

## Safety Data Sheet

**MK0457****EFFECTIVE DATE: 2015-05-16**

### 1 Product and Company Identification

- 1.1 Product Name:** MK0457
- 1.2 Product Identifier:** N-[4-[4-(4-methylpiperazin-1-yl)-6-[(5-methyl-1H-pyrazol-3-yl)amino]pyrimidin-2-yl]sulfanylphenyl]cyclopropanecarboxamide
- 1.3 Catalog Number:** 73282, 73284
- 1.4 Product Use:** Laboratory Chemical
- 1.5 Manufacturer/Supplier:** STEMCELL Technologies  
Suite 500-1618 Station Street  
Vancouver, British Columbia V6A 1B6 Canada
- 1.6 In Case of Emergency Call:** 1-800-667-0322

### 2 Hazards Identification

#### 2.1 Classification of the substance or mixture

Acute Toxicity: Oral, Category 2  
Skin Corrosion/Irritation, Category 2  
Serious Eye Damage/Eye Irritation, Category 1  
Toxic To Reproduction, Category 2  
Target Organ Systemic Toxicity (repeated exposure), Category 2

#### 2.2 Label elements

##### Pictogram



**Signal word** Danger

##### Hazard statement(s)

H300 Fatal if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H361 Suspected of damaging fertility or the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.

##### Precautionary statement(s)

P264 Wash {hands} thoroughly after handling.  
P280 Wear {protective gloves/protective clothing/eye protection/face protection}.  
P362 Take off contaminated clothing and wash it before reuse.  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P281 Use personal protective equipment as required.

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P260	Do not breathe {dust/fume/gas/mist/vapours/spray}.
P270	Do not eat, drink or smoke when using this product.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER attention or doctor/physician.
P330	Rinse mouth.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P332+313	If skin irritation occurs, get medical advice/.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a {POISON CENTER/doctor/...}.
P308+313	IF exposed or concerned: Get medical attention/advice.
P314	Get medical attention/advice if you feel unwell.
<b>2.3 Other hazards</b>	No data available

### 3 Composition / Information on Ingredients

#### 3.1 Substances

<b>Synonyms</b>	N-[4-[[4-(4-methyl-1-piperazinyl)-6-[(5-methyl-1H-pyrazol-3-yl)amino]-2-pyrimidinyl]thio]phenyl]-cyclopropanecarboxamide; Tozasertib; VX 680
<b>Molecular formula</b>	C <sub>23</sub> H <sub>28</sub> N <sub>8</sub> OS
<b>Molecular weight</b>	464.6

Hazardous Components (Chemical Name)	CAS #	Concentration	EC #
N-[4-[4-(4-methylpiperazin-1-yl)-6-[(5-methyl-1H-pyrazol-3-yl)amino]pyrimidin-2-yl]sulfanylphenyl]cyclopropanecarboxamide	639089-54-6	100%	N/A

### 4 First Aid Measures

#### 4.1 Description of first aid measures

##### 4.1.1 If inhaled

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

##### 4.1.2 In case of skin contact

Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

##### 4.1.3 In case of eye contact

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.

##### 4.1.4 If swallowed

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Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

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

The toxicological properties of this product have not been fully evaluated.

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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**5 Fire Fighting Measures****5.1 Extinguishing Media****5.1.1 Suitable Extinguishing Media**

Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

Use water spray to cool fire-exposed containers.

**5.1.2 Unsuitable Extinguishing Media**

A solid water stream may be inefficient.

**5.2 Special hazards arising from the substance or mixture****5.2.1 Flammable Properties and Hazards**

No data available

**5.2.2 Flash Pt**

No data available

**5.2.3 Autoignition Pt**

No data available

**5.2.4 Explosive Limits**

LEL: No data available

UEL: No data available

**5.2.5 Hazardous Combustion Products**

No data available

**5.3 Fire Fighting Instructions**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

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**6 Accidental Release Measures****6.1 Personal precautions, protective equipment and emergency procedures**

Avoid raising and breathing dust, and provide adequate ventilation.

As conditions warrant, wear a NIOSH approved (or equivalent) self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

**6.2 Environmental precautions**

Take steps to avoid release into the environment, if safe to do so.

**6.3 Methods and materials for containment and cleaning up**

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Contain spill and collect, as appropriate.  
 Transfer to a chemical waste container for disposal in accordance with local regulations.

### 7 Handling and Storage

#### 7.1 Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapours/spray.  
 Avoid prolonged or repeated exposure.

#### 7.2 Conditions for safe storage

Keep container tightly closed.  
 Store in accordance with information listed on the product insert.

### 8 Exposure Controls/Personal Protection

#### 8.1 Exposure limits

Component	CAS #	Value	Control parameters
N-[4-[4-(4-methylpiperazin-1-yl)-6-[(5-methyl-1H-pyrazol-3-yl)amino]pyrimidin-2-yl]sulfanylphenyl]cyclopropanecarboxamide	639089-54-6	No data available	No data available

#### 8.2 Engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

#### 8.3 Personal protective equipment

##### 8.3.1 Eye/face protection

Safety glasses

##### 8.3.2 Skin protection

Compatible chemical-resistant gloves  
 Lab coat

##### 8.3.3 Respiratory protection

NIOSH (US) or CEN (EU) approved respirator, as conditions warrant.

##### 8.3.4 General hygiene considerations

Do not take internally.  
 Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.  
 Wash thoroughly after handling.

##### 8.3.5 Environmental exposure controls

No data available

### 9 Physical and Chemical Properties

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

Appearance

A crystalline solid

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Odour	No data available
Odour threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Boiling point/boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Solubility	~0.1 mg/mL in 1:10 DMF:PBS (pH 7.2); ~15 mg/mL in DMF & DMSO
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

### 10 Stability and Reactivity

<b>10.1 Reactivity</b>	No data available
<b>10.2 Chemical stability</b>	Stable
<b>10.3 Possibility of hazardous reactions</b>	No data available
<b>10.4 Conditions to avoid</b>	No data available
<b>10.5 Incompatible materials</b>	Strong oxidizing agents
<b>10.6 Hazardous decomposition products</b>	Carbon dioxide Carbon monoxide Nitrogen oxides

### 11 Toxicological Information

<b>11.1 Acute toxicity</b>	
Oral:	No data available
Inhalation:	No data available
Dermal:	No data available
Other:	No data available
<b>11.2 Skin corrosion/irritation</b>	No data available
<b>11.3 Serious eye damage/eye irritation</b>	No data available
<b>11.4 Respiratory and/or skin sensitization</b>	No data available

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**MK0457****EFFECTIVE DATE: 2015-05-16****11.5 Germ cell mutagenicity**

No data available

**11.6 Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**11.7 Reproductive toxicity**

No data available

**11.8 Specific target organ toxicity - single exposure**

No data available

**11.9 Specific target organ toxicity - repeated exposure**

No data available

**11.10 Aspiration hazard**

No data available

**11.11 Potential health effects**

Inhalation: Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation. May cause respiratory system irritation.

Ingestion: Fatal if swallowed.

Skin: Causes skin irritation. May be harmful by skin absorption.

Eyes: Causes serious eye damage.

**11.12 Signs and symptoms of exposure**

Contains a pharmaceutically active ingredient; Substance not fully tested, handle with care. May cause damage to organs through prolonged or repeated exposure.

Suspected of damaging fertility or the unborn child.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**11.13 RTECS #** No data available

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**12 Ecological Information****12.1 Toxicity**Avoid release into the environment.  
Runoff from fire control or dilution water may cause pollution.**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Other adverse effects**

No data available

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**13 Disposal Considerations****13.1 Waste disposal method**

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Dispose in accordance with local, provincial/state, and federal regulations.

**13.2 Contaminated packaging**

Dispose of as unused product.

**14 Transport Information**

<b>14.1 UN number</b>	No data available
<b>14.2 UN proper shipping name</b>	DOT Not dangerous goods ADR/RID Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods
<b>14.3 Transport hazard class(es)</b>	No data available
<b>14.4 Packing group</b>	No data available
<b>14.5 Environmental hazards</b>	No data available
<b>14.6 Special precautions</b>	No data available

**15 Regulatory Information**
**15.1 US EPA SARA Title III**

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)
N-[4-[4-(4-methylpiperazin-1-yl)-6-[(5-methyl-1H-pyrazol-3-yl)amino]pyrimidin-2-yl]sulfanylphenyl]cyclopropanecarboxamide	639089-54-6	No	No	No

**15.2 Other US EPA or State Lists**

Hazardous Components (Chemical Name)	CAS #	CAA HAP, ODC	CWA NPDES	TSCA	CA PROP.65
N-[4-[4-(4-methylpiperazin-1-yl)-6-[(5-methyl-1H-pyrazol-3-yl)amino]pyrimidin-2-yl]sulfanylphenyl]cyclopropanecarboxamide	639089-54-6	No	No	No	No

**15.3 EU**

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

**15.4 Canada**

Not WHIMIS controlled

This SDS was prepared in accordance with Hazardous Products Regulations (HPR) and WHMIS 2015.

**16 Other Information**

- 16.1 Prepared by:** Quality Control, STEMCELL Technologies Inc.
- 16.2 Revision:** N/A
- 16.3 Notice:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. STEMCELL Technologies Inc.

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shall not be held liable for any damage resulting from handling or from contact with the product. The information contained in this Safety Data Sheet (SDS) is current as of the Effective Date shown in this document and may be subject to amendment by STEMCELL Technologies Inc.

**16.4 Disclaimer: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.**