

SAFETY DATA SHEET



Targena 228 SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	2023/03/07	50002721	Date of first issue: 2023/03/07

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Targena 228 SC

Other means of identification : Zinc Thiazole 228 SC

Recommended use of the chemical and restrictions on use

Recommended use : Bactericide

Restrictions on use : Use as recommended by the label.

Manufacturer or supplier's details

Company : FMC Corporation

Address : 2929 WALNUT ST
PHILADELPHIA PA 19104
USA

Telephone : (215) 299-6000

E-mail address : SDS-Info@fmc.com

Emergency telephone : For leak, fire, spill or accident emergencies, call:
001-803-017-9114 (CHEMTREC)
1 703 / 741-5970 (CHEMTREC - International)

Medical emergency:
0800 140 1447

2. HAZARDS IDENTIFICATION

GHS Classification

Serious eye damage/eye irritation : Category 2B

Skin sensitization : Sub-category 1B

Long-term (chronic) aquatic hazard : Category 2


GHS label elements

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Hazard pictograms : 

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H320 Causes eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
P261 Avoid breathing mist or vapors.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Zinc Thiazole	3234-62-6	>= 10 -< 25

4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

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| If inhaled | : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician. |
| In case of skin contact | : If on skin, rinse well with water. |
| In case of eye contact | : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician. |
| Most important symptoms and effects, both acute and delayed | : May cause an allergic skin reaction.
Causes eye irritation. |
| Notes to physician | : Treat symptomatically. |

5. FIRE-FIGHTING MEASURES

- | | |
|--|---|
| Suitable extinguishing media | : Water spray
Dry chemical
Carbon dioxide (CO2)
Foam |
| Unsuitable extinguishing media | : High volume water jet |
| Specific hazards during fire fighting | : Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : No hazardous combustion products are known |
| Specific extinguishing methods | : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for fire-fighters | : Wear self-contained breathing apparatus for firefighting if necessary. |

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment. |
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| Environmental precautions | : | Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal. |

7. HANDLING AND STORAGE

- | | | |
|---|---|---|
| Advice on protection against fire and explosion | : | Normal measures for preventive fire protection. |
| Advice on safe handling | : | Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. |
| Conditions for safe storage | : | Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards. |
| Further information on storage stability | : | No decomposition if stored and applied as directed. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

- | | | |
|------------------------|---|---|
| Respiratory protection | : | In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. |
| Hand protection | : | |
| Material | : | Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. |
| Remarks | : | The suitability for a specific workplace should be discussed with the producers of the protective gloves. |

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Eye protection	: Eye wash bottle with pure water Tightly fitting safety goggles
Skin and body protection	: Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: suspension
Color	: off-white
pH	: 5 - 8
Boiling point/boiling range	: No data available
Flash point	: No data available
Self-ignition	: No data available
Density	: 1,14 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: insoluble Solvent: organic solvent
Viscosity	
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: Non-oxidizing

10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.

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Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents Strong acids and strong bases
Hazardous decomposition products	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Species	:	Rabbit
Result	:	No skin irritation
Remarks	:	May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Causes eye irritation.

Product:

Species	:	Rabbit
Result	:	Mild eye irritation
Remarks	:	Vapors may cause irritation to the eyes, respiratory system and the skin.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

Species	:	Guinea pig
Result	:	The product is a skin sensitizer, sub-category 1B.
Remarks	:	Causes sensitization.

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Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro	:	Test Type: reverse mutation assay
		Result: negative
		Test Type: Chromosome aberration test in vitro
		Result: negative

Carcinogenicity

Not classified based on available information.

Product:

Species	:	Rat
Exposure time	:	104 weeks
	:	20 mg/kg food
Result	:	negative

Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.
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Reproductive toxicity

Not classified based on available information.

Product:

Reproductive toxicity - Assessment	:	No toxicity to reproduction
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STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Product:

Species	:	Rat, male and female
NOAEL	:	19.1 - 19.8 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	90 days

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks	:	No data available
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12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Zebra fish): 5,56 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1,19 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Scenedesmus subspicatus): 2,14 mg/l Exposure time: 96 h
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): > 100 mg/kg Exposure time: 14 d
Toxicity to terrestrial organisms	:	LD50 (Birds): > 1.000 mg/kg Exposure time: 7 d LC50 (Honey Bee): > 6.000 mg/kg Exposure time: 48 h LC50 (Bombyx mori): > 6.000 mg/kg

Ecotoxicology Assessment

Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.
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Persistence and degradability

Product:

Stability in water	:	Hydrolysis: (< 90 d) Remarks: Hydrolyzes on contact with water.
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Components:

Zinc Thiazole:

Stability in water	:	Hydrolysis: (< 90 d) Remarks: Hydrolyzes on contact with water.
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Bioaccumulative potential

No data available

Mobility in soil

Stability in soil	:	
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No data available

Other adverse effects

Product:

Additional ecological information	:	An environmental hazard cannot be excluded in the event of
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mation	unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.
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13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	: UN 3082
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zinc Thiazole)
Class	: 9
Packing group	: III
Labels	: 9

IATA-DGR

UN/ID No.	: UN 3082
Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (Zinc Thiazole)
Class	: 9
Packing group	: III
Labels	: Miscellaneous
Packing instruction (cargo aircraft)	: 964
Packing instruction (passenger aircraft)	: 964
Environmentally hazardous	: yes

IMDG-Code

UN number	: UN 3082
Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zinc Thiazole)
Class	: 9
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
Marine pollutant	: yes

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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

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

Minister of Industry Regulation No. 23/M-IND/PER/4/2013 concerning the Revision of Minister of Industry Regulation No. 87/M-IND/PER/9/2009 concerning Globally Harmonized System of Classification and Labelling of Chemicals.

Regulation of the Minister of Health No. 472 of 1996 on the Safeguarding of Substances Hazardous to Health

Hazardous substances that must be registered : Not applicable

Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances

Hazardous substances approved for use : Not applicable

Prohibited substances : Not applicable

Restricted substances : Not applicable

The ingredients of this product are reported in the following inventories:

TCSI	: Not in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL. Zinc Thiazole
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory

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NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

16. OTHER INFORMATION

Revision Date	:	2023/03/07
Date format	:	yyyy/mm/dd

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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