SAFETY DATA SHEET (SDS)	
TITLE:	**BIFENAZATE 240 SC**

1.0 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier

Product Name	:	AG BIFENAZATE 240 SC
Common Name	:	Bifenazate 240 g/l SC
CAS No.	:	149877-41-8
EC No.	:	442-820-5

1.2 Relevant identified uses of the substance: insecticide

1.3 Details of the Manufacturer / Supplier of the safety data sheet:

Supplier	AGROMEC SARL P.O.Box: 462 Jounieh, Lebanon
Tel	+961 9 226874
E-mail	agromec@agromec-international.com
Webpage	www.agromec-international.com

1.4 Emergency Phone Number (24 hours)

+961 3 980599

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the mixture:

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 **H317: May cause an allergic skin reaction.**

Specific target organ toxicity - repeated exposure, Category 2

H373: May cause damage to organs through pro- longed or repeated exposure.

Chronic aquatic toxicity, Category 2 **H411: Toxic to aquatic life with long lasting effects.**

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements :	H317	May cause an allergic skin reaction.
	H373	May cause damage to organs through prolonged or repeated exposure.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements :	**Prevention:**	
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P273	Avoid release to the environment.
	P280	Wear protective gloves.
	P314	Get medical advice/ attention if you feel unwell.
	P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P363	Wash contaminated clothing before reuse.
	P391	Collect spillage.

Hazardous components which must be listed on the label: Bifenazate

1,2-benzisothiazol-3(2H)-one

Supplemental Hazard Statements:

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumula- tive and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No. EC-No.	Classification	Concentration (% w/w)
Bifenazate	149877-41-8 442-820-5	Skin Sens. 1; H317 STOT RE 2; H373 Aquatic Acute 1; H400	22.6

4.0 FIRST AID MEASURES

4.1 Description of first aid measures

4.1.1 General information

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

4.1.2 In case of inhalation

Wearing proper respiratory protection before rescues. Immediately remove the affected victim from exposure to an area of fresh air. If not breathing, give artificial respiration; if breathe difficult, give oxygen. Get medical attention.

4.1.3 In case of skin contact

Flush with large amount of water; use soap or detergent if available. Remove grossly contaminated clothing, including shoes, and launder before reuse.

4.1.4 In case of eyes contact

Flush eyes with large amount of water until irritation subsides. If irritation persists, get medical attention.

4.1.5 In case of ingestion

If swallowed, rinse mouth with water. Keep patient at rest. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless told to by a poison control centre or doctor. Get immediate medical attention.

4.1.6 Note to physician

No specific antidote. Treat symptomatically and supportively.

4.1.7 Most important symptoms and effects, both acute and delayed :

This product or its components may have long term chronic health effects. No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema or hyperactive airways disease may be more susceptible to overexposure.

5.0 FIRE – FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Foam, dry chemical, water spray or CO2 to extinguish fire.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : N/A

5.3 Advice for fire-fighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Keep unnecessary people away. Use as little water as possible. Dike area of fire to prevent material run-off. Decontaminate

emergency personnel with soap and water before leaving the fire area. Avoid breathing dusts, vapours and fumes from burning materials. Control run-off water.

5.4 Fire and Explosion Hazards:

Flash point: >58°C. This product can form combustible mixtures at temperatures at or above the flash point. It may produce a floating fire hazard in extreme fire conditions.

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 Personal precautions

Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

6.2 Environmental precautions

Do not discharge into drains or rivers. Do not allow to enter soil, waterways or waste water canal. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

6.3 Methods and material for containment and cleaning up

Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental precautions.

6.3.1 Other information

N/A

6.4 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.

6.5 Additional information

In case materials are released, contact emergency response personnel. Keep unnecessary persons away. If emergency response personnel are unavailable, absorb small spills on spill pillows or other suitable absorbing material (sand or earth) and place in a sealed container for disposal. Dike large spills and transfer to an appropriate container for disposal. Avoid contact of spilled materials and runoff with soil and surface waterways. Use suitable protective equipment (Section 8). Follow all fire prevention procedures (Section 5).

7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protective measures

Protect against physical damage. Use non-sparking type tools and equipment, including explosion proof ventilation. Do not contaminate lakes, streams, and ponds.

7.1.2 Advice on general occupational by hygiene

Avoid contact with eyes, skin or clothing. Do not breathe spray mist. When using, do not eat, drink, or smoke. Wash hands and exposed skin before meals and afterwork. Wash out container thoroughly and dispose of safely.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions	:	Store in the original container and keep closed. Store in cool, dry and well-ventilated place. Do not use, pour, or store near heat or open flame.
Further information on storage conditions	:	Keep out of reach of children. Keep away from food, drink and animal feeding stuffs.

8.0 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

effective ventilation in all processing areas

Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye protection	: Safety glasses with side-shields
Hand protection	
Remarks	: Impervious gloves
Skin and body protection	: Impervious clothing
Respiratory protection	: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	off-white, to, tan
Odour	:	slight, sweet
Odour Threshold	:	No data available pH : 5 - 9
Melting point/range	:	Not applicable
Boiling point/boiling range	:	> 100 °C
Flash point	:	> 104 °C
Evaporation rate	:	No data available
Upper explosion limit	:	Not explosive Lower
explosion limit	:	Not explosive
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.050 - 1.070 (25 °C)
Density	:	> 1 g/cm3

9.2 Other information N/A

10.0 STABILITY AND RELIABILITY

10.1 Reactivity

No information available

10.2 Chemical stability

Stable under normal handling and storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known

10.4 Conditions to avoid

Avoid extreme heat

10.5 Incompatible materials

Avoid mix with strong oxidizing agent and alkaline substance.

10.6 Hazardous decomposition products

The substance decomposes on burning, and producing toxic and corrosive fumes.

10.7 Hazard Polymerization

Will not occur.

11.0 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity	: LD50 (Rat, male): > 5,000 mg/kg
	LD50 (Rat, female): > 2,000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 1.94 mg/l
	Exposure time: 4 h
	Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala- tion toxicity

Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity	: LD50 Dermal (Rabbit): > 5,000 mg/kg

Components: Bifenazate:

Acute oral toxicity	: LD50 (Rat, male and female): > 5,000 mg/kg
	Method: OECD Test Guideline 401
	LD50 (Mouse, male and female): > 5,000 mg/kg
	Method: OECD Test Guideline 401
Acute inhalation toxicity	: LC50 (Rat, male and female): > 4.4 mg/l
	Exposure time: 4 h
	Test atmosphere: dust/mist
	Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala- tion toxicity

Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity	: LD50 (Rat, male and female): > 5,000 mg/kg
	Method: OECD Test Guideline 402

12.0 ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.4 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.4 mg/l

Exposure time: 48 h

Toxicity to algae

EC50 (Pseudokirchneriella subcapitata (green algae)): 1.3 mg/l

Exposure time: 72 h

12.2 Persistence and degradability

Biodegradability : Result: Not readily biodegradable.

Remarks: Not readily biodegradable.

Components: Bifenazate:

Biodegradability : Result: According to the results of tests of biodegradability this product is not readily biodegradable.

Remarks: Not readily biodegradable.

12.3 Bioaccumulative potential

Components: Bifenazate: Partition coefficient: n-octanol/water : log Pow: 3.4 (25 °C)

12.4 Mobility in soil

Mobility : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher..

13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Container and washing must be disposed to an approved facility.

13.2 Product / Packaging disposal

13.2.1 Product waste disposal

Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

13.2.2 Packing waste disposal

Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

14.0 TRANSPORT INFORMATION

14.1 Land transport (ADR/RID/GGVSE)

UN No	:	3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bifenazate)
Class(es)	:	9
Packing group	:	III
Hazard label(s)	:	9

14.2 Sea transport (IMDG-Code/GGVSee)

UN-No	:	3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bifenazate)
Class(es)	:	9
Packing group	:	III
Marine Pollutant	:	YES
Label	:	9

14.3 Air transport (ICAO-IATA/DGR)

UN No	:	3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bifenazate)
Class(es)	:	9
Packing group	:	III
Hazard label(s)	:	9

15.0 REGULATORY INFORMATION

15.1 Risk and safety phrases in accordance with the Directive 2001/58/EC

Regulation (EC) No 649/2012 of the European Parlia- ment and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable

16.0 OTHER INFORMATION

16.1 Further Information

The information contained herein relates only to the specified material identified. AGROMEC believes that such information is accurate and reliable as of the data of this material safety data sheet, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability, or completeness of the information. AGROMEC urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.