

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

### 1.1. Product identifier

|  |   |
|--|---|
| Trade name or designation of the mixture | MEKINIST TABLETS  |
| Registration number                      | -   |
| Synonyms                                 | TRAMETINIB TABLETS * TRAMETINIB AQUEOUS FILM COATED TABLETS * TRAMETINIB AQUEOUS FILM COATED TABLETS 0,25 MG - 2,0MG * GSK1120212B AQUEOUS FILM COATED TABLETS 0,25 MG - 2,0MG * TRAMETINIB, FORMULATED PRODUCT * GSK1120212B, FORMULATED PRODUCT |
| Issue date                               | 22-October-2014   |
| Version number                           | 10  |
| Revision date                            | 22-October-2014   |
| Supersedes date                          | 12-September-2014   |

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

**Identified uses** 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.

**Uses advised against** No other uses are advised.

### 1.3. Details of the supplier of the safety data sheet

GlaxoSmithKline UK  
980 Great West Road  
Brentford, Middlesex TW8 9GS UK  
UK General Information (normal business hours): +44-20-8047-5000  
Email Address: msds@gsk.com  
Website: www.gsk.com

### 1.4. Emergency telephone number

TRANSPORT EMERGENCIES::  
UK In-country toll call: +(44)-870-8200418  
International toll call: +1 703 527 3887  
available 24 hrs/7 days; multi-language response

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

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

#### Classification according to Regulation (EC) No 1272/2008 as amended

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

### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

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

### 2.3. Other hazards

Caution - Pharmaceutical agent. Avoid breaking or crushing tablets. Avoid breathing dusts from this material. See section 11 for additional information on health hazards.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

## General information

| Chemical name          | %           | CAS-No. / EC No.  | REACH Registration No. | INDEX No. | Notes |
|------------------------|-------------|---|------------------------|-----------|-------|
| TRAMETINIB             | 0,2 - 2,0   | 108-78-1<br>203-615-4   | -                      | -         | M=10  |
| <b>Classification:</b> | <b>DSD:</b> | Repr. Cat. 3;R63, T;R48/25, R43, N;R50/53   |                        |           |       |
|                        | <b>CLP:</b> | Skin Sens. 1;H317, Repr. 2;H361, STOT RE 1;H372, Aquatic Acute 1;H400, Aquatic Chronic 1;H410 |                        |           |       |
| MAGNESIUM STEARATE     | <1,0        | 557-04-0<br>209-150-3   | -                      | -         |       |
| <b>Classification:</b> | <b>DSD:</b> | -   |                        |           |       |
|                        | <b>CLP:</b> | -   |                        |           |       |
| Titanium dioxide       | <1,0        | 13463-67-7<br>236-675-5   | -                      | -         |       |
| <b>Classification:</b> | <b>DSD:</b> | -   |                        |           |       |
|                        | <b>CLP:</b> | -   |                        |           |       |
| DODECYL SODIUM SULFATE | <0,1        | 151-21-3<br>205-788-1   | -                      | -         |       |
| <b>Classification:</b> | <b>DSD:</b> | F;R11, Xn;R22, Xi;R36/38  |                        |           |       |
|                        | <b>CLP:</b> | Flam. Sol. 1;H228, Acute Tox. 4;H302, Skin Irrit. 2;H315, Eye Irrit. 2;H319, STOT SE 3;H335   |                        |           |       |

Other components below reportable levels >95,0

### List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

**Composition comments** The full text for all R- and H-phrases is displayed in section 16.

## SECTION 4: First aid measures

**General information** In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 4.1. Description of first aid measures

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Move to fresh air. If breathing is difficult, trained personnel should give oxygen. Call a physician if symptoms develop or persist. Under normal conditions of intended use, this material is not expected to be an inhalation hazard. |
| <b>Skin contact</b> | Immediately flush skin with plenty of water. Take off contaminated clothing and wash before reuse. Get medical attention if symptoms occur.   |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.  |
| <b>Ingestion</b>    | If swallowed, rinse mouth with water (only if the person is conscious). If ingestion of a large amount does occur, call a poison control centre immediately. Do not induce vomiting without advice from poison control center.          |

**4.2. Most important symptoms and effects, both acute and delayed** May cause allergic skin reaction.  
The following adverse effects have been noted with therapeutic use of this material: bone marrow toxicity; gastrointestinal distress; cardiovascular effects; symptoms of hypersensitivity (such as skin rash, hives, itching); fatigue; anaemia; skin changes. Additional effects of overexposure may occur.

**4.3. Indication of any immediate medical attention and special treatment needed** No specific antidotes are recommended. Treat according to locally accepted protocols. For additional guidance, refer to the current prescribing information or to the local poison control information centre.

## SECTION 5: Firefighting measures

**General fire hazards** No unusual fire or explosion hazards noted.

|   |   |
|---|---|
| <b>5.1. Extinguishing media</b>                                   |   |
| <b>Suitable extinguishing media</b>                               | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).                      |
| <b>Unsuitable extinguishing media</b>                             | None known.   |
| <b>5.2. Special hazards arising from the substance or mixture</b> | During fire, gases hazardous to health may be formed.   |
| <b>5.3. Advice for firefighters</b>                               |   |
| <b>Special protective equipment for firefighters</b>              | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Special fire fighting procedures</b>                           | Use water spray to cool unopened containers.  |
| <b>Specific methods</b>   | Use standard firefighting procedures and consider the hazards of other involved materials.    |

## SECTION 6: Accidental release measures

|   |  |
|---|--|
| <b>6.1. Personal precautions, protective equipment and emergency procedures</b> |  |
| <b>For non-emergency personnel</b>  | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8. |
| <b>For emergency responders</b>   | Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.  |
| <b>6.2. Environmental precautions</b>   | Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.   |
| <b>6.3. Methods and material for containment and cleaning up</b>                | Stop the flow of material, if this is without risk. Collect spillage. Prevent product from entering drains. Following product recovery, flush area with water.   |
| <b>6.4. Reference to other sections</b>   | For personal protection, see section 8. For waste disposal, see section 13 of the SDS.   |

## SECTION 7: Handling and storage

|  |   |
|--|---|
| <b>7.1. Precautions for safe handling</b>                                | Avoid breaking or crushing tablets. Avoid breathing dusts from this material. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. |
| <b>7.2. Conditions for safe storage, including any incompatibilities</b> | Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).   |
| <b>7.3. Specific end use(s)</b>  | Medicinal Product   |

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

| GSK Components                        | Type     | Value                | Note                |
|---------------------------------------|----------|----------------------|---------------------|
| DODECYL SODIUM SULFATE (CAS 151-21-3) | OHC      | 2                    |                     |
| MAGNESIUM STEARATE (CAS 557-04-0)     | OHC      | 1                    |                     |
| TRAMETINIB (CAS 108-78-1)             | 8 HR TWA | 2 mcg/m <sup>3</sup> |                     |
|                                       | OHC      | 4                    | SKIN SENSITISER     |
|                                       |          | 4                    | Reproductive hazard |

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

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no-effect level (DNEL)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

### 8.2. Exposure controls

|  |  |
|--|--|
| <b>Appropriate engineering controls</b>                                      | General ventilation normally adequate.   |
| <b>Individual protection measures, such as personal protective equipment</b> |  |
| <b>General information</b>   | Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Follow all local regulations if personal protective equipment (PPE) is used in the workplace.  |
| <b>Eye/face protection</b>   | Not normally needed. If contact is likely, safety glasses with side shields are recommended. (eg. EN 166)  |
| <b>Skin protection</b>   |  |
| <b>- Hand protection</b>   | Not normally needed. For prolonged or repeated skin contact use suitable protective gloves. Select suitable chemical resistant protective gloves (EN 374) with a protective index 6 (>480min permeation time).   |
| <b>- Other</b>   | Not normally needed. Wear suitable protective clothing as protection against splashing or contamination.   |
| <b>Respiratory protection</b>  | No personal respiratory protective equipment normally required.  |
| <b>Thermal hazards</b>   | Wear appropriate thermal protective clothing, when necessary.  |
| <b>Hygiene measures</b>  | For advice on suitable monitoring methods, seek guidance from a qualified environment, health and safety professional. Consider control procedures for maintenance, cleaning and emergencies. 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. |
| <b>Environmental exposure controls</b>                                       |  |
| <b>Hazard guidance and control recommendations</b>                           | Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases. Avoid release to the aquatic environment. Wastewaters containing this material must be converted to non-hazardous forms and/or rendered biodegradable prior to discharge.   |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

|   |                |
|---|----------------|
| <b>Physical state</b>                               | Solid.         |
| <b>Form</b>   | Tablet.        |
| <b>Colour</b>                                       | Not available. |
| <b>Odour</b>  | Not available. |
| <b>Odour threshold</b>                              | Not available. |
| <b>pH</b>   | Not available. |
| <b>Melting point/freezing point</b>                 | Not available. |
| <b>Initial boiling point and boiling range</b>      | Not available. |
| <b>Flash point</b>                                  | Not available. |
| <b>Evaporation rate</b>                             | Not available. |
| <b>Flammability (solid, gas)</b>                    | Not available. |
| <b>Upper/lower flammability or explosive limits</b> |                |
| <b>Flammability limit - lower (%)</b>               | Not available. |
| <b>Flammability limit - upper (%)</b>               | Not available. |
| <b>Vapour pressure</b>                              | Not available. |
| <b>Vapour density</b>                               | Not available. |
| <b>Relative density</b>                             | Not available. |
| <b>Solubility(ies)</b>                              |                |
| <b>Solubility (water)</b>                           | Not available. |
| <b>Solubility (other)</b>                           | Not available. |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available. |
| <b>Auto-ignition temperature</b>                    | Not available. |
| <b>Decomposition temperature</b>                    | Not available. |
| <b>Viscosity</b>                                    | Not available. |

|                               |   |
|-------------------------------|---|
| <b>Explosive properties</b>   | Not available.                                |
| <b>Oxidizing properties</b>   | Not available.                                |
| <b>9.2. Other information</b> | No relevant additional information available. |

## SECTION 10: Stability and reactivity

|   |   |
|---|---|
| <b>10.1. Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <b>10.2. Chemical stability</b>                 | Material is stable under normal conditions.   |
| <b>10.3. Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.                                   |
| <b>10.4. Conditions to avoid</b>                | Contact with incompatible materials.  |
| <b>10.5. Incompatible materials</b>             | Strong oxidising agents. Fluorine.  |
| <b>10.6. Hazardous decomposition products</b>   | Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.       |

## SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Health injuries are not known or expected under normal use. Do not breathe dust/fume/gas/mist/vapors/spray.          |
| <b>Skin contact</b> | Health injuries are not known or expected under normal use. May cause an allergic skin reaction.                     |
| <b>Eye contact</b>  | Health injuries are not known or expected under normal use. Direct contact with eyes may cause temporary irritation. |
| <b>Ingestion</b>    | Health injuries are not known or expected under normal use. May be harmful if swallowed.                             |

### Symptoms

May cause an allergic skin reaction.  
The following adverse effects have been noted with therapeutic use of this material: bone marrow toxicity; gastrointestinal distress; cardiovascular effects; symptoms of hypersensitivity (such as skin rash, hives, itching); fatigue; anaemia; skin changes. Additional effects of overexposure may occur.

### 11.1. Information on toxicological effects

**Acute toxicity** Health injuries are not known or expected under normal use. May be harmful if swallowed.

| Components                            | Species | Test results  |
|---------------------------------------|---------|---|
| DODECYL SODIUM SULFATE (CAS 151-21-3) |         |   |
| <b>Acute</b>                          |         |   |
| <i>Oral</i>                           |         |   |
| LD50                                  | Rat     | 1288 mg/kg  |
| MAGNESIUM STEARATE (CAS 557-04-0)     |         |   |
| <b>Acute</b>                          |         |   |
| <i>Oral</i>                           |         |   |
| LD50                                  | Rat     | > 2000 mg/kg  |
| Titanium dioxide (CAS 13463-67-7)     |         |   |
| <b>Acute</b>                          |         |   |
| <i>Inhalation</i>                     |         |   |
| LC50                                  | Rat     | 6820 mcg/m3   |
| <i>Oral</i>                           |         |   |
| LD50                                  | Rat     | > 24 g/kg   |
| <b>Chronic</b>                        |         |   |
| <i>Inhalation</i>                     |         |   |
| LOEC                                  | Rat     | 8,6 mg/m3, 1 years TiO2 accumulated in interstitial macrophages, aggregated interstitial cells and particle laden macrophages in lymphoid tissue. |
| NOAEC                                 | Rat     | 250 mg/m3, 2 years Highest dose<br>5 mg/m3, 24 months   |
| <b>Subacute</b>                       |         |   |
| <i>Inhalation</i>                     |         |   |
| LOEL                                  | Rat     | 0,1 - 35 mg/m3, 4 weeks Mild macrophage hyperplasia, no change in bronchio-alveolar lavage fluid.   |

| Components                                     | Species    | Test results   |
|--|------------|--|
| NOAEC  | Guinea pig | 26 mg/m <sup>3</sup> , 3 weeks No evidence of significant inflammation in respiratory tract.                               |
| <i>Oral</i><br>NOAEL                           | Rat        | 100000 ppm, 14 Day Dietary study, highest dose tested.   |
| <b>Subchronic</b><br><i>Inhalation</i><br>LOEC | Rat        | 3,2 - 20 mg/m <sup>3</sup> , 8 min Accumulation of TiO <sub>2</sub> in macrophages and evidence of pulmonary inflammation. |
| TRAMETINIB (CAS 108-78-1)                      |            |  |
| <b>Subacute</b><br><i>Oral</i><br>LD           | Rat        | 1 mg/kg/day, 14 days   |
| <b>Subchronic</b><br><i>Oral</i><br>NOAEL      | Dog        | < 0,03 mg/kg/day, 13 weeks<br>Gastro-intestinal lesions, bone marrow   |
|  | Rat        | < 0,02 mg/kg/day, 13 weeks Stomach,<br>Reduced corpora lutea   |

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

**Skin corrosion/irritation** Health injuries are not known or expected under normal use. Prolonged skin contact may cause temporary irritation.

**Irritation Corrosion - Skin**  
TITANIUM DIOXIDE

0, Literature data  
Result: Non-irritant  
Species: Guinea pig  
0, Literature data  
Result: Non-irritant  
Species: Human  
Acute dermal irritation; OECD 404, Literature data  
Result: Non-irritant  
Species: Rabbit  
Reconstituted Human Epidermis (RHE)  
Result: negative

TRAMETINIB

**Irritation Corrosion - Skin: P.I.I. value**  
MAGNESIUM STEARATE

0

**Serious eye damage/eye irritation** Health injuries are not known or expected under normal use. Direct contact with eyes may cause temporary irritation.

**Eye**

TITANIUM DIOXIDE

OECD 405, Literature data  
Result: Mild irritant  
Species: Rabbit  
Reconstituted Human Corneal Epithelium (HCE)  
Result: negative

TRAMETINIB

**Eye / Kay and Calandra class - Intact**  
MAGNESIUM STEARATE

4  
Recovery Period: 2 days

**Respiratory sensitisation** Not available.

**Skin sensitisation** May cause an allergic skin reaction.

**Sensitisation**

TITANIUM DIOXIDE

5 % Optimisation Test, Literature data - Vehicle: petrolatum  
Result: negative  
Species: Guinea pig  
Test Duration: 48 hour exposure

TRAMETINIB

OECD 429 / Local Lymph Node Assay, Maximum concentration = 1%; vehicle = acetone:olive oil 4:1; SI = 6,4  
Result: positive  
Species: Mouse  
Occupational exposure  
Result: Positive (limited number of reported cases)  
Species: Human

|   |  |  |
|---|--|--|
| <b>Sensitisation</b>  |  |  |
| TITANIUM DIOXIDE  |  | Patch test, Literature data<br>Result: negative<br>Species: Human  |
| <b>Germ cell mutagenicity</b>                                 |  | Health injuries are not known or expected under normal use.  |
| <b>Mutagenicity</b>   |  |  |
| TRAMETINIB  |  | Ames Assay, GLP assay<br>Result: negative  |
| TITANIUM DIOXIDE  |  | Ames, Literature data<br>Result: negative<br>Micronucleus Assay in vitro, CHO cells, Literature data<br>Result: negative<br>Micronucleus Assay in vitro, cultured human peripheral lymphocytes, Literature data<br>Result: positive  |
| TRAMETINIB  |  | Micronucleus Assay, GLP assay; maximum dose = 2 mg/kg (oral MTD)<br>Result: negative<br>Species: Rat<br>Mouse Lymphoma Cell (L5178Y) Mutation Assay, GLP assay<br>Result: negative   |
| TITANIUM DIOXIDE  |  | Syrian Hamster Embryo (SHE) cell transformation assay<br>Result: negative<br>WIL2-NS HPRT/ t-Thioguanidine - Human B-Cell lymphoblastoid, Literature data<br>Result: positive  |
| <b>Carcinogenicity</b>  |  | Health injuries are not known or expected under normal use. Contains a material (titanium dioxide) classified as a carcinogen by external agencies. Carcinogenic activity was seen in inhalation studies using laboratory animals. High concentrations or doses administered over an extended period of time were required to produce adverse effects.   |
| TITANIUM DIOXIDE  |  | 0,5 mg/m3, Literature data<br>Result: negative<br>Species: Rat<br>Test Duration: 24 months<br>0,72 - 14,8 mg/m3, Literature data<br>Result: negative<br>Species: Mouse<br>10 - 250 mg/m3, Dietary study - Literature data.<br>Result: Inflammation at all doses with alveolar/bronchiolar adenoma at the highest concentration.<br>Species: Rat<br>Test Duration: 24 months<br>25000 - 50000 ppm, Dietary study<br>Result: negative<br>Species: Mouse<br>25000 - 50000 ppm, Dietary study - Literature data.<br>Result: negative<br>Species: Rat<br>7,2 - 14,8 mg/m3, Literature data<br>Result: Lung tumour<br>Species: Rat<br>Test Duration: 24 months<br>SAR / QSAR, DEREK, Lhasa, UK<br>Result: negative |
| TRAMETINIB  |  |  |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b> |  |  |
| Titanium dioxide (CAS 13463-67-7)                             |  | 2B Possibly carcinogenic to humans.  |
| <b>Reproductive toxicity</b>                                  |  | The ingredient trametinib has caused adverse effects on the development of unborn offspring in animal studies.   |
| <b>Reproductivity</b>   |  |  |
| TRAMETINIB  |  | Embryo-foetal development - Oral<br>Result: Foetal NOAEL = 0,016 mg/kg/day; decreased foetal weight with doses $\geq$ 0,031 mg/kg/day; no other foetal adverse effects or malformations<br>Species: Rat<br>Embryo-foetal development - Oral<br>Result: Foetal NOAEL not identified; decreased foetal weight and ossification delays with doses $\geq$ 0,039 mg/kg/day; maternal toxicity with dose = 0,039 mg/kg/day<br>Species: Rabbit  |

**Reproductivity**  
TRAMETINIB

Fertility, Female  
Result: Decreased corpora lutea and increased ovarian cysts (>= 0,016 mg/kg/day, 13 week study)  
Species: Rat  
Fertility, Male, No effects on male reproductive organs (rats, dogs) in repeat dose studies to 13 weeks  
Result: negative  
Species: Rat

|   |   |
|---|---|
| <b>Specific target organ toxicity - single exposure</b>   | None known.   |
| <b>Specific target organ toxicity - repeated exposure</b> | Causes damage to organs through prolonged or repeated exposure. |
| <b>Aspiration hazard</b>                                  | Not available.  |
| <b>Mixture versus substance information</b>               | No information available.                                       |
| <b>Other information</b>                                  | Not available.  |

**SECTION 12: Ecological information**

**12.1. Toxicity** 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  |
|--|-------------|---|
| <b>DODECYL SODIUM SULFATE (CAS 151-21-3)</b> |             |   |
| <b>Aquatic</b>                               |             |   |
| <i>Acute</i>                                 |             |   |
| Crustacea                                    | EC50        | Water flea (Daphnia magna) 5,4 mg/l, 48 hours Static test                             |
| Fish   | EC50        | Rainbow trout (Adult Oncorhyncus mykiss) 4,6 mg/l, 96 hours Flow-through test         |
| <i>Chronic</i>                               |             |   |
| Algae  | NOEC        | Green algae (Desmodesmus subspicatus) 30 mg/l, 72 hours                               |
| Crustacea                                    | NOEC        | Ceriodaphnia dubia 0,88 mg/l, 7 days Flow-through Test                                |
| Fish   | NOEC        | Fathead minnow (Pimephales promelas) 3,8 mg/l, 28 days Flow-through test              |
| <b>MAGNESIUM STEARATE (CAS 557-04-0)</b>     |             |   |
| <b>Aquatic</b>                               |             |   |
| <i>Acute</i>                                 |             |   |
| Fish   | EC50        | Orange-red killfish (Adult Oryzias latipes) 130 mg/l, 96 hours                        |
| <b>Titanium dioxide (CAS 13463-67-7)</b>     |             |   |
| <b>Aquatic</b>                               |             |   |
| <i>Acute</i>                                 |             |   |
| Crustacea                                    | EC50        | Water flea (Daphnia magna) > 1000 mg/l, 48 hours Static test                          |
| <b>TRAMETINIB (CAS 108-78-1)</b>             |             |   |
| <b>Aquatic</b>                               |             |   |
| <i>Acute</i>                                 |             |   |
| Algae  | EC50        | Green algae (Pseudokirchnerella subcapitata) > 0,045 mg/l, 72 hours Nominal, OECD 201 |
|  | NOEC        | Green algae (Pseudokirchnerella subcapitata) 0,045 mg/l, 72 hours                     |
| <i>Chronic</i>                               |             |   |
| Crustacea                                    | LOEC        | Water flea (Daphnia magna) > 0,045 mg/l, 21 days semi-static test , OECD 211          |
|  | NOEC        | Water flea (Daphnia magna) 0,0146 mg/l, 21 days                                       |
| Fish   | Growth test | Fathead minnow (Juvenile Pimephales promelas) 0,0146 mg/l, 28 days Nominal, OECD 210  |
|  | LOEC        |   |
|  | Growth test | Fathead minnow (Juvenile Pimephales promelas) 0,0045 mg/l, 28 days                    |
|  | NOEC        |   |

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



**12.2. 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-inherent)**

MAGNESIUM STEARATE 77 %, 28 days BOD

**Percent degradation (Aerobic biodegradation-ready)**

DODECYL SODIUM SULFATE 95 % OECD 301 B

MAGNESIUM STEARATE 95 %, 22 days Sturm test

**Percent degradation (Aerobic biodegradation-soil)**

MAGNESIUM STEARATE 50 %, 13 days

**12.3. Bioaccumulative potential** No data available.

**Partition coefficient**

**n-octanol/water (log Kow)**

DODECYL SODIUM SULFATE 1,6

TRAMETINIB 4,04 (measured)

**Bioconcentration factor (BCF)**

MAGNESIUM STEARATE > 9999 Estimated

**12.4. Mobility in soil** Not available.

**Adsorption**

**Soil/sediment sorption - log Koc**

MAGNESIUM STEARATE 5,86 Estimated

**Mobility in general** Not available.

**12.5. Results of PBT** Not available.

**and vPvB assessment**

**12.6. Other adverse effects** Not available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Residual waste**

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.

**EU waste code**

The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Disposal methods/information**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. 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.

**Special precautions**

Dispose in accordance with all applicable regulations.

**SECTION 14: Transport information**

**ADR**

**14.1. UN number** UN3077

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

**14.3. Transport hazard class(es)**

**Class** 9

**Subsidiary risk** -

**Label(s)** 9

**Hazard No. (ADR)** 90

**Tunnel code** E

**14.4. Packing group** III

**14.5. Environmental hazards** No.

**14.6. Special precautions for user** May be able to ship as an Excepted or Limited Quantity. Review all HazMat Table packaging exceptions and instructions to identify options.  
May not be subject to ADR; See SP 601.

#### IATA

**14.1. UN number** UN3077  
**14.2. UN proper shipping name** Environmentally hazardous substance, solid, n.o.s. (TRAMETINIB TABLETS)  
**14.3. Transport hazard class(es)** 9  
**Subsidiary class(es)** -  
**14.4. Packing group** III  
**14.5. Environmental hazards** No.  
**Labels required** Not available.  
**ERG Code** 9L  
**14.6. Special precautions for user** May be able to ship as an Excepted or Limited Quantity. Review all HazMat Table packaging exceptions and instructions to identify options.  
ID 8000, Consumer Commodity, may apply. See Packing Instruction Y963.

#### Other information

**Cargo aircraft only** Allowed.

#### Additional Information:

**Passenger & cargo** Allowed.

#### IMDG

**14.1. UN number** UN3077  
**14.2. UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TRAMETINIB TABLETS)  
**14.3. Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**14.4. Packing group** III  
**14.5. Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-F  
**14.6. Special precautions for user** May be able to ship as an Excepted or Limited Quantity. Review all HazMat Table packaging exceptions and instructions to identify options.  
May be exempt from IMDG regulations. See SP 335.

May be able to ship as an Excepted or Limited Quantity. Review all HazMat Table packaging exceptions and instructions to identify options.

ID 8000, Consumer Commodity, may apply. See Packing Instruction Y963.

**14.7. Transport in bulk according to Annex II of MARPOL73/78 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.

ADR; IATA; IMDG



## SECTION 15: Regulatory information

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

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I**

Not listed.

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended**

Not listed.

- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended**  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended**  
Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended**  
Not listed.
- Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry**  
Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**  
Not listed.

#### Authorisations

- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**  
Not listed.

#### Restrictions on use

- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**  
Not listed.
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work**  
Not listed.
- Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding**  
Not listed.

#### Other EU regulations

- Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances**  
Not listed.
- Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**  
Not listed.
- Directive 94/33/EC on the protection of young people at work**  
Not listed.

#### Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

#### National regulations

Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

### SECTION 16: Other information

#### List of abbreviations

Not available.

#### References

GSK Hazard Determination

#### Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

#### Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R11 Highly flammable.  
R22 Harmful if swallowed.  
R36/38 Irritating to eyes and skin.  
R43 May cause sensitization by skin contact.  
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
R48/25 Toxic: danger of serious damage to health by prolonged exposure if swallowed.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R63 Possible risk of harm to the unborn child.  
H228 Flammable solid.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

**Revision information**

Product and Company Identification: Product and Company Identification  
Composition / Information on Ingredients: Undisclosed Ingredient Statement  
Exposure Controls / Personal Protection: OELs  
Physical & Chemical Properties:  
Toxicological Information:  
Ecological Information: Ecotoxicity  
Transport information:  
Regulatory Information: United States  
GHS: Classification

**Training information**

Follow training instructions when handling this material.

**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.