

Issuing Date 13-Sep-2021

Revision Date 26-Apr-2024

Revision Number 2

1. Identification

Product identifier

Product Name GCS Bifenthrin 2EC

Other means of identification

EPA Reg. No. 94730-8

UN/ID no UN3352

Synonyms Bifenthrin

Recommended use of the chemical and restrictions on use

Recommended use Insecticide

Restrictions on use Use only as directed on product label

Details of the supplier of the safety data sheet

Supplier Address

Generic Crop Science, LLC
1887 Whitney Mesa Drive #9740
Henderson, NV 89014-2069
1-844-200-FARM (3276)

E-mail regulatory@farmersbusinessnetwork.com

Emergency telephone numbers

For Emergency Medical Assistance (Human or Animal) contact Rocky Mountain Poison Control at 866-767-5040.

For Chemical Emergency Assistance (Spill, Leak, Fire or Accident) contact CHEMTREC at 800-424-9300 (North America) or 703-527-3887 (International).

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin sensitization	Category 1B
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 1
Aspiration hazard	Category 1
Flammable liquids	Category 4

Hazards not otherwise classified (HNOC)

Not applicable.

Label elements**Danger****Hazard statements**

Combustible liquid.
Toxic if swallowed.
Harmful in contact with skin.
Toxic if inhaled.
May cause an allergic skin reaction.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

**Precautionary Statements - Prevention**

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Contaminated work clothing must not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from flames and hot surfaces. - No smoking
Keep cool

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of water and soap
Call a POISON CENTER or doctor if you feel unwell
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting
Rinse mouth
In case of fire: Use dry chemical, CO₂, water spray or regular foam to extinguish

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Causes mild skin irritation. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

Unknown acute toxicity

5.5232 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

5.5232 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
73.7124 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Synonyms Bifenthrin

Chemical name	CAS No	Weight-%	Trade secret
Solvent Naphtha (Petroleum), Heavy Aromatic	64742-94-5	64.59 - 68.59	*
Bifenthrin	82657-04-3	24.65 - 26.17	*
Proprietary surfactant blend	-	5 - 10	*
Naphthalene	91-20-3	< 0.5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention. Immediate medical attention is required.
Inhalation	Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical advice/attention. Delayed pulmonary edema may occur. Immediate medical attention is required. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get immediate medical advice/attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not breathe vapor or mist. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Prolonged contact may cause redness and irritation.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically. Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances.

5. Fire-fighting measures

Suitable Extinguishing Media Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media Straight streams of water.

Specific hazards arising from the chemical Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Product is or contains a sensitizer. May cause sensitization by skin contact.

Hazardous combustion products Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not breathe vapor or mist.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. Handling and storage**Precautions for safe handling**

Advice on safe handling Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of

insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Handle product only in closed system or provide appropriate exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up. Store away from other materials.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Naphthalene 91-20-3	TWA: 10 ppm S*	TWA: 10 ppm TWA: 50 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m ³ (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m ³	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m ³ STEL: 15 ppm STEL: 75 mg/m ³

Biological occupational exposure limits

Chemical name	ACGIH
Naphthalene 91-20-3	- (1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis) - end of shift

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not breathe vapor or mist. Remove and wash contaminated clothing and gloves, including

the inside, before re-use.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	Light yellow
Odor	Aromatic
Odor threshold	No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.188	
Melting point / freezing point		No data available
Boiling point / boiling range		No data available
Flash point	66 °C / 150.8 °F	
Evaporation rate		No data available
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Vapor pressure		No data available
Vapor density		No data available
Relative density	0.9677	
Water solubility		No data available
Solubility(ies)		No data available
Partition coefficient		No data available
Autoignition temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	3.89 cP @ 20°C 2.45 cP @ 40°C	

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract. Toxic by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. May cause irritation.
Skin contact	Specific test data for the substance or mixture is not available. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Repeated exposure may cause skin dryness or cracking. May be absorbed through the skin in harmful amounts. Causes mild skin irritation. Harmful in contact with skin.
Ingestion	Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Prolonged contact may cause redness and irritation.
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Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral)	185.00 mg/kg
ATEmix (dermal)	1,509.20 mg/kg
ATEmix (inhalation-dust/mist)	0.518 mg/l

Unknown acute toxicity

- 5.5232 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 5.5232 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 73.7124 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Solvent Naphtha (Petroleum), Heavy Aromatic 64742-94-5	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Bifenthrin 82657-04-3	= 47 mg/kg (Rat)	= 790 mg/kg (Rat)	= 1010 mg/m ³ (Rat) 4 h
Naphthalene 91-20-3	= 1110 mg/kg (Rat)	= 1120 mg/kg (Rabbit)	> 0.4 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	May cause skin irritation.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	Classification based on data available for ingredients. May cause sensitization by skin contact.
Germ cell mutagenicity	No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Bifenthrin 82657-04-3	-	Group 2A	-	X
Naphthalene 91-20-3	A3	Group 2B	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Other adverse effects	No information available.
Interactive effects	No information available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Solvent Naphtha (Petroleum), Heavy Aromatic 64742-94-5	-	LC50: =1740mg/L (96h, Lepomis macrochirus) LC50: =19mg/L (96h, Pimephales promelas) LC50: =2.34mg/L (96h, Oncorhynchus mykiss) LC50: =41mg/L (96h, Pimephales promelas) LC50: =45mg/L (96h, Pimephales promelas)	-	EC50: =0.95mg/L (48h, Daphnia magna)
Bifenthrin 82657-04-3	-	LC50: 0.0001 - 0.00019mg/L (96h, Oncorhynchus mykiss) LC50: 0.0003 - 0.00038mg/L (96h, Lepomis macrochirus)	-	EC50: 0.00135 - 0.00195mg/L (48h, Daphnia magna)
Naphthalene 91-20-3	-	LC50: 0.91 - 2.82mg/L (96h, Oncorhynchus mykiss) LC50: 5.74 - 6.44mg/L (96h, Pimephales promelas)	-	EC50: 1.09 - 3.4mg/L (48h, Daphnia magna) EC50: =1.96mg/L (48h, Daphnia magna) LC50: =2.16mg/L (48h, Daphnia magna)

		LC50: =1.6mg/L (96h, Oncorhynchus mykiss) LC50: =1.99mg/L (96h, Pimephales promelas) LC50: =31.0265mg/L (96h, Lepomis macrochirus)		
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Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Solvent Naphtha (Petroleum), Heavy Aromatic 64742-94-5	6.1
Naphthalene 91-20-3	3.6

Other adverse effects No information available.

13. Disposal considerations

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 Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

ID number UN3352
Proper shipping name Pyrethroid Pesticide, Liquid, Toxic (Bifenthrin)
Hazard class(es) 6.1
Packing group III
Hazard Label Division 6.1 Toxic
Marine pollutant/RQ Pyrethrins RQ = 1 lb
Hazardous Substance

IATA

ID number UN3352
Proper shipping name Pyrethroid Pesticide, Liquid, Toxic (Bifenthrin)
Hazard class(es) 6.1
Packing group III
Hazard Label Division 6.1 Toxic

IMDG

ID number	UN3352
Proper shipping name	Pyrethroid Pesticide, Liquid, Toxic (Bifenthrin)
Hazard class(es)	6.1
Packing group	III
Hazard Label	Division 6.1 Toxic, Environmentally Hazardous
Marine pollutant/ Environmentally Hazardous Substance	YES

15. Regulatory information**International Inventories**

Contact supplier for inventory compliance status

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Bifenthrin - 82657-04-3	1.0
Naphthalene - 91-20-3	0.1

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Naphthalene 91-20-3	100 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Naphthalene 91-20-3	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Naphthalene - 91-20-3	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Bifenthrin 82657-04-3	X	-	-
1-Hexanol 111-27-3	X	-	X
Propylene glycol 57-55-6	X	-	X
Naphthalene 91-20-3	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 94730-8

16. Other information

NFPA	Health hazards 2	Flammability 2	Instability 0	Special hazards -
HMIS	Health hazards 2*	Flammability 2	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>		<i>* = Chronic Health Hazard</i>		

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGLe(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Issuing Date 13-Sep-2021

Revision Date 26-Apr-2024

Revision Note Change to Email, Emergency Telephone Number and Section 14.

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