SECTION 1. Identification

Product identifier

Product No: 9052
Product name: Dasatinib
UN number: UN2811

Recommended use of the chemical and restrictions on use

Identified uses: This product is intended for research purposes only.

Manufacturer, importer, supplier

Manufacturer address:
Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400

Website: www.cellsignal.com
Email address: support@cellsignal.com
Emergency telephone number: In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

This substance/mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
</tr>
<tr>
<td>Specific target organ toxicity - repeated exposure (STOT RE)</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Signal Word
Danger

Hazard statement(s)
Toxic if swallowed. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.
Precautionary Statement(s)
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Store locked up.
Dispose of contents/container to an approved waste disposal plant.

Supplementary Hazard Information
No information available.
Hazard not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects.

### SECTION 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Formula</th>
<th>C_{22}H_{26}CIN_{7}O_{2}S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>488.0 g/mol</td>
</tr>
<tr>
<td>Chemical nature</td>
<td>Monoconstituent substance</td>
</tr>
<tr>
<td>Synonyms</td>
<td>Dasatinib (anhydrous);</td>
</tr>
<tr>
<td></td>
<td>Sprycel;</td>
</tr>
<tr>
<td></td>
<td>5-Thiazolecarboxamide,</td>
</tr>
<tr>
<td></td>
<td>N-(2-chloro-6-methylphenyl)-2-{(6-{4-(2-hydroxyethyl)piperazin-1-yl}-2-methylpyrimidin-4-yl) amino}--;</td>
</tr>
<tr>
<td></td>
<td>N-(2-chloro-6-methylphenyl)-2-{6-{4-(2-hydroxyethyl)piperazin-1-yl}-2-methylpyrimidin-4-yl amino} thiazole-5-carboxamide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(2-chloro-6-methylphenyl)-2-{6-{4-(2-hydroxyethyl)piperazin-1-yl}-2-methylpyrimidin-4-yl amino} thiazole-5-carboxamide</td>
<td>302962-49-8</td>
<td>100</td>
</tr>
</tbody>
</table>

### SECTION 4. First-aid measures

**Eye contact**
Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

**Skin contact**
Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

**Inhalation**
Immediate medical attention is required. Move to fresh air. If not breathing, give artificial respiration.

**Ingestion**
Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Drink plenty of water.

**Most important symptoms and effects, both acute and delayed**

**Indication of any immediate medical attention and special treatment needed**
Treat symptomatically.

**Advice for emergency responders**
General advice

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Protection of first-aiders

Use personal protective equipment. Avoid contact with skin, eyes and clothing.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Use personal protective equipment.

Other information No information available.

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Clean contaminated surface thoroughly. Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid dust formation.

SECTION 7. Handling and storage

Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place. Protect from light. Protect from moisture. Keep in a bunded area.

Packaging material No information available.

Incompatible products Strong oxidizing agents, Chlorinated compounds.

SECTION 8. Exposure controls/personal protection

Control parameters
**Appropriate engineering controls**

Showers, eyewash stations, and ventilation systems.

**Individual protection measures, such as personal protective equipment**

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

- **Eye/face protection**
  - Tightly fitting safety goggles
- **Skin and body protection**
  - Wear protective gloves/clothing.
- **Respiratory protection**
  - If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
- **Hygiene measures**
  - When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

---

**SECTION 9. Physical and chemical properties**

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
<td>White to off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>274-276 °C</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Relative density</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td></td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td></td>
<td>No information available</td>
</tr>
</tbody>
</table>

**Other information**

- Softening point: No information available
- Molecular Weight: 488.0 g/mol
- VOC content: No information available
- Density: No information available.
- Bulk Density VALUE: No information available.

---

**SECTION 10. Stability and reactivity**

**Reactivity**

---
Dasatinib

No information available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

<table>
<thead>
<tr>
<th>Hazardous reactions</th>
<th>None under normal processing.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous polymerization</td>
<td>None under normal processing.</td>
</tr>
</tbody>
</table>

**Conditions to Avoid**

No information available.

**Incompatible Materials**

Strong oxidizing agents, Chlorinated compounds.

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors: Carbon oxides (COx), Nitrogen oxides (NOx).

### SECTION 11. Toxicological information

**Information on likely routes of exposure**

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May cause irritation of respiratory tract.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Contact with eyes may cause irritation.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be fatal if swallowed.</td>
</tr>
</tbody>
</table>

**Information on toxicological effects**

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(2-chloro-6-methyl[phenyl]-2-[[6-[4-(2-hydroxyethyl)piperazin-1-yl]-2-methylpyrimidin-4-y]]amino]-1,3-thiazole-5-carboxamide</td>
<td>50 - 100 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Symptoms**


**Serious eye damage/eye irritation**

not applicable.

**Sensitization**

No sensitization responses were observed.

**Mutagenic effects**

The weight of evidence demonstrates that this material is not genotoxic: Caused chromosomal aberrations in vitro in Chinese hamster ovary (CHO) cells.

**Carcinogenicity**

This material was a carcinogen in animal studies. 2 years oral (daily) rat study: Tumor LOAEL = 0.3 mg/kg (males and females). [tumor organs: uterus/cervix, prostate]

**Reproductive toxicity**

This material is classified as a Pregnancy Category D: Positive evidence of risk. Oral (Rat):
NOAEL (parent, females) = 5 mg/kg. Results of repeat dose toxicity studies in multiple species indicate the potential for dasatinib to impair reproductive function and fertility. Effects evident in male animals included reduced size and secretion of seminal vesicles, and immature prostate, seminal vesicle, and testes. Effects evident in female animals included uterine inflammation and mineralization in monkeys, and cystic ovaries and ovarian hypertrophy in rodents.

Developmental toxicity
Fetal death was observed in rats. Oral (Rat): LOAEL (embryo/fetus) = 2.5 mg/kg
Embryo-fetal toxicities included: skeletal malformations at multiple sites (scapula, humerus, femur, radius, ribs, clavicle), reduced ossification (sternum; thoracic, lumbar, and sacral vertebrae; forepaw phalanges; pelvis; and hyoid body), edema, and microhepatia.

STOT - single exposure
STOT - repeated exposure
2 weeks - 2 years oral (5/week-daily) monkey, rat study with recovery period (2 - 4 weeks) (males and females): NOAEL = 0.3 mg/kg
Low dose effects include: abnormal posture, hypoactivity, tremors, labored respiration, swelling, paleness, feecal changes, menstrual irregularities, gastrointestinal tract toxicity, decreased weight gain, decreased food consumption, changes in clinical chemistry parameters, decreased red blood cell count, changes in white blood cell parameters, lymphoid depletion, ovary effects, changes in the uterus. Decreased organ weights included: spleen, pituitary gland. Increased organ weights included: heart, liver, thyroid gland, ovary, adrenal glands, mortality. Low dose microscopic effects include: liver, lymph nodes, ovary, uterus, large intestine, small intestine, adrenal glands, thyroid gland, kidney, thymus, bone marrow, spleen, stomach, lungs.

Target Organ Effects
Heart, Gastrointestinal tract (GI), Bone marrow, Immune system.

Neurological effects
No information available.

Other adverse effects
In vitro phototoxicity (mouse) : NOAEL = 30 mg/kg.

SECTION 12. Ecological information

Ecotoxicity
Very toxic to aquatic life with long lasting effects

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(2-chloro-6-methylphenyl)-2-[[6-[4-(2-hydroxyethyl) piperazin-1-yl]-2-methylpyrimidin-4-yl] amino]-1,3-thiazole-5-carboxamide</td>
<td>EC50 0.14 mg/L (Pseudokirchneriella subcapitata) 72 h</td>
<td>LC50 &gt;0.5 mg/L (Oncorhynchus mykiss) 96 h (limit of solubility)</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability
Not readily biodegradable. 0.4% @ 21 days. Koc (Estimation by HPLC, Activated Sludge) : 2,430.

Bioaccumulation
Does not bioaccumulate.

Mobility
Is not likely mobile in the environment due its low water solubility

SECTION 13. Disposal considerations

Waste Disposal Methods
Should not be released into the environment. Dispose of in accordance with local regulations.

Disposal considerations
Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14. Transport information
DOT

| UN number   | UN2811                |
| UN proper shipping name | Toxic solid, organic, n.o.s. (Dasatinib) |
| Transport hazard class(es) | 6.1                     |
| Packing group | II                     |
| Special provisions | IB8, IP2, IP4, T3, TP33 |
| Emergency response guide number | 154                     |

IATA

| UN number   | UN2811                |
| UN proper shipping name | Toxic solid, organic, n.o.s. (Dasatinib) |
| Transport hazard class(es) | 6.1                     |
| Packing group | II                     |
| ERG code    | 6L                     |

SECTION 15. Regulatory information

North American Inventory Listing

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA 8(b)</th>
<th>TSCA 12(b)</th>
<th>DSL</th>
<th>NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(2-chloro-6-methylphenyl)-2-[[6-[4-(2-hydroxyethyl)piperazin-1-yl]-2-methylpyrimidin-4-yl]amin o]-1,3-thiazole-5-carboxamide</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Canadian Workplace Hazardous Materials Information System (WHMIS) Classification

Class D1A - Very Toxic Materials at >= 1%
Class D2A - Very Toxic Material at >= 0.1%

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive
Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. FIFRA Label Information

This product does not contain any substances regulated as pesticides.

US Commerce Department - Export Administration Regulations Information

This product does not contain any substances regulated under the Chemical Weapons Convention (CWC).

U.S. Drug Enforcement Administration Information

This product does not contain any substances regulated under the DEA.

SECTION 16. Other information

Issuing Date: 2015-01-06
Revision Date: 2018-03-14

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet