

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008



Revision date 30-Jan-2023

Revision Number 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name PERFECT
Product Code(s) TP.3022.I.1___ISR
Chemical name Emamectin Benzoate 19.2 EC
Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Insecticide; For professional users only
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Tapazol Chemical Works Ltd.
1st HaSolela st.
West. Ind. Zone
Beit Shemesh, Israel 9905415
Tel: +972-2-992-6040
Fax: +972-2-9926050
For further information, please contact sds@tapazol.co.il

1.4. Emergency telephone number

Emergency Telephone +972 4 777 1900
National Institute for Information on Poisoning
Rambam Health Care Campus, Haifa, Israel

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity (single exposure)	Category 2 - (H371)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label elements

Contains Emamectin Benzoate (ISO) , Hexyl Alcohol



Signal word

Warning

Hazard statements

- H302 - Harmful if swallowed
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H332 - Harmful if inhaled
- H371 - May cause damage to organs
- H373 - May cause damage to organs through prolonged or repeated exposure
- H410 - Very toxic to aquatic life with long lasting effects
- EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Precautionary Statements - EU (§28, 1272/2008)

- P102 - Keep out of reach of children
- P201 - Obtain special instructions before use
- P260 - Do not breathe 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
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P312 - Call a POISON CENTER or doctor/physician if you feel unwell
- P391 - Collect spillage
- P501 - Dispose of contents/ container to an approved waste disposal plant

Additional information

SP1 - Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Emamectin Benzoate (ISO)	605-015-1	155569-91-8	1-3	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Eye Dam. 1 (H318) Acute Tox. 3 (H331) STOT SE 1 (H370) (nervous system) STOT RE 1 (H372) (nervous system) Aquatic Acute 1 (H400)

				M=10000 Aquatic Chronic 1 (H410) M=10000
Hexyl Alcohol	203-852-3	111-27-3	57-63	Acute Tox. 4 (H302)
Distillates (petroleum), heavy hydrocracked	265-077-7	64741-76-0	5-9	Asp. Tox. 1 (H304)

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

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
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.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	Coughing and/ or wheezing. Difficulty in breathing.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Small Fire	Dry chemical, CO2, water spray or regular foam.
Large Fire	Water spray, fog or regular foam Dike fire-control water for later disposal Move containers from fire area if you can do it without risk

Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
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5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. See section 8 for more information. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid breathing vapors or mists. Use personal protective equipment as required.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8. Do not get water inside containers.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

6.3. 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. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers 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.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

General hygiene considerations 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 eat, drink or smoke when using this product.

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

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. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

Chemical name	Denmark	Germany	France	United Kingdom	Spain
Hexyl Alcohol 111-27-3	-	TWA: 25 ppm TWA: 105 mg/m ³	-	-	-

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

8.2. Exposure controls**Personal protective equipment****Eye/face protection**

Tight sealing safety goggles.

Hand protection

Impervious gloves. Wear suitable gloves.

Skin and body protection

Chemical resistant apron. Antistatic boots. 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

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 eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance**

Transparent Liquid

Physical state	Liquid	
Color	Clear yellow to brown	
Property	Values	Remarks • Method
pH		
pH (as aqueous solution)	4.5 - 6.5	solution (1 %)
Melting point / freezing point		
Boiling point / boiling range		
Flash point	64.2 °C	ASTM D-93/A
Evaporation rate	No data available.	
Flammability (solid, gas)	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	0.87 - 0.93	20-25 C
Water solubility	No data available.	
Solubility(ies)	No data available.	
Partition coefficient	No data available.	
Autoignition temperature	No data available.	
Decomposition temperature		
Kinematic viscosity	No data available.	
Dynamic viscosity	No data available.	

9.2. Other information**SECTION 10: Stability and reactivity****10.1. Reactivity****10.2. Chemical stability**

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Excessive heat.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Oral LD50 300-2000 mg/kg. (rat); Acute Tox. 4 (H302) Classification based on test data.
Dermal LD50 > 2000 mg/kg. (rat); Based on available data, the classification criteria are not met.
Inhalation LC50 1.6658 mg/l air 4 h. (rat); Acute Tox. 4 - H332 Classification based on test data.

Skin corrosion/irritation Non-irritating to the skin; Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Irritating to eyes; Eye Irrit. 2 - (H319). Classification based on test data.

Respiratory or skin sensitization Not a skin sensitizer. Based on available data, the classification criteria are not met.

Germ cell mutagenicity Not classified. Based on calculation method classification criteria are not met.

Chemical name	European Union
Emamectin Benzoate (ISO)	Not classified
Distillates (petroleum), heavy hydrocracked	Not classified

Carcinogenicity Not classified. Based on calculation method classification criteria are not met.

Chemical name	European Union
Emamectin Benzoate (ISO)	Not classified
Distillates (petroleum), heavy hydrocracked	Not classified

Reproductive toxicity Not classified. Based on calculation method classification criteria are not met.

Chemical name	European Union
Emamectin Benzoate (ISO)	Not classified
Distillates (petroleum), heavy hydrocracked	Not classified

STOT - single exposure Cat 2 (H371) - May cause damage to organs. Classification based on calculation method. [Emamectin Benzoate].

STOT - repeated exposure Cat 2 (H373) - May cause damage to organs through prolonged or repeated exposure. Classification based on calculation method. [Emamectin Benzoate].

Aspiration hazard Not classified. Based on calculation method classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life: H400 - Classification based on calculation method.
 Very toxic to aquatic life with long lasting effects: H410 - Classification based on calculation method.
 Highly toxic to honeybees.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Emamectin Benzoate (ISO)	-	Acute toxicity: LC50=0.174 mg/L	-	Acute toxicity: LC50=0.00004 mg/L Chronic toxicity: NOEC=0.000088 mg/L

12.2. Persistence and degradability

Persistence and degradability Not rapidly degradable. (Emamectin Benzoate).

12.3. Bioaccumulative potential

Bioaccumulation Low potential for bioaccumulation. (Emamectin benzoate).

Bioconcentration factor (BCF) 82 L/kg

Component Information

Chemical name	Partition coefficient
Emamectin Benzoate (ISO)	5.0

12.4. Mobility in soil

Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The components in formulation do not meet the criteria for classification as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Emamectin Benzoate (ISO)	The substance is not PBT / vPvB
Hexyl Alcohol	The substance is not PBT / vPvB
Distillates (petroleum), heavy hydrocracked	The substance is not PBT / vPvB

12.6. Other adverse effects**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information**IMDG**

14.1 UN number 3082
 14.2 UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. [Emamectin Benzoate]
 14.3 Transport hazard class(es) 9
 14.4 Packing group III
 14.5 Marine pollutant Yes
 Environmental hazards Yes
 14.6 Special precautions for user
 Special Provisions None
 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

RID

14.1 UN number 3082
 14.2 UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. [Emamectin Benzoate]
 14.3 Transport hazard class(es) 9
 14.4 Packing group III
 14.5 Environmental hazards Yes
 14.6 Special precautions for user
 Special Provisions None

ADR

14.1 UN number	3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. [Emamectin Benzoate]
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	None

IATA

14.1 UN number	3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. [Emamectin Benzoate]
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Hexyl Alcohol 111-27-3	RG 84	-

Germany

Water hazard class (WGK) strongly hazardous to water (WGK 3)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Distillates (petroleum), heavy hydrocracked - 64741-76-0	28.	

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

- P5a - FLAMMABLE LIQUIDS
- P5b - FLAMMABLE LIQUIDS
- P5c - FLAMMABLE LIQUIDS

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status

KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AICS	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H226 - Flammable liquid and vapor
H301 - Toxic if swallowed
H302 - Harmful if swallowed
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H332 - Harmful if inhaled
H370 - Causes damage to organs
H371 - May cause damage to organs
H372 - Causes damage to organs through prolonged or repeated exposure
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: Exposure controls/personal protection

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

Classification procedure

H302 - Classification based on test data
H315 - Classification based on Plant Protection authority opinion in Israel
H319 - Classification based on test data
H332 - Classification based on test data
H371 - Classification based on calculation method
H373 - Classification based on calculation method
H400 - Classification based on calculation method
H410 - Classification based on calculation method

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) (AEGl(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

Revision date 30-Jan-2023

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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