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Version: 2.6

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

Product identifier:

Identification as on the label/Trade name: ACCLIMA® 240 EC

Additional information: Product code ACC 240EC/02

Relevant identification uses of the substance and uses advised against:

Identified uses: An insecticide.

Uses advised against: Use only as directed

Details of the supplier of the Safety Data Sheet:

AECI Limited
14 Field Road, LILIANTON

Emergency telephone numbers:

Griffon Poison information centre: 082 446 8946
Poisons Information Helpline: 0861 555 777
AECI Limited: (011) 823 8000 (o/h) Spill Tech: 086 100 0366 (a/h)

SECTION 2. HAZARD IDENTIFICATION

Classification of the substances or mixture

The mixture is classified according to

SANS 10234:2008, Regulation EC 1272/2008 [EU-GHS/CLP]	
Hazard classes/Hazard categories	Hazard statement
Flammable liquid (Category 3)	H226
Acute toxicity oral (Category 4)	H302
Skin irritation (Category 2)	H315
Skin sensitization (Category 1B)	H317
Eye irritation (Category 2)	H319
Acute toxicity inhalation (Category 4)	H332
Specific target organ toxicity repeated exposure (Category 1)	H372
Specific target organ toxicity single exposure (Category 3)	H336
Hazardous to the aquatic environment (Acute 2)	H401
Hazardous to the aquatic environment (Chronic 2)	H411

For full text of H statements see section 16

The most important adverse effects

The most important adverse physiochemical effects: Flammable liquid.

The most important adverse human health effects: Harmful if swallowed or inhaled. Causes skin, eye and respiratory irritation.

Label elements

Hazard pictograms:

Signal Word: Danger

Hazard Statements: H226 Flammable liquid and vapour. H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H372 Causes damage to organs (blood, nervous system and heart) through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements: P210 Keep away from heat, hot surfaces, open flames and other ignition sources. No smoking. P260 Do not breathe mist/ vapours/ spray. P264 Wash thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTRE/doctor if you feel unwell.
P332 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
Special labelling of certain mixture: None
Other hazards: None

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture
Ingredients:

Substance name (IUPAC/EC)	CAS –No. EC-No.	Concentration % by weight	Classification EC1272/2008
Acetamiprid	135410-20-7	10-20%	Acute toxicity oral (Category 4) H302. Aquatic chronic 3 H412.
Indoxacarb	1733584-44-6 605-683-4	1-10%	Acute toxicity oral (category 3) H301. Skin sensitization (Category 1B) H317. Acute toxicity inhalation (Category 4) H332. STOT RE 1 H372. Aquatic acute 1 H400. Aquatic chronic 1 H410
Propylene carbonate	108-32-7 203-572-1	20-30%	Eye irritation (Category 2) H319.
Ethyl acetate	141-78-6 205-500-4	10-20%	Flammable liquid (Category 2) H225. Eye irritation (Category 2) H319. STOT SE 3 H336.
N,-Dimethyldecan-1-amide	14433-76-2 238-405-1	1-10%	Skin irritation (Category 2) H315. Eye irritation (Category 2) H319. STOT SE 3 H335. Aquatic chronic 3 H412.

For full text of H statements see section 16

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation occurs.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

In case of ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention.

Most important symptoms and effects, both acute and delayed:

Repeated exposure to the product may cause the following symptoms; skin sensitization, nausea, vomiting, headaches, confusion, blurry vision, lethargy and shortness of breath.

In addition to symptoms for the following exposure routes:

Inhalation: Harmful if inhaled. May cause drowsiness and dizziness.

Ingestions: Harmful if swallowed.

Skin contact: May cause skin allergies or irritation.

Eye contact: May cause eye irritation.

Indication of any immediate medical attention and special treatment needed:

Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids, under medical supervision.

SECTION 5. FIRE -FIGHTING MEASURE

Extinguisher media:

Suitable extinguisher media:

SMALL FIRE: Use an extinguisher suitable for surrounding fire, water, foam, dry agent (carbon dioxide, dry chemical powder).

LARGE FIRE: Use an extinguisher suitable for surrounding fire, water, foam, dry agent (carbon dioxide, dry chemical powder).

Unsuitable extinguishing media: Do not use high volume water jet, due to contamination risk.

Special hazards arising from the mixture:

Fire may produce irritating or poisonous vapours (toxic oxides of nitrogen), mists or other products of combustion.

Advice for fire-fighters:

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Be sure to use an approved/certified respirator or equivalent.

SECTION 6. ACCIDENTAL RELEASE

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling and Storage, for additional precautionary measures. Use appropriate safety equipment. For additional information refer to Section 8, Exposure Controls / Personal Protection.

For emergency responders: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling and Storage, for additional precautionary measures. Use appropriate safety equipment. For additional information refer to Section 8, Exposure Controls / Personal Protection.

Environmental precautions:

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapours. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Methods for containment and cleaning up:

For small spills Contain spilled material if possible. Collect in suitable and properly labelled containers. Absorb with materials such as: sand, earth, vermiculite or diatomaceous earth. Scrub area with hard water detergent. Pick up wash liquid with additional absorbent and place into well labelled container for disposal according to local regulations.
For large spills Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in well labelled container for disposal according to local regulations.

Reference to other sections:

See section 7 for information on safe handling.
See section 8 for information on personal protection equipment.
See section 13 for information on disposal.

Additional information:

None.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid prolonged contact with concentrate. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing.

Protective measures: Observe directions on label and instructions for use.
Advice on general occupational hygiene: Do not eat drink or smoke when handling this product.

Conditions for safe storage, including incompatibilities:

Store product in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Incompatible materials; combustible materials, reducing agents, acids, alkalis.

Specific end uses:

Use as directed. Use original container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Occupational exposure limits (OEL):

Ethyl acetate-TWA OEL-RL 400 ppm, 1400 mg/m^3.

Biological exposure indices (BEI):

None

Additional exposure limits under the conditions of use:

None.

Exposure control:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. A Risk Assessment should be conducted before handling is to commence to determine specific exposure control.

Appropriate engineering controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective OEL's if applicable. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Body protection: Wear appropriate clothing for task or operation. Keep working clothes separately.

Respiratory protection: Respiratory protection is required when ventilation is inadequate or discomfort is experienced; use an approved air-purifying respirator. Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines.

Environmental exposure controls: Prevent product from entry into sewers and water courses.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (form): Liquid.

Colour: Dark brown to black.

Odour: Strong chemical odour.

Odour threshold: No information available.

pH (at concentration): 5.6 – 6.6 (1%)

Melting point/range (°C): No information available

Boiling point/range (°C): No information available

Flash point (°C): 29 °C (ASTM D93)

Evaporation rate: No information available.

Flammability (solid, gas, liquid): Flammable liquid.

Ignition temperature (°C): No information available.

Upper/lower flammability/explosive limits: No information available.

Vapour pressure (20°C): No information available.

Vapour density: No information available.

Density (25°C): 1.07 – 1.09 g/cm^3

Water solubility (g/l) at 20°C: No information available.

n-Octanol/Water partition coefficient: No information available

Auto-ignition temperature: No information available.

Decomposition temperature: No information available.

Viscosity: No information available.

Physical hazards:

Explosive properties: No information available

Other information:

Fat solubility (solvent-oil to be specified): No information available.

Bulk density: No information available.

Dissociation constant in water (p Ka): No information available.

Oxidation-reduction potential: No information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity:

The product is stable under normal conditions.

Chemical stability:

Stable under normal storage conditions for 2 years.

Possibility of hazardous reactions:

No information available.

Conditions to avoid:

Do not expose to extreme temperatures.

Incompatible materials:

Incompatible with oxidation material and acids.

Hazardous decomposition products:

Thermal decomposition giving flammable and toxic products.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: No Information available.

Method: No Information available.

Dosage: No Information available.

Routes of administration: No Information available.

Results: No Information available.

Absorption: No Information available.

Distribution: No Information available.

Metabolism:

Acetamiprid

Acetamiprid is extensively (>90%) metabolised, mainly by oxidation and demethylation.

Indoxacarb

Major metabolic reactions included hydroxylation of the indane ring, hydrolysis of the carboxymethyl group from the amino nitrogen, and opening of the oxadiazine ring, which gave rise to cleaved products.

Excretion:

Acetamiprid

In animals, rapidly and almost completely absorbed (>96% after 24 h) and rapidly and almost completely excreted (90% after 96 h), mainly via urine.

Indoxacarb

Most of the dose was excreted within 96 hours. Extensive metabolism to numerous minor metabolites occurs. In urine, metabolites were cleaved products (indane or trifluoromethoxyphenyl ring products), whilst, in faeces, major metabolites retained both these moieties.

Information on toxicological effects:

Acute toxicity: ACCLIMA® 240 EC

Acute oral LD_{50} for rats 773 mg/kg (based calculation).

Dermal LD_{50} for rats >2000 mg/kg (based on calculation).

Inhalation: LC_{50} (4 h) for rats >1.93 mg/ℓ for dusts and mist (based on calculation).

Chronic toxicity: No information available**.**

Skin corrosion/irritation:

Acetamiprid

Non-irritating to skin for rat and rabbits.

Indoxacarb

Non-irritating to skin for rabbits.

Serious eye damage/irritation:

Acetamiprid

Non-irritating to eyes for rat and rabbits.

Indoxacarb

Non-irritating to eyes for rabbits.

Respiratory or skin sensitization:

Acetamiprid

Not a skin sensitiser for guinea pigs.

Indoxacarb

Dermal sensitiser for guinea pigs.

Germ cell mutagenicity: No information available.

Carcinogenicity: No information available.

Reproductive toxicity: No information available.

STOT-single exposure: No information available.

STOT-repeated exposure: No information available.

Aspiration hazard: No information available.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:

Acetamiprid

Birds toxicity: Acute oral LD_{50} for Mallard ducks 98 mg/kg and Bobwhite quail 180 mg/kg, diet. LC_{50} (48 h) for Bobwhite quail >5000 ppm.

Fish toxicity: LC_{50} (24-96 h) for Carp >100 mg/ ℓ.
Daphnia: LC_{50} (24 h) >200 mg/ ℓ; EC_{50} (48 h) 49.8 mg/ ℓ.
Algae: ErC_{50} (72 h) for *Scenedesmus subspicatus* >98.3 mg ℓ /; NOEC (72 h) 98.3 mg/ ℓ.
Other aquatic spp. EC_{50} (14 d) for *Lemna gibba* 1.0 mg/ ℓ.
Bees: LD_{50} (oral) 14.5 µg/bee; (contact) 8.1 µg/bee.

Indoxacarb
Birds: Acute oral LD_{50} for Bobwhite quail 98 mg/kg. Dietary LC_{50} (5 d) for Mallard ducks >5620, Bobwhite quail 808 ppm.
Fish: LC_{50} (96 h) for Bluegill sunfish 0.9 mg/ ℓ, Rainbow trout 0.65 mg/ ℓ.
Daphnia: LC_{50} (48 h) 0.60 mg/ ℓ.
Algae: EC_{50} (96 h) >0.11 mg/ ℓ.
Bees: LD_{50} (oral) 0.26 µg/bee; (contact) 0.094 µg/bee.
Worms: LC_{50} (14 d) >1250 mg/kg.

Persistence and degradability:
Acetamiprid:
The primary degradation pathway is aerobic soil metabolism. Acetamiprid is not expected to be persistent in soil.
Indoxacarb:
Indoxacarb is considered to be moderately persistent.

Bioaccumulative potential:
No information available.

Mobility in soil
Acetamiprid is moderately to highly mobile in most soils but is not expected to be persistent in the environment.
Indoxacarb is considered to be immobile.

Results of PBT& vPvB assessment:
No information available.

Other adverse effects:
No information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:
Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

Product/ packaging disposal:
Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

SECTION 14. TRANSPORT INFORMATION

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	1993	1993	1993

UN Proper shipping name:	FLAMMABLE LIQUID, N.O. S	FLAMMABLE LIQUID, N.O. S	FLAMMABLE LIQUID, N.O. S
Transport hazard class:	3	3	3
Packaging group:	III	III	III
Marine pollutant:	yes	yes	yes
Special precautions for user:	Flammable liquid	Flammable liquid	Flammable liquid
Transport in bulk according to MARPOL 73/78 Annex II and the IBC code	Not required	Not required	Not required

Inland waterways: Not required.

Emergency response information: No information.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

Relevant information regarding authorization: Occupational Health and Safety Act 1993 Regulation for Hazardous Chemical Substances.

ACGIH: American Conference of Governmental Industrial Hygienists (ACGIH)

Relevant information regarding restrictions:

EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP] and EU directives 67/548/EEC or EC 1999/45/EC

Other National regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996).

SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes.

National Environmental Management: Waste Act 59 of 2008.

Chemical Safety Assessment carried out? No.

SECTION 16. OTHER INFORMATION

Indication of changes:

Change in formulation, section 1,2,3, 11.

Relevant Classification and Hazard Statements:

Aquatic acute 1: Hazardous to the Environment (Acute 1)
Aquatic chronic 1: Hazardous to the Environment (Chronic 1)
Aquatic chronic 3: Hazardous to the Environment (Chronic 3)
STOT SE- 3 Specific target organ toxicity single exposure (Category 3)
STOT RE 1- Specific target organ toxicity repeated exposure (Category 1)

H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H372 Causes damage to organs (blood, nervous system and heart) through prolonged or repeated exposure. H400 Very toxic to aquatic life. H401 Toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

Training instructions:

Use as indicated on the label, special training may be required for application.

Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

Notice to readers:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.