



# SAFETY DATA SHEET

## Clethodim 120 EC

Revision Date 28-Mar-2016

Version 1

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

#### Product identifier

## Clethodim 120 EC

#### 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** +972-03-6106666 Subscription no. 36789 (ADAMA Makhteshim Ltd.)

### Section 2: HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

Aspiration toxicity Category 1 - (H304)  
Acute toxicity - Inhalation (Dusts/Mists) Category 4 - (H332)  
Serious eye damage/eye irritation Category 2 - (H319)  
Carcinogenicity Category 2 - (H351)  
Specific target organ toxicity (single exposure) Category 3 - (H336)  
Chronic aquatic toxicity Category 2 - (H411)

#### Label Elements

#### **Hazard pictograms**

**Signal word**

Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
 H319 - Causes serious eye irritation  
 H332 - Harmful if inhaled  
 H336 - May cause drowsiness or dizziness  
 H351 - Suspected of causing cancer  
 H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements**

P102 - Keep out of reach of children  
 P201 - Obtain special instructions before use  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 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  
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
 P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Hazards**

No information available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight-%	CAS No
Clethodim	11-15	99129-21-2
Benzenesulfonic acid, C10-13-alkyl derivs., calcium salt	1-3	90194-26-6
2-Ethylhexanol	1-3	104-76-7
Hydrocarbons, C10, aromatics, >1% naphthalene	35-39	N/A
White mineral oil (petroleum)	37-41	8042-47-5

### Section 4: FIRST AID MEASURES

**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. Immediate medical attention is not required.

**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**

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.

**Ingestion** Do NOT induce vomiting. Rinse mouth. Immediate medical attention is required.

**Self-protection of the first aider** 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**

Combustible material.

**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**

Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**For emergency responders**

Use personal protection recommended in Section 8.

**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.

**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 personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

**General Hygiene Considerations**

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

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

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

**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
2-Ethylhexanol 104-76-7					TWA: 10 ppm TWA: 54 mg/m <sup>3</sup> Ceiling / Peak: 10 ppm Ceiling / Peak: 54 mg/m <sup>3</sup> TWA: 20 ppm TWA: 110 mg/m <sup>3</sup>
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
2-Ethylhexanol 104-76-7	Skin STEL 100 ppm STEL 540 mg/m <sup>3</sup> TWA: 50 ppm TWA: 270 mg/m <sup>3</sup>	STEL: 20 ppm STEL: 110 mg/m <sup>3</sup> TWA: 20 ppm TWA: 110 mg/m <sup>3</sup>	STEL: 320 mg/m <sup>3</sup> TWA: 160 mg/m <sup>3</sup>		

**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**

Rubber boots, Apron, Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**General Hygiene Considerations**

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

**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**

Property	Property	Values	Method	Remarks
Appearance	Physical state	: Liquid		

<b>Color</b>	: amber		
<b>Odor</b>	: Aromatic		
<b>Odor threshold</b>	: No data available		
<b>pH</b>	: 3 - 6		
<b>Melting point/freezing point °C</b>	: ----		Not Applicable
<b>Boiling point/boiling range °C</b>	: ----		Not Applicable
<b>Flash point °C</b>	: 66.6	CIPAC MT 12.2	
<b>Evaporation rate</b>	: Not Applicable		
<b>Flammability (solid, gas)</b>	: Not applicable for liquids		
<b>Upper/lower flammability or explosive limits</b>	: No data available		
<b>Vapor pressure kPa</b>	: ----		Not Applicable
<b>Vapor density</b>	: No data available		
<b>Relative density</b>	: 0.9 - 0.93	CIPAC MT 3.1	
<b>Solubility(ies) mg/l</b>	: ----		Not Applicable
<b>Partition Coefficient (n-octanol/water) Log Pow</b>	:		See Section 12 for more information
<b>Autoignition temperature °C</b>	: ----		No data available
<b>Decomposition temperature °C</b>	: ----		No data available
<b>Kinematic viscosity mm<sup>2</sup>/s 40 °C</b>	: 5.189		
<b>Explosive properties</b>	: No data available		
<b>Oxidizing properties</b>	: No data available		No data available
<b>Other Information</b>			
<b>Bulk density g/ml</b>	: ----		Not Applicable
<b>Surface tension mN/m</b>	: ----		No data available

## 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>
<b>Oral LD50 mg/kg</b>	: > 2000	Rat	OECD 423	
<b>Dermal LD50 mg/kg</b>	: > 2000	Rat	OECD 402	

Inhalation LC50 mg/l/4h	: 4.01	Rat	OECD 403
Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404
Serious eye damage/eye irritation	: Irritating to eyes	Rabbit	OECD 405
Respiratory/skin sensitization	: Not a skin sensitizer	Guinea pig	OECD 406

**Chronic toxicity****Germ cell mutagenicity****Chemical Name**

Clethodim : No data available

**Carcinogenicity****Chemical Name**

Clethodim : Not Carcinogenic

**Reproductive toxicity .****Chemical Name**

Clethodim : Not toxic for the reproductive system

**STOT - single exposure****Chemical Name**

Clethodim : No data available

**STOT - repeated exposure****Chemical Name**

Clethodim : No data available

**Aspiration hazard****Chemical Name**

Clethodim : No data available

**Section 12: ECOLOGICAL INFORMATION****Toxicity****Aquatic toxicity**

<b>Acute toxicity</b>	<b><u>Values</u></b>	<b><u>Species</u></b>	<b><u>Method</u></b>	<b><u>Remarks</u></b>
Fish 96-hour LC50 mg/l	: > 100	Poecilia reticulata		
Crustacea 48-hour EC50 mg/l	: ----			No data available
Algae 72-hour EC50 mg/l	: ----			No data available
Other plants EC50 mg/l	: ----			No data available

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

Clethodim : &gt; 2000 Japanese quail EPA-OPPTS 850.2100

**Bees Oral LD50 µg/bee****Chemical Name**

Clethodim : 313.4 OECD 213

**Persistence and degradability****Abiotic Degradation****Water DT50 days****Chemical Name**

Clethodim : 300 pH 7

**Soil DT50 days****Chemical Name**

Clethodim : 1 - 3

**Biodegradation****Chemical Name**

Clethodim : No data available

**Bioaccumulative potential**

<b>Partition Coefficient (n-octanol/water) Partition Coefficient (n-octanol/water) Log Pow</b>	<b><u>Values</u></b>	<b><u>Method</u></b>	<b><u>Remarks</u></b>
<b>Chemical Name</b> Clethodim	: 4.4	OECD 107	

**Bioconcentration factor (BCF)****Chemical Name**

Clethodim : ---- No data available

**Mobility in soil**

<b>Adsorption/Desorption</b>	<b><u>Values</u></b>	<b><u>Method</u></b>	<b><u>Remarks</u></b>
<b>Chemical Name</b> Clethodim	: 1.08-93 ml/g		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 \*****Proper shipping name**

3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ( Clethodim, Hydrocarbons, C10, aromatics, > 1% naphthalene )

**Hazard Class****Packing Group****Marine pollutant****Special precautions for user**

9  
III  
Yes

**RID/ADR****UN/ID No \*****Proper shipping name**

3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ( Clethodim, Hydrocarbons, C10, aromatics, > 1% naphthalene )

Hazard Class	9
Packing Group	III
Environmental hazard	Yes
Special precautions for user	

**ICAO/IATA**

UN/ID No *	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ( Clethodim, Hydrocarbons, C10, aromatics, > 1% naphthalene )

Hazard Class	9
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

**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



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with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet