# Safety Data Sheet

Bristol-Myers Squibb Company

| 1. IDENTIFICATION | | |
|---|---|---|
| *Product Information* | | |
| Product name | BMT-371798-02 | |
| Version | 1.0, 13.10.2017 | |
| Jurisdiction | This Safety Data Sheet was prepared in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) for the United States of America (USA) (CFR 1910.1200), European Union (EU) (EC 1272/2008) and United Nations (UN). The following countries utilize the UN GHS classification process: Mexico, Brazil, China, New Zealand, Canada, Japan, and Korea. | |
| Chemical Name | Trade Secret | |
| IUPAC name | Trade Secret | |
| Synonyms | BMT 371798-02 | |
| Other information | Project Name: 06321 | |
| Intended Uses | This material is used for Research and Development activities. This material is a chemical intermediate used in drug synthesis. This compound may have pharmacologic activity. | |
| *Company/Undertaking Identification* | | |
| Address | USA<br>**Bristol-Myers Squibb Company**<br>P.O. Box 191<br>New Brunswick, New Jersey 08903<br>United States of America<br>1-800-332-2056 | Ireland<br>**Bristol-Myers Squibb Company**<br>Swords Laboratories, Watery Lane<br>Swords, Ireland<br>MG-GBS-MSDS-Request@bms.com<br>353-1813-9456 |
| Emergency Phone No. | USA (also Canada, Puerto Rico and the Virgin Island): 1-800-424-9300<br>Other Countries: See "Section 16" for country-specific emergency phone numbers from CHEMTREC. | Ireland: 353-1813-9456 |

| 2. HAZARDS IDENTIFICATION | |
|---|---|
| **Classification and Labelling Common to All Jurisdictions** | |
| Classification | Serious Eye Damage/Eye Irritation - Category 1<br>Toxic To Reproduction - Developmental Toxicity - Category 2<br>Specific Target Organ Systemic Toxicity (Single Exposure) - Category 3<br>Specific Target Organ Systemic Toxicity (Repeated Exposure) - Category 1<br>Substance not fully tested. |
| Symbol |  |
| Signal Word | Danger |
| Hazard Statements | Causes serious eye damage.<br>Suspected of damaging the unborn child |

## *2. HAZARDS IDENTIFICATION*

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|---|---|
| | May cause respiratory irritation .<br>Causes damage to organs (immune system, kidney) through prolonged or repeated exposure. |
| Precautionary Statements | Wear protective gloves/clothing and eye/face protection.<br>Do not breathe dust.<br>Obtain special instructions before use.<br>Do not handle until all safety precautions have been read and understood.<br>Use personal protective equipment as required.<br>Use only outdoors or in a well-ventilated area.<br>Wash thoroughly after handling.<br>Do not eat, drink or smoke when using this product. |
| Other information | May enhance the potential for hypersensitivity and dermal sensitization response to other compounds. This effect is due to the mechanism of action. |

## *3. COMPOSITION/INFORMATION ON INGREDIENTS*

| Components | Concentration | CAS No. | EU only | | Other Registration No. |
|---|---|---|---|---|---|
| | | | EC No./REACH Registration No. | H-code(s) | |
| *Hazardous components*<br>BMT-371798-02 | 100 % | Trade Secret | -- | H318<br>H361d<br>H335<br>H372 | -- |

See section 16 for H-code text.

## *4. FIRST AID MEASURES*

| | |
|---|---|
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Keep eye wide open while rinsing. |
| Skin contact | Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Discard contaminated clothing or wash before re-use. If exposed or concerned: Get medical attention/advice. |
| Inhalation | Oxygen or artificial respiration if needed. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. |
| Ingestion | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical attention/advice. |
| Notes to Physician | Medical conditions aggravated include: autoimmune disorders. Material not fully tested. Refer to Section 11. |

| 4. FIRST AID MEASURES | |
|---|---|
| Medical Surveillance | The need for a pre-placement, follow-up physical examination and history for employees with potential exposure to this compound is to be evaluated by a physician that is thoroughly knowledgeable about both the toxicity of this compound and the extent of work place exposure. Baseline testing would include: a complete blood count with differential, a blood test for kidney function. Repeat periodically depending on the potential for exposure.<br>Employees who are pregnant, are breast-feeding, or who are concerned with other reproductive issues should be encouraged to consult with the occupational health physician monitoring worker's health. |

| 5. FIRE-FIGHTING MEASURES | |
|---|---|
| Flammable Properties | Not available |
| Extinguishing Media | Suitable extinguishing media: Dry chemical, Water spray, Foam<br>Unsuitable extinguishing media: Do NOT use water jet. |
| Protection of Firefighters | Specific hazards: Not available<br>Protective equipment: Use personal protective equipment. In the event of fire, wear self-contained breathing apparatus.<br>Hazardous Combustion Products: carbon oxides (COx), nitrogen oxides (NOx) |
| Other information | Decontaminate protective clothing and equipment before reuse. |

| 6. ACCIDENTAL RELEASE MEASURES | |
|---|---|
| Personal precautions | Refer to protective measures listed in sections 7 and 8. Use personal protective equipment. Examples include tightly fitting safety goggles, disposable lab coat of low permeability with cuffs, double gloves and shoe covers. Wear respiratory protection. Depending on the nature of the spill (quantity and extent of spill) additional protective clothing and equipment such as a self-contained breathing apparatus may be needed. |
| Environmental precautions | Prevent release to drains and waterways. Prevent release to the environment. |
| Containment Methods | Wet down any dust to prevent generation of aerosols, if appropriate. Cover with suitable material. |
| Cleanup Methods | Spill prevention procedures and a spill response procedure should be implemented. Contain and collect spillage and place in container for disposal according to local regulations (see Section 13). Clean spill area with a deactivating solution (if available) followed by detergent and water after spill pick-up. Handle waste materials, including gloves, protective clothing, contaminated spill cleanup material, etc., as appropriate for chemically and pharmacologically similar materials. |

| 7. HANDLING AND STORAGE | |
|---|---|
| Handling Precautions | Highly potent material. Avoid exposure - obtain special instructions before use. Avoid formation of dust and aerosols. Keep away from heat and sources of ignition. Prevent release to drains and waterways. |
| Container Requirements | Store in sturdy containers appropriate to maintain the integrity of this material for its intended use. |
| Storage Conditions | Store at room temperature. Protect against light. Keep away from heat, sparks and flames. Store locked up. Store in well-ventilated place. Keep container tightly closed. |
| Specific use(s) | Refer to Section 1 |

## *8. EXPOSURE CONTROLS / PERSONAL PROTECTION*

| Exposure limit(s) | Company Guideline | ACGIH | Germany OEL | UK MEL |
|---|---|---|---|---|
| BMT-371798-02 | 1 - < 10 µg/m3 (ECB 4 - For BMS Internal Use Only) | -- | -- | -- |

| | |
|---|---|
| Recommended Industrial Hygiene Monitoring Methods | A specific exposure sampling method is not available. Contact the Bristol-Myers Squibb AIHA accredited Industrial Hygiene Laboratory at (USA) 732-227-6338.<br><br>General - The health hazard risk of handling this material is dependent on many factors, including physical form, % API in material being handled, duration and frequency of process task, and effectiveness of controls. If it is necessary to handle this compound outside of engineering controls, an exposure risk assessment should be conducted and procedures documented by a qualified EHS professional. |
| Engineering Controls and Ventilation | Use process enclosures, containment technology, or other engineering controls to keep airborne levels below recommended exposure limit. When handling quantities up to 3 milligrams, a standard laboratory with general laboratory dilution ventilation (e.g. 6-12 air changes per hour) is appropriate. When handling quantities up to 1 kilogram, work in either a standard laboratory (<500 g) or designated laboratory (500 g to <1 kg) using a fume hood, biological safety cabinet(Class II, Type A2 with thimble connection, B1, or B2)or approved vented enclosure. HEPA filtered exhaust preferred for fume hoods containing particularly "dusty" operations. Quantities exceeding 1 kilogram should be handled in a designated laboratory or containment facility using appropriate containment technology. A laminar flow/powder containment booth or appropriate isolation technology should be considered for handling more than 1 kilogram of active compound. HEPA filtered exhaust preferred. For manufacturing and pilot plant operations, barrier/containment technology and direct coupling (totally enclosed processes that create a barrier between the equipment and the room) with use of double or split butterfly valves, hybrid unidirectional airflow/local exhaust ventilation solutions (e.g. powder containment booth) should be used. Glove bags, isolator/glove box systems are optional. HEPA filtration of exhaust from dry product handling areas is required. |
| Respiratory protection | Use and selection of respiratory protection is based upon engineering controls in use and potential for aerosol generation. When engineering controls are not sufficient control exposure, wear an approved respirator with NIOSH Class 100 or high efficiency particulate (HEPA) filters or cartridges (EN 140/EN 136) when exposures are up to 10 times the exposure control guideline. Wear a loose-fitting (Tyvek or helmet type) HEPA powered-air purifying respirator (PAPR) (EN 12941) when exposures are 10-25 times the exposure control guideline. Wear a full facepiece negative pressure respirator with Class 100 or HEPA filters (EN 136) when exposures are 25-50 times the exposure control guideline. Wear a tight-fitting, full facepiece HEPA PAPR (EN 12942) when exposures are 50-100 times the exposure control guideline. Wear a hood-shroud HEPA PAPR (EN 12941) or full facepiece supplied air respirator (EN 139) operated in a pressure demand or other positive pressure mode when exposures are 100-1000 times the exposure control guideline. |
| Eye protection | Safety glasses with side-shields are recommended (EN 166). Face shields or chemical safety goggles (EN 166) may be required if splash potential exists or if corrosive materials are present. Note: Choice of eye protection may be influenced by the type of respirator which is selected. |
| Hand protection | Wear gloves at all times when handling containers, including when unpacking, inspecting or transporting within a facility. Impervious gloves are recommended. (EN 420, EN 374). Double gloving for all manufacturing personnel potentially in direct contact with the compound should be considered. If material is handled in solution, the solvent should also be considered when selecting protective clothing material. |

## *8. EXPOSURE CONTROLS / PERSONAL PROTECTION*

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|---|---|
| Skin and body protection | Wear a laboratory coat (EN 340) when handling quantities up to 500 grams. For quantities up to 1 kilogram, wear disposable laboratory coat (EN 340) or coverall of low permeability (EN 1149-1) . For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability (EN 1149-1) and disposable shoe covers. |
| Hygiene | Wash hands and face before breaks and immediately after handling the product. |
| Environmental exposure controls | Prevent release to drains and waterways. |

## *9. PHYSICAL AND CHEMICAL PROPERTIES*

*General Information*

| | |
|---|---|
| *Appearance* | |
| Physical State | solid |
| Color | yellow to white |
| *Odour* | |
| Odour | Not available |
| Odor Threshold | Not available |
| pH | Not determinable |
| *Other information* | |
| Bulk density | Not available |
| Chemical Name | Trade Secret |
| Evaporation rate | Not available |
| Molecular formula | Trade Secret |
| Hydrolysis/Photolysis | Not available |
| Hygroscopicity | Not available |
| Molecular Weight | 307.0 g/mol |
| Log Octanol/Water Partition Coefficient [log Kow] | Not available |
| Surface Tension | Not available |
| pKa | Not available |
| Particle Size | Not available |
| Solubility, Water | Not available |
| Specific Gravity/ Relative density | Not available |
| Viscosity, dynamic | Not available |
| Viscosity, kinematic | Not available |
| % Volatile | Not available |
| *Thermal/Stability properties* | |
| Autoignition temperature | Not available |
| Boiling Point | Not available |
| Thermal decomposition | Not available |
| Explosive Limits, LEL | Not available |
| Explosive limits, UEL | Not available |
| Explosiveness | Non-explosive based on chemical structure. |
| Flammability | Not available |
| Flash point | Not available |
| Melting Point | Not available |
| Oxidizing Potential | Non-oxidizer based on chemical structure. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

*Vapor Properties*

| | |
|---|---|
| Vapor Density | Not available |
| Vapor Pressure | Not available |
| Saturated Vapor Concentration | Not available |

## 10. STABILITY AND REACTIVITY

*Stability*

| | |
|---|---|
| Chemical Stability | Stable under normal conditions. |
| Conditions to avoid | Not available |
| Materials to avoid | Not available |
| Hazardous decomposition products | Hazardous decomposition products formed under fire conditions.: carbon oxides (COx), nitrogen oxides (NOx) |
| Hazardous reactions | None known. |

*Sensitivity to static discharge/Dust exp.*

| | |
|---|---|
| Summary Statements | Although material has not been specifically tested, fine dust suspended in air in sufficient concentration and in the presence of an ignition source may pose a potential explosion hazard. Provide appropriate bonding and grounding protection to control static charge. Powder handling equipment such as dust collectors, dryers, and mills may require additional protective measures (e.g. explosion venting, inerting, etc.). |

## 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| Routes of Entry | Ingestion, inhalation, Eye contact, Skin contact |
| Eye Irritation | Causes serious eye damage. This result is from a study on a structurally similar compound. |
| Skin Irritation | Not available |
| Respiratory Irritation | May cause respiratory irritation This result is from a structurally similar compound. |
| Sensitization | Not available |
| Acute Toxicity Study | Not available |
| Repeated Dose Toxicity | Not available |
| Genetic Toxicity | **In vitro**<br>in silico mutagenicity prediction --<br>A computerized structure-toxicity analysis of this chemical class predicted this material to be a mutagen. |

## 11. TOXICOLOGICAL INFORMATION

| | | | |
|---|---|---|---|
| Carcinogenicity | Not available | | |
| **Carcinogenicity** | **ACGIH** | **IARC** | **NTP** |
| BMT-371798-02 | -- | -- | -- |
| Reproductive Toxicity | Not available | | |
| Developmental Toxicity | **Developmental Toxicity Assessment**<br>Potential developmental toxicant This effect is due to the mechanism of action. | | |
| Human experience | Not available | | |
| Target Organs | immune system, kidney, This result is from a study on a structurally-and/or pharmacologically-related substance. | | |
| Symptoms | redness and swelling of eyes, pain, tissue destruction, blindness, labored respiration, noisy respiration, chest pain, breathing difficulties, shortness of breath, lung inflammation, This result is from a structurally similar compound. | | |
| Pharmacokinetics/ Toxicokinetics | Not available | | |
| Other Toxicity Information | Not available | | |
| Other Information: | May enhance the potential for hypersensitivity and dermal sensitization response to other compounds.<br>This effect is due to the mechanism of action.<br>Some of the toxicological data presented is derived from a structurally or pharmacologically similar compound. | | |

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| **Ecotoxicity effects** | Not available |
| **Mobility** | Not available |
| **Persistence and degradability** | Not available |
| **PBT and vPvB assessment** | Not available |

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| Advice On Disposal And Packaging | Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements. This information presented only applies to the material as supplied. |
| Other information | Disposal by incineration is recommended. |

## 14. TRANSPORT INFORMATION

This material is not a dangerous good for the purpose of transportation in all modes.

## 15. REGULATORY INFORMATION

**United States of America**

## *15. REGULATORY INFORMATION*

| | |
|---|---|
| 313 Toxic Release Inventory | No components listed on the SARA 313 inventory. |
| TSCA Inventory | Not listed. Food, drug and cosmetic products are exempt from TSCA. |
| Regulatory Authorizations and Restrictions: | Not available |

## *16. OTHER INFORMATION*

*Text of H-code(s) mentioned in Section 3.*

| | |
|---|---|
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation |
| H361d | Suspected of damaging the unborn child |
| H372 | Causes damage to organs through prolonged or repeated exposure. |

*Recommended Restrictions for Use:*

Not available

*SDS preparation information*

| | |
|---|---|
| Prepared by | Global Environment, Health, Safety, and Sustainability 1-732-227-7380 |
| Prepared on | 13.10.2017 DD/MM/YYYY |

This is the first Safety Data Sheet issued for this material.

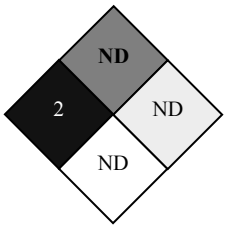
*Other information*

HMIS

| | |
|---|---|
| Health | 2* |
| Flammability | Not Determined (ND) |
| Reactivity | Not Determined (ND) |
| Personal protective equipment | See Section 8. |

NFPA

| | |
|---|---|
| Health | 2 |
| Fire | ND |
| Reactivity | ND |
| Special | ND |



*Country- Specific Emergency Phone Numbers*

| CHEMTREC In-Country Dial Numbers | Local # Provided in Country | Toll Free in Country* | Greeting Language |
|---|---|---|---|
| CHEMTREC South Africa* | | 0-800-983-611 | English |
| CHEMTREC Argentina (Buenos Aires) | +(54)-1159839431 | | Latin American Spanish |
| CHEMTREC Brazil (Rio De Janeiro) | +(55)-2139581449 | | Portuguese |
| CHEMTREC Chile (Santiago) | +(56)-25814934 | | Latin American Spanish |
| CHEMTREC Colombia * | | 01800-710-2151 | Latin American Spanish |
| CHEMTREC Mexico* | | 01-800-681-9531 | Latin American Spanish |
| CHEMTREC Peru (Lima) | +(51)-17071295 | | Latin American Spanish |
| CHEMTREC China* | 4001-204937 | | Mandarin |
| CHEMTREC Hong Kong (Hong Kong)* | | 800-968-793 | Cantonese |
| CHEMTREC India * | | 000-800-100-7141 | Hindi |
| CHEMTREC Indonesia* | | 001-803-017-9114 | Indonesian |
| CHEMTREC Japan (Tokyo) | +(81)-345209637 | | Japanese |
| CHEMTREC Malaysia * | | 1-800-815-308 | Malay |
| CHEMTREC Philippines * | | 1-800-1-116-1020 | Tagalog |
| CHEMTREC Singapore* | | 800-101-2201 | Mandarin |
| CHEMTREC Singapore | +(65)-31581349 | | Mandarin |
| CHEMTREC South Korea* | | 00-308-13-2549 | Korean |
| CHEMTREC Taiwan* | | 00801-14-8954 | Mandarin |
| CHEMTREC Thailand * | | 001-800-13-203-9987 | Thai |
| CHEMTREC Vietnam (Ho Chi Minh City) | +(84)-838012436 | | Vietnamese |
| CHEMTREC Australia (Sydney) | +(61)-290372994 | | English |
| CHEMTREC Belgium (Brussels) | +(32)-28083237 | | French and Flemish |
| CHEMTREC Czech Republic (Prague) | +(420)-228880039 | | Czech |
| CHEMTREC France | +(33)-975181407 | | French |
| CHEMTREC Germany * | | 0800-181-7059 | German |
| CHEMTREC Hungary (Budapest) | +(36)-18088425 | | Hungarian |
| CHEMTREC Italy * | | 800-789-767 | Italian |
| CHEMTREC Italy (Milan) | +(39)-0245557031 | | Italian |
| CHEMTREC Netherlands | +(31)-858880596 | | Dutch |
| CHEMTREC Poland (Warsaw) | +(48)-223988029 | | Polish |
| CHEMTREC Spain* | | 900-868538 | European Spanish |
| CHEMTREC Sweden (Stockholm) | +(46)-852503403 | | Swedish |
| CHEMTREC Switzerland (Zurich) | +(41)-435016715 | | German |
| CHEMTREC UK (London) | +(44)-870-8200418 | | English |
| CHEMTREC Bahrain (Bahrain) | +(973)-16199372 | | Arabic |
| CHEMTREC Israel (Tel Aviv) | +(972)-37630639 | | Hebrew |
| *Phone numbers for countries marked with an asterisk must be dialed within the country | | | |

The information contained in this SDS is believed to be accurate and represents the best information reasonably available at the time of preparation. However, we make no warranty, express or implied, with respect to such information. and we assume no liability from its use.