Reason for revision** Changes made to the last version are labeled with this sign \*\*\*

#### Abbreviations and 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

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

##### Classification of the mixture

H400 - Very toxic to aquatic life  
 H410 - Very toxic to aquatic life with long lasting effects

##### Classification procedure

Classification based on test data  
 Classification based on Calculation method

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

#### Disclaimer

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.

**End of Safety Data Sheet**