



# SAFETY DATA SHEET

## Pendimethalin 330 EC

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Version 2

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27793 AG-P4 330 EC

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

#### Product identifier

## Pendimethalin 330 EC

Synonyms Pendimethalins 330 EC  
Pure substance/mixture Mixture

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

Recommended Use Herbicide  
Uses advised against No information available

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

Supplier Address ADAMA Agan Ltd  
P.O.B. 262  
ASHDOD Israel

For further information, please contact

Email address SDS@ADAMA.COM

#### Emergency Telephone

Emergency Telephone ADAMA Makhteshim: + 972 8 6560800/801 ; + 972 8 6296713/714  
ADAMA Agan : + 972 8 8515341

### Section 2: HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

Aspiration toxicity	Category 1 - (H304)
Acute toxicity - Oral	Category 5 - (H303)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)
Flammable liquids	Category 3 - (H226)

#### Label Elements

#### Hazard pictograms



(Bad file name)

**Signal word**

Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
 H303 - May be harmful if swallowed  
 H315 - Causes skin irritation  
 H319 - Causes serious eye irritation  
 H335 - May cause respiratory irritation  
 H410 - Very toxic to aquatic life with long lasting effects  
 H226 - Flammable liquid and vapor

**Precautionary Statements**

P102 - Keep out of reach of children  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
 P243 - Take precautionary measures against static discharge  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P270 - Do not eat, drink or smoke when using this product  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P331 - Do NOT induce vomiting  
 P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Hazards**

No information available

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Mixture**

Chemical Name	Weight-%	CAS No	EC No	GHS Classification	M-Factor
Pendimethalin	32-36	40487-42-1	254-938-2	Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M = 100 M= 10
Hydrocarbons, C9, aromatics	54-60	N/A	918-668-5	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) STOT SE 3 (H335) STOT SE 3 (H336) Aquatic Chronic 2 (H411)	
butan-1-ol	3-5	71-36-3	200-751-6	Flam Liq. 3 (H226) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) STOT SE 3 (H335) STOT SE 3 (H336)	
Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt	2-4	90194-26-6	932-231-6	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Chronic 3 (H412)	

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

## Section 4: FIRST AID MEASURES

### First aid measures

<b>General advice</b>	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!.
<b>Inhalation</b>	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
<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 physician.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Immediate medical attention is required.
<b>Self-protection of the first aider</b>	Use personal protective equipment as required.

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

**Symptoms** None known.

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

**Note to physicians** Treat symptomatically.

## Section 5: FIRE-FIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Unsuitable Extinguishing Media**

No information available.

### Special hazards arising from the substance or mixture

No specific hazard known.

### Advice for firefighters

In the event of fire, wear self-contained breathing apparatus  
In the event of fire and/or explosion do not breathe fumes.

## Section 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

#### **Personal precautions**

Remove all sources of ignition. Evacuate personnel to safe areas. Use only with adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

**For emergency responders**

Use personal protection recommended in Section 8.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

**Methods and material for containment and cleaning up**

**Methods for cleaning up**

Take up mechanically, placing in appropriate containers for disposal.

**Reference to other sections**

**Other Information**

See also section 8,13

**Section 7: HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling**

Use only with adequate ventilation. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

**General Hygiene Considerations**

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Wash contaminated clothing before reuse.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions**

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place.

**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**

**National occupational exposure limits**

Chemical Name	European Union	United Kingdom	France	Spain	Germany
butan-1-ol 71-36-3		STEL: 50 ppm STEL: 154 mg/m <sup>3</sup> Skin	STEL: 50 ppm STEL: 150 mg/m <sup>3</sup>	S* STEL: 50 ppm STEL: 154 mg/m <sup>3</sup>	TWA: 100 ppm TWA: 310 mg/m <sup>3</sup> Ceiling / Peak: 100 ppm Ceiling / Peak: 310 mg/m <sup>3</sup>
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
butan-1-ol 71-36-3		TWA: 20 ppm		TWA: 50 ppm TWA: 150 mg/m <sup>3</sup> STEL: 75 ppm STEL: 230 mg/m <sup>3</sup> Skin	Ceiling: 50 ppm Ceiling: 150 mg/m <sup>3</sup> Skin

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
butan-1-ol 71-36-3	STEL 200 ppm STEL 600 mg/m <sup>3</sup> TWA: 50 ppm TWA: 150 mg/m <sup>3</sup>	STEL: 50 ppm STEL: 150 mg/m <sup>3</sup> TWA: 50 ppm TWA: 150 mg/m <sup>3</sup>	STEL: 150 mg/m <sup>3</sup> TWA: 50 mg/m <sup>3</sup> Skin	Skin Ceiling: 25 ppm Ceiling: 75 mg/m <sup>3</sup>	TWA: 20 ppm STEL: 25 ppm STEL: 75 mg/m <sup>3</sup> Skin

**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).

**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** Use only with adequate ventilation.

**General Hygiene Considerations** When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. 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****Physical and Chemical Properties**

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
<b>Appearance</b>			
Physical state	: liquid		
Color	: dark brown		
Odor	: Aromatic		
Odor threshold	: No data available		
pH	: 5 - 7	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	: 40	EEC A.9	
Evaporation rate	: Not Applicable		
Flammability (solid, gas)	: Not Applicable		
Upper/lower flammability or explosive limits	: No data available		
Vapor pressure kPa	: No data available		
Vapor density	: No data available		
Relative density	: 0.92 - 1.02	EEC A.3	
Solubility(ies) mg/l	: No data available		
Partition Coefficient (n-octanol/water) Log Pow	:		See Section 12 for more information
Autoignition temperature °C	: 375		
Decomposition temperature °C	: No data available		
Kinematic viscosity mm <sup>2</sup> /s 40 °C	: 2.0		
Explosive properties	: Not an explosive		
Oxidizing properties	: No		

**Other Information**

<b>Bulk density</b> g/ml	:		Not Applicable
<b>Surface tension</b> mN/m	:	30.26	EEC A.5 25°C

## Section 10: STABILITY AND REACTIVITY

### Reactivity

Not available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Heat, flames and sparks.

### Incompatible Materials

No information available

### Hazardous Decomposition Products

None under normal use conditions.

## Section 11: TOXICOLOGY INFORMATION

### Information on toxicological effects

#### Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: 3470	Rat	EPA 81-1	female
Dermal LD50 mg/kg	: > 4000	Rat	EPA 81-2	
Inhalation LC50 mg/l/4h	: > 2.05	Rat	EPA 81-3	Maximum attainable concentration
<b>Skin corrosion/irritation</b>	: Irritating to skin	Rabbit	EPA 81-5	
<b>Serious eye damage/eye irritation</b>	: Irritating to eyes	Rabbit	OPPTS 870.2400	
<b>Respiratory/skin sensitization</b>	: Not a skin sensitizer	Guinea pig	EPA 81-6	

#### Chronic toxicity

##### Germ cell mutagenicity

**Chemical Name**  
Pendimethalin : Not classified

##### Carcinogenicity

**Chemical Name**  
Pendimethalin : Not Carcinogenic

##### Reproductive toxicity

**Chemical Name**  
Pendimethalin : Not toxic for the reproductive system

##### 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

**Section 12: ECOLOGICAL INFORMATION**

Toxicity

**Aquatic toxicity**

<b>Acute toxicity</b>	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Fish 96-hour LC50 mg/l	: 2.51	Rainbow trout	EEC C.1	
Crustacea 48-hour EC50 mg/l	: 17.2	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 0.014	Green algae	EEC C.3	
Other plants EC50 mg/l	:			Not available

<b>Chronic aquatic toxicity</b>	<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

Persistence and degradability

<b>Abiotic Degradation</b>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Water DT50 days			
<b>Chemical Name</b>			
Pendimethalin	: 31.8		

**Soil DT50 days**

**Chemical Name**

Pendimethalin : 182 SETAC

**Biodegradation**

**Chemical Name**

Pendimethalin : No information available

Bioaccumulative potential

<b>Partition Coefficient (n-octanol/water) Partition Coefficient (n-octanol/water) Log Pow</b>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
<b>Chemical Name</b>			
Pendimethalin	: 5.2		pH 7

**Bioconcentration factor (BCF)**

Chemical Name  
Pendimethalin : 1536

**Mobility in soil**

Adsorption/Desorption Chemical Name	Values	Method	Remarks
Pendimethalin	: 13792		KOC

**Results of PBT and vPvB assessment**

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

**Other adverse effects**

No information available.

**Section 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

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

**Section 14: TRANSPORTATION INFORMATION**

**IMDG/IMO**

UN/ID No \* 1993  
 Proper shipping name FLAMMABLE LIQUID, N.O.S. ( Hydrocarbons, C9, aromatics )  
 Hazard Class 3  
 Packing Group III  
 Marine pollutant Yes  
 Special precautions for user

**RID/ADR**

UN/ID No \* 1993  
 Proper shipping name FLAMMABLE LIQUID, N.O.S. ( Hydrocarbons, C9, aromatics )  
 Hazard Class 3  
 Packing Group III  
 Environmental hazard Yes  
 Special precautions for user

**ICAO/IATA**

UN/ID No \* 1993  
 Proper shipping name FLAMMABLE LIQUID, N.O.S. ( Hydrocarbons, C9, aromatics )  
 Hazard Class 3  
 Packing Group III  
 Environmental hazard Yes  
 Special precautions for user  
 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

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

## Section 16: OTHER INFORMATION

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

H226 - Flammable liquid and vapor  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H335 - May cause respiratory irritation  
H336 - May cause drowsiness or dizziness  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects  
H411 - Toxic to aquatic life with long lasting effects

### Revision Note

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

### 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