

SAFETY DATA SHEET

1. Identification

Product identifier	TAFINLAR CAPSULES
Other means of identification	Not available.
Synonym(s)	DABRAFENIB CAPSULES * GSK2118436B CAPSULES * GSK2118436B 1MG CAPSULES * GSK2118436B 5MG CAPSULES * GSK2118436B 25MG CAPSULES * GSK2118436B 50MG CAPSULES * GSK2118436B 75MG CAPSULES * GSK2118436B 100MG CAPSULES * GSK2118436B, 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	%
DABRAFENIB MESYLATE	GSK2118436B N-[3-[5-(2-AMINO-4-PYRIMIDINYL)-2-(1,1-DIMETHYLETHYL)-1,3-THIAZOL-4-YL]-2-FLUOROPHENYL]-2,6-DIFLUOROBENZENESULFONAMIDE, METHANESULFONATE, (1:1)	1195768-06-9	1.0 - <45.0
MAGNESIUM STEARATE	STEARIC ACID, MAGNESIUM SALT MAGNESIUM DISTEARATE DIBASIC MAGNESIUM STEARATE MAGNESIUM DISTEARATE, PURE	557-04-0	0.1 - <5.0

Other components below reportable levels >50.0

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

4. First-aid measures

Inhalation	If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Get medical attention immediately.
Skin contact	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. If swallowed, rinse mouth with water (only if the person is conscious).
Most important symptoms/effects, acute and delayed	Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
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	In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	This product is expected to be non-combustible.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Use care in handling/storage.
Conditions for safe storage, including any incompatibilities	Store in accordance with local/regional/national/international regulation.

8. Exposure controls/personal protection

Occupational exposure limits

GSK Components	Type	Value	Note
DABRAFENIB MESYLATE (CAS 1195768-06-9)	8 HR TWA	20 mcg/m3	REPRODUCTIVE HAZARD
	OHC	3	REPRODUCTIVE HAZARD
MAGNESIUM STEARATE (CAS 557-04-0)	OHC	1	

US. ACGIH Threshold Limit Values

Components	Type	Value
MAGNESIUM STEARATE (CAS 557-04-0)	TWA	10 mg/m3

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Individual protection measures, such as personal protective equipment

Eye/face protection	Not normally needed. Wear safety glasses with side shields (or goggles).
----------------------------	--

Hand protection	Not normally needed. Use personal protective equipment as required. 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 appropriate chemical resistant clothing.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Thermal hazards	Not available.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wash hands before breaks and immediately after handling the product. An occupational/industrial hygiene monitoring method has been developed for this material. For advice on suitable monitoring methods, seek guidance from a qualified environment, health and safety professional. New or expectant mothers might be at greater risk from overexposure. Risk assessments must take this into consideration. Female employees anticipating pregnancy or with a confirmed pregnancy must be encouraged to notify an occupational health professional or their line manager. This will act as the trigger for individual re-assessment of the employee's work practices.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Capsule.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
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.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
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	Based on available data, the classification criteria are not met. May be harmful if swallowed.
Inhalation	Due to lack of data the classification is not possible. Inhalation of dusts may cause respiratory irritation.
Skin contact	Due to lack of data the classification is not possible. May be irritating to the skin.
Eye contact	Due to lack of data the classification is not possible. Dust or powder may irritate eye tissue.
Symptoms related to the physical, chemical and toxicological characteristics	Not available.

Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
-----------------------	---

Components	Species	Test Results
-------------------	----------------	---------------------

DABRAFENIB MESYLATE (CAS 1195768-06-9)

Acute

Oral

LD	Rat	> 1000 mg/kg Micronucleus study
----	-----	---------------------------------

Subchronic

Oral

LD	Rat	> 400 mg/kg/day 13 week study
----	-----	-------------------------------

NOAEL	Rat	< 20 mg/kg/day 13 week study
-------	-----	------------------------------

MAGNESIUM STEARATE (CAS 557-04-0)

Acute

Oral

LD50	Rat	> 2000 mg/kg
------	-----	--------------

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

Skin corrosion/irritation	Due to lack of data the classification is not possible.
----------------------------------	---

Corrosivity

DABRAFENIB MESYLATE

Reconstituted Human Epidermis (RHE)
Result: Negative; not considered a significant irritant;
GSK2118436A (free base) tested

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

MAGNESIUM STEARATE

0

Serious eye damage/eye irritation	Due to lack of data the classification is not possible.
--	---

Eye

DABRAFENIB MESYLATE

Reconstituted Human Corneal Epithelium (HCE)
Result: Negative; not likely to be a severe irritant;
GSK2118436A (free base) tested

Eye / Kay and Calandra class - Intact

MAGNESIUM STEARATE

4

Recovery Period: 2 days

Respiratory or skin sensitization

Respiratory sensitization	Due to lack of data the classification is not possible.
----------------------------------	---

Skin sensitization	Due to lack of data the classification is not possible.
---------------------------	---

Sensitization

DABRAFENIB MESYLATE

Local lymph node assay, Maximum test concentration 50%;
vehicle DMF; GSK2118436A tested
Result: Negative
Species: Mouse
SAR / QSAR
Result: Negative

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
-------------------------------	--

Mutagenicity

DABRAFENIB MESYLATE

Ames Assay, GLP assay; GSK2118436A (free base) tested
Result: Negative

Mutagenicity

DABRAFENIB MESYLATE

Micronucleus Assay, GLP assay; tested to MTD of 1000

mg/kg (oral); GSK2118436A (free base) tested

Result: Negative

Species: Rat

Mouse Lymphoma Cell (L5178Y) Assay, GLP assay; GSK2118436A (free base) tested

Result: Negative

SAR / QSAR, DEREK, Lhasa, UK

Result: Negative

Carcinogenicity

DABRAFENIB MESYLATE

Due to lack of data the classification is not possible. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Not classifiable as to carcinogenicity to humans.

Clinical observation, In cancer patients ingestion of GSK2118436, like other BRAF inhibitors, leads to appearance of squamous cell carcinoma.

SAR / QSAR

Result: Negative

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

Not listed.

Reproductive toxicity**Reproductivity**

DABRAFENIB MESYLATE

Suspected of damaging fertility or the unborn child.

Female Fertility / Early Embryonic & Embryo-foetal Development

Result: Maternal toxicity and decreased corpora lutea, no other fertility effects; foetal lethality, cardiac and thymic defects plus foetal adverse effects noted at lower doses; dose = 300 mg/kg/day; GSK2118436A (free base) tested

Species: Rat

Female Fertility / Early Embryonic & Embryo-foetal Development

Result: Maternal toxicity, no fertility effects; delayed foetal skeletal development and reduced foetal weight; dose >= 20 mg/kg/day; GSK2118436A (free base) tested

Species: Rat

Specific target organ toxicity -**single exposure**

Due to lack of data the classification is not possible.

Specific target organ toxicity -**repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Not available.

Chronic effects

Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.

Further information

DABRAFENIB MESYLATE

3T3 Cell / Neutral Red Uptake Assay, Potential phototoxicity

Result: Positive

12. Ecological information**Ecotoxicity**

Contains a substance which causes risk of hazardous effects to the environment.

Components	Species	Test Results
DABRAFENIB MESYLATE (CAS 1195768-06-9)		
Aquatic		
Acute		
Activated Sludge Respiration	IC50	Residential sludge > 370.3 mg/l, 3 hours OECD 209
	NOEC	Residential sludge 370.3 mg/l, 3 hours
Algae	EC50	Green algae (Pseudokirchnereilla subcapitata) 0.33 mg/l, 72 hours Measured, OECD 202
	NOEC	Green algae (Pseudokirchnereilla subcapitata) 0.26 mg/l, 72 hours
Chronic		
Crustacea	LOEC	Water flea (Daphnia magna) > 0.12 mg/l, 21 days semi-static test conditions, OECD 211
	NOEC	Water flea (Daphnia magna) 0.12 mg/l, 21 days
Fish	Growth test LOEC	Fathead minnow (Juvenile Pimephales promelas) 3.09 mg/l, 28 days Flow-through test, OECD 210

Components	Species	Test Results
	Growth test NOEC	Fathead minnow (Juvenile Pimephales promelas) 1.74 mg/l, 28 days
Other	LOEC	Chironomid (Chironomus riparius) 189.6 mg/l, 28 days Measured, OECD 209
	NOEC	Chironomid (Chironomus riparius) 75.84 mg/l, 28 days

MAGNESIUM STEARATE (CAS 557-04-0)

Aquatic

Acute

Fish

EC50

Orange-red killfish (Adult Oryzias latipes)

130 mg/l, 96 hours

Microtox

EC50

Microtox

12.5 mg/l, 15 minutes

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

Persistence and degradability No data is available on the degradability of this product.

Photolysis

Half-life (Photolysis-atmospheric)

MAGNESIUM STEARATE

17 Hours Estimated

UV/visible spectrum wavelength

MAGNESIUM STEARATE

210 nm

Biodegradability

Percent degradation (Aerobic biodegradation-soil)

MAGNESIUM STEARATE

50 %, 13 days

Bioaccumulative potential No data available for this product.

Partition coefficient n-octanol / water (log Kow)

DABRAFENIB MESYLATE

3.38 (measured at pH 7)

Bioconcentration factor (BCF)

DABRAFENIB MESYLATE

3.98 - 4.38 OECD 305, Measured

MAGNESIUM STEARATE

Species: Rainbow trout (Adult *Oncorhynchus mykiss*)

> 9999 Estimated

Mobility in soil

Adsorption

Sludge/biomass distribution coefficient - log Kd

DABRAFENIB MESYLATE

2.93, pH 7

Soil/sediment sorption - log Koc

MAGNESIUM STEARATE

5.86 Estimated

Mobility in general

Distribution

Octanol/water distribution coefficient log DOW

DABRAFENIB MESYLATE

-0.17, pH 9

3.23 Measured., pH 5

3.38, pH 7

Other adverse effects

Not available.

13. Disposal considerations

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international 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

DOT

UN number

UN3077

UN proper shipping name

Environmentally hazardous substances, solid, n.o.s. (DABRAFENIB CAPSULES), MARINE POLLUTANT

Transport hazard class(es)

Class	9
Subsidiary risk	-
Label(s)	9

Packing group	III
----------------------	-----

Environmental hazards

Marine pollutant	Yes
-------------------------	-----

Special precautions for user	May be able to ship as an Excepted or Limited Quantity. Consumer Commodity, ORM-D may apply. See 173.150 and 173.156
-------------------------------------	---

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
-----------------------------	----------

May be able to ship as an Excepted or Limited Quantity.
ID 8000, Consumer Commodity, may apply. See Packing Instruction Y963.

IATA

UN number	UN3077
------------------	--------

UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (DABRAFENIB CAPSULES)
--------------------------------	--

Transport hazard class(es)	9
-----------------------------------	---

Subsidiary class(es)	-
-----------------------------	---

Packaging group	III
------------------------	-----

Labels required	9
------------------------	---

Environmental hazards	No.
------------------------------	-----

ERG Code	9L
-----------------	----

Special precautions for user	May be able to ship as an Excepted or Limited Quantity. ID 8000, Consumer Commodity, may apply. See Packing Instruction Y963.
-------------------------------------	--

Other information

Cargo aircraft only	Allowed.
----------------------------	----------

Passenger & cargo	Allowed.
------------------------------	----------

Additional Information:

Packaging Instruction	956
------------------------------	-----

Pkg Inst cargo only	956
----------------------------	-----

Pkg Inst passenger & cargo	Y956
---------------------------------------	------

SP see 44	A97,A158,A179
------------------	---------------

Max net qty pkg	400 kg
------------------------	--------

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

Max net qty pkg LQ	30 kg G
---------------------------	---------

IMDG

UN number	UN3077
------------------	--------

UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DABRAFENIB CAPSULES)
--------------------------------	--

Transport hazard class(es)	
-----------------------------------	--

Class	9
--------------	---

Subsidiary risk	-
------------------------	---

Label(s)	9
-----------------	---

Packing group	III
----------------------	-----

Environmental hazards

Marine pollutant	Yes
-------------------------	-----

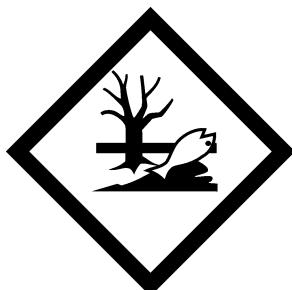
EmS	F-A, S-F
------------	----------

Special precautions for user	May be able to ship as an Excepted or Limited Quantity.
-------------------------------------	---

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.
---	---



Marine pollutant



15. Regulatory information

US federal regulations

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

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

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No
	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.

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 (SDWA)

Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

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

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

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.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
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

Issue date	04-09-2014
Revision date	04-09-2014
Version #	11
Further information	HMIS® is a registered trade and service mark of the NPCA.
HMIS® ratings	Health: 3* Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 3 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.
Revision Information	Composition / Information on Ingredients: Component Summary