SAFETY DATA SHEET



1. Identification

Product identifier ALBENDAZOLE TABLETS

Other means of identification

identification Not available.

Synonym(s)

ALBEN TABLETS 400 MG * AZENTEL TABLETS 400 MG * ESKAZOLE TABLETS 400 MG * ESKAZOLE 400 MG CHEWABLE TABLETS * NEMATIL TABLETS 400 MG * ZENTEL TABLETS

400 MG * ALBENDAZOLE, FORMULATED PRODUCT

Recommended use Medicinal Product

This safety data sheet is written to provide health, safety and environmental information for people handling this formulated product in the workplace. It is not intended to provide information relevant

to medicinal use of the product. In this instance patients should consult prescribing

information/package insert/product label or consult their pharmacist or physician. For health and safety information for individual ingredients used during manufacturing, refer to the appropriate

safety data sheet for each ingredient.

Recommended restrictions

No other uses are advised.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

GlaxoSmithKline US 5 Moore Drive

Research Triangle Park, NC 27709 USA

US General Information (normal business hours): +1-888-825-5249

Email Address: msds@gsk.com Website: www.gsk.com EMERGENCY PHONE NUMBERS -TRANSPORT EMERGENCIES::

US / International toll call +1 703 527 3887

available 24 hrs/7 days; multi-language response

2. Hazard(s) identification

Classified hazards

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

Label elements

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

Hazard(s) not otherwise classified (HNOC)

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ALBENDAZOLE	(5-(PROPYLTHIO)-1H-BENZIMIDAZOL-2-Y L-)CARBAMIC ACID METHYL ESTER ABZ SKF-62979 METHYL	54965-21-8	38.94
	5-(PROPYLTHIO)-2-BENZIMIDAZOLECAR BAMATE ((PROPYLTHIO)-5 1H-BENZIMIDAZOLYL-2) CARBAMATE DE		
	METHYLE (FRENCH) (5-(PROPYLTHIO)-1H-BENZIMIDAZOL-2-Y L)CARBAMIC ACID METHYL ESTER 5-(PROPYLTHIO)-2-CARBOMETHOXYAMI		
	NOBENZIMIDAZOLE 62979 (SKF)		

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Chemical name	Common name and synonyms	CAS number	%
MICROCRYSTALLINE CELLULOSE	AVICEL PH MICROCRYSTALLINE CELLULOSE ABICEL ALPHA-CELLULOSE ARBOCEL ARBOCELL B 600/30 ARBOCELL BC 200 AVICEL PH101 AVICEL PH102 AVICEL PH103 AVICEL PH105 AVICEL PH200 BETA-AMYLOSE CELLEX MX CELLULOSE (8CI9CI) CELLULOSE CRYSTALLINE CELLULOSE CRYSTALLINE CELLULOSE CRYSTALLINE CELLULOSE EMOCEL MCC MICROCRYSTALLINE CELLULOSE POWDERED CELLULOSE RTECS FJ5691460 SOLKA FLOC BW200 CELLULOSE (PAPER FIBRES) CELLULOSE (PAPER FIBRES) CELLULOSA (FIBRA PAPEL) TSELLULOOS	9004-34-6	25.66
STARCH	ARROWROOT STARCH CORN STARCH POTATO STARCH RICE STARCH	9005-25-8	15.58
CROSCARMELLOSE SODIUM	AC-DI-SOL (R) SODIUM CROSCARMELLOSE AC-DI-SOL (R) CROSCARMELLOSE SODIUM AC-DI-SOL (R) SD-711 OHS05522	74811-65-7	3.89
POLYVINYLPYRROLIDONE	1-ETHENYL-2-PYRROLIDINONE HOMOPOLYMER POLY(N-VINYLPYRROLIDONE) PLASDONE	9003-39-8	1.95
MAGNESIUM STEARATE	STEARIC ACID, MAGNESIUM SALT MAGNESIUM DISTEARATE DIBASIC MAGNESIUM STEARATE MAGNESIUM DISTEARATE, PURE	557-04-0	0.9
Other components below reportab			13.08

^{*}Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

treatment needed

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

IngestionRinse mouth. Get medical attention if symptoms occur.Most importantDirect contact with eyes may cause temporary irritation.

symptoms/effects, acute and delayed The possible symptoms of overexposure include: nausea; vomiting; abdominal pain; headache.

Indication of immediate Treat symptomatically. medical attention and special

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to

protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing

None known.

media

Specific hazards arising from

the chemical

During fire, gases hazardous to health may be formed.

Foam. Dry chemical powder. Carbon dioxide (CO2). Water.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting

equipment/instructions

Use water spray to cool unopened containers. Move containers from fire area if you can do so

without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Assume that this product is capable of sustaining combustion.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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Components	Туре	Value	Note
ALBENDAZOLE (CAS 54965-21-8)	8 HR TWA	100 mcg/m3	
,	OHC	3	REPRODUCTIVE HAZARD
MAGNESIUM STEARATE (CAS 557-04-0)	OHC	1	
MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)	OHC	1	
US. OSHA Table Z-1 Limits for Air	Contaminants (29 CFR 1910.100	0)	
Components	Туре	Value	Form
MICROCRYSTALLINE CELLULOSE (CAS	PEL	5 mg/m3	Respirable fraction.
9004-34-6)		45	Total dust
STARCH (CAS 9005-25-8)	PEL	15 mg/m3 5 mg/m3	Total dust. Respirable fraction.
31ARC11 (CAS 9003-25-0)	FEL	15 mg/m3	Total dust.
		ro mg/mo	Total dust.
US. ACGIH Threshold Limit Values			
Components	Туре	Value	
MAGNESIUM STEARATE (CAS 557-04-0)	TWA	10 mg/m3	
MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)	TWA	10 mg/m3	
STARCH (CAS 9005-25-8)	TWA	10 mg/m3	
US. NIOSH: Pocket Guide to Chem	ical Hazards		
Components	Туре	Value	Form
MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)	TWA	5 mg/m3	Respirable.
•		10 mg/m3	Total

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US. NIOSH: Pocket Guide to Chemical Hazards

Form Components Value Type STARCH (CAS 9005-25-8) **TWA** 5 mg/m3 Respirable. 10 mg/m3 Total

No biological exposure limits noted for the ingredient(s). **Biological limit values**

Appropriate engineering

controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Not normally needed.

Hand protection The choice of an appropriate glove does not only depend on its material but also on other quality

features and is different from one producer to the other. Glove selection must take into account

any solvents and other hazards present.

Other Wear suitable protective clothing.

No personal respiratory protective equipment normally required. Respiratory protection Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Solid. Physical state Tablet **Form**

Color Not available. Odor Not available Odor threshold Not available. Not available. pН Melting point/freezing point Not available. Not available. Initial boiling point and boiling

range

Not available. Flash point Not available. **Evaporation rate** Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

Not available.

Flammability limit - upper

(%)

Not available.

Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available.

Not available. Vapor pressure Not available. Vapor density Relative density Not available.

Solubility(ies)

Not available. Solubility (water) **Partition coefficient** Not available.

(n-octanol/water)

Auto-ignition temperature Not available. Not available. **Decomposition temperature** Not available. **Viscosity**

10. Stability and reactivity

Not available. Reactivity

Chemical stability Material is stable under normal conditions.

Possibility of hazardous No dangerous reaction known under conditions of normal use.

reactions

Conditions to avoid Contact with incompatible materials. Incompatible materials Strong oxidizing agents. Fluorine.

Hazardous decomposition

products

Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

11. Toxicological information

Information on likely routes of exposure

Ingestion Expected to be a low ingestion hazard. Health injuries are not known or expected under normal

use.

Health injuries are not known or expected under normal use. Inhalation Skin contact Health injuries are not known or expected under normal use.

Direct contact with eyes may cause temporary irritation. Avoid contact with eyes. Eye contact

Symptoms related to the physical, chemical and toxicological characteristics The possible symptoms of overexposure include: nausea, vomiting, abdominal pain, headache.

Information on toxicological effects

Acute toxicity Health injuries are not known or expected under normal use.

Components **Species Test Results**

ALBENDAZOLE (CAS 54965-21-8)

Acute

Oral

LD50 Rat 1320 - 2000 mg/kg

CROSCARMELLOSE SODIUM (CAS 74811-65-7)

Acute

Dermal

LD50 Rabbit > 2000 mg/kg

Inhalation

LCLo Rat $> 0.1 \, \text{mg/l}$

Oral

LD50 Rat 5050 mg/kg

MAGNESIUM STEARATE (CAS 557-04-0)

Acute

Oral

LD50 Rat > 2000 mg/kg

MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)

Acute

Dermal

Rabbit LD50 > 2000 mg/kg

Oral

LD50 Rat > 2000 mg/kg

POLYVINYLPYRROLIDONE (CAS 9003-39-8)

Acute

Oral

LD50 Rat > 5000 mg/kg

Skin corrosion/irritation Health injuries are not known or expected under normal use.

Corrosivity

ALBENDAZOLE Acute dermal irritation

Result: Non-irritant Species: Rabbit

Irritation Corrosion - Skin: P.I.I. value

MAGNESIUM STEARATE

Serious eye damage/eye

Direct contact with eyes may cause temporary irritation. Health injuries are not known or expected

irritation under normal use.

Material name: ALBENDAZOLE TABLETS

^{*} Estimates for product may be based on additional component data not shown.

Eye

ALBENDAZOLE Acute Occular irritation

Result: Non-Irritating Species: Rabbit

Eye / Kay and Calandra class - Intact

MAGNESIUM STEARATE

Recovery Period: 2 days

Respiratory or skin sensitization

Health injuries are not known or expected under normal use. Respiratory sensitization Skin sensitization Health injuries are not known or expected under normal use.

Sensitization

ALBENDAZOLE Maximisation assay (Magnusson and Kligman)

Result: Negative Species: Guinea pig

Germ cell mutagenicity

Health injuries are not known or expected under normal use.

Mutagenicity

ALBENDAZOLE

Ames

Result: Negative

Chromosomal Aberration Assay In Vitro

Result: Negative In vivo Micronucleus Result: Negative

Carcinogenicity

ALBENDAZOLE

Health injuries are not known or expected under normal use.

24 Month

Result: Negative Species: Mouse 24 Month Result: Negative Species: Rat

IARC Monographs. Overall Evaluation of Carcinogenicity

POLYVINYLPYRROLIDONE (CAS 9003-39-8) 3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Possible risk of affecting the quantity or the quality of breast milk in humans. May damage the Reproductive toxicity

unborn child.

Reproductivity

ALBENDAZOLE Embryo-foetal development

Result: Effects seen at 10 mg/kg/day, NOAEL 5 mg/kg/day

Species: Rabbit

Embryo-foetal development

Result: Effects seen at 10 mg/kg/day, NOAEL 5 mg/kg/day

Species: Rat Fertility, Female Result: Negative Species: Rat Fertility, Male Result: Negative Species: Rat Milk effects

Result: Excreated in milk, inconclusive effects.

Species: Rat

Specific target organ toxicity -

single exposure

None known.

Specific target organ toxicity -

repeated exposure

ALBENDAZOLE

30 mg/kg/day Repeat dose non-clinical studies

Result: Decrease in size, rat, mouse.

Organ: Testes

Repeat dose non-clinical studies; clinical observation

Result: Human, rat, mouse

Organ: Liver

Repeat dose non-clinical studies; clinical observation

Result: Human, rat, mouse Organ: bone marrow; blood

Aspiration hazard Not an aspiration hazard.

Further information Caution - Pharmaceutical agent.

Material name: ALBENDAZOLE TABLETS

12. Ecological information

Ecotoxicity

No information is available about the potential of this product to produce adverse environmental effects. Contains a substance which causes risk of hazardous effects to the environment. The product contains a substance which may cause long-term adverse effects in the environment.

Components		Species	Test Results
ALBENDAZOLE (CAS 54	965-21-8)		
Chronic			
Fish	NOEC	Danio rerio	0.022 mg/l, 6 days
Aquatic			
Acute			
Activated Sludge Respiration	IC50	Residential sludge	> 0.27 mg/L, 3 hours
Algae	EC50	Green algae (Selenastrum capricornutum)	> 50 mg/L, 72 hours
Crustacea	EC50	Water flea (Daphnia magna)	0.024 mg/L, 48 hours Static test
	NOEC	Water flea (Daphnia magna)	0.017 mg/L, 48 hours Static test
Microtox	EC50	Microtox	0.36 mg/L, 15 minutes
Terrestrial			
Acute			
Earthworm	EC50	Redworm (Lumbricus rubellus)	15 mg/kg, 60 days agricultural soil
MAGNESIUM STEARAT	E (CAS 557-04-0	0)	
Aquatic			
Acute			
Fish	EC50	Orange-red killfish (Adult Oryzias latipes)	130 mg/l, 96 hours
Microtox	EC50	Microtox	12.5 mg/l, 15 minutes
POLYVINYLPYRROLIDO	NE (CAS 9003-	39-8)	
Acute			
	IC50	Activated sludge	> 1000 mg/l, 3 hours Static test
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	84 mg/l, 48 hours Static test
	NOEC	Water flea (Daphnia magna)	32 mg/l, 48 hours Static test

^{*} Estimates for product may be based on additional component data not shown.

Persistence and degradability

Photolysis

Half-life (Photolysis-aqueous)

ALBENDAZOLE 0.1 - 1.65 Days Measured

Half-life (Photolysis-atmospheric)

MAGNESIUM STEARATE 17 Hours Estimated

UV/visible spectrum wavelength

ALBENDAZOLE 295 nm, pH 7 MAGNESIUM STEARATE 210 nm

Biodegradability

Percent degradation (Aerobic biodegradation-soil)

MAGNESIUM STEARATE 50 %, 13 days

Bioaccumulative potential

Bioconcentration factor (BCF)

ALBENDAZOLE 1.16 Measured, Lepomis macrochirus, bluegill sunfish

MAGNESIUM STEARATE > 9999 Estimated

Mobility in soil

Adsorption

Soil/sediment sorption - log Koc

ALBENDAZOLE 3.89 - 4.44 Measured MAGNESIUM STEARATE 5.86 Estimated

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Mobility in general

Distribution

Octanol/water distribution coefficient log DOW

3.47 AI BENDAZOI E

Octanol/water distribution coefficient pH

ALBENDAZOLE 7

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Dispose in accordance with all applicable regulations. Local disposal regulations

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

Since emptied containers may retain product residue, follow label warnings even after container is

emptied.

14. Transport information

General information Classifications are for the material when offered for transport as fully regulated. Depending on the

> specific transport details (Ship-From/Ship To locations, quantities being shipped, type of packaging and mode of transport) it may be possible to ship this material in a manner other than fully regulated. (One example is IATA Limited or Excepted Quantity. There are others.) Be sure to

review all regulatory agency packaging instructions and special provisions, referenced in this

section, to identify options applicable to the specifics of your shipment.

DOT

UN number UN3077

UN proper shipping name Environmentally hazardous substances, solid, n.o.s. (ALBENDAZOLE TABLETS), MARINE

POLLUTANT

Transport hazard class(es)

9 Class Subsidiary risk Label(s) 9 Ш **Packing group**

Environmental hazards

Marine pollutant Yes

Special precautions for user Not available.

Special provisions 8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33

Packaging exceptions 155 Packaging non bulk 213 Packaging bulk 240 **Qty limits cargo** No limit **Qty limits passenger** No limit

IATA

UN number UN3077

Environmentally hazardous substance, solid, n.o.s. (ALBENDAZOLE TABLETS) **UN proper shipping name**

Transport hazard class(es) 9 Subsidiary class(es) Ш **Packaging group** Labels required 9 **Environmental hazards** Nο 9L **ERG Code**

Special precautions for user Not available.

Other information

Cargo aircraft only Allowed. Passenger & cargo Allowed.

Additional Information:

Packaging Instruction 956 956 Pkg Inst cargo only Pkg Inst passenger & cargo Y956

SP see 44 A97,A158,A179

400 kg Max net qty pkg 400 kg Max net qty pkg cargo only

30 kg G Max net qty pkg LQ

IMDG

UN3077 **UN** number

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ALBENDAZOLE TABLETS) **UN** proper shipping name

Transport hazard class(es) Class

9 Subsidiary risk 9 Label(s) Ш **Packing group Environmental hazards**

Marine pollutant Yes F-A, S-F **EmS** Special precautions for user Not available.

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

MARPOL Annex II applies to liquids used in a ship's operation that pose a threat to the marine

environment. These materials may not be transported in bulk.

DOT; IATA; IMDG



Marine pollutant



15. Regulatory information

US federal regulations One or more components are not listed on TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Superfund Amendments and Reauthorization Act of 1986 (SARA)

No

Hazard categories Immediate Hazard - Yes

Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

chemical

SARA 313 (TRI reporting)

Not regulated.

Material name: ALBENDAZOLE TABLETS

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

US state regulations

US. Massachusetts RTK - Substance List

MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)

STARCH (CAS 9005-25-8)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

MICROCRYSTALLINE CELLULOSE (CAS 9004-34-6)

STARCH (CAS 9005-25-8)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Australian Inventory of Chemical Substances (AICS)

International Inventories

Australia

Country(s) or region

Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Inventory name

 Issue date
 06-18-2014

 Revision date
 06-18-2014

Version # 14

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 2*
Flammability: 1

Physical hazard: 0

NFPA ratings Health: 2

Flammability: 1 Instability: 0

References GSK Hazard Determination

Disclaimer The information and recommendations in this safety data sheet are, to the best of our knowledge,

accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and

the suitability of the material or product for any particular purpose.

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SDS US

On inventory (yes/no)*

No

Revision Information

Product and Company Identification: Business Units Composition / Information on Ingredients: Ingredients Physical & Chemical Properties:

Toxicological Information: Irritation Corrosion
Transport Information: Material Transportation Information
Regulatory Information: United States

GHS: Classification