

Classified as hazardous according to criteria of EPA New Zealand

## Section 1 - Identification

**Product Name** 4-Methoxybenzyl 3-chloromethyl-7-(2-phenylacetamido)-3-cephem-4-carboxylate  
**CAS No** 104146-10-3

<b>Product Code</b>	<b>473240000; 473240050; 473240250; 473241000</b>
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<b>E-mail address</b>	<u>ANZinfo@thermofisher.com</u>

**Recommended Use** Laboratory chemicals.

## Section 2 - Hazard(s) Identification

### Classification under Work Safe New Zealand

6.1E - Substances that are acutely toxic (Oral)  
 6.5B - Substances that are contact sensitisers  
 6.5A - Substances that are respiratory sensitisers

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### GHS Classification

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

Acute Oral Toxicity	Category 5
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1

#### Environmental hazards

Based on available data, the classification criteria are not met

### Label Elements



Signal Word

Danger

**Hazard Statements**

H303 - May be harmful if swallowed

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Precautionary Statements**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P272 - Contaminated work clothing should not be allowed out of the workplace

P280 - Wear protective gloves

P284 - In case of inadequate ventilation wear respiratory protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P363 - Wash contaminated clothing before reuse

P403 - Store in a well-ventilated place

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

## Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-(chloromethyl)-8-oxo-7-[(phenylacetyl)amino]-, (4-methoxyphenyl)methyl ester, (6R,7R)-	104146-10-3	<=100

## Section 4 - First Aid Measures

<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>General Advice</b>	If symptoms persist, call a physician.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
<b>First Aid Facilities</b>	Eyewash, safety shower and washroom.

**Most important symptoms and effects**

None reasonably foreseeable. . May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Notes to Physician**

Treat symptomatically.

## **Section 5 - Fire Fighting Measures**

**Suitable Extinguishing Media**

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

**Extinguishing media which must not be used for safety reasons**

No information available.

**Hazardous Combustion Products**

Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors.

**Special protective equipment and precautions for fire fighters**

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**

**Emergency procedures**

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

**Environmental Precautions**

Should not be released into the environment.

**Methods for Containment and Clean Up**

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

**Reference to Other Sections**

Refer to protective measures listed in Sections 8 and 13.

## **Section 7 - Handling and Storage**

**Precautions for Safe Handling**

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Conditions for Safe Storage, Including any Incompatibilities**

Store in freezer.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

## **Section 8 - Exposure Controls and Personal Protection**

**Exposure limits**

The product does not contain any hazardous materials with occupational exposure limits established.

### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### **Personal protective equipment**

#### **Eye Protection**

Wear safety glasses with side shields (or goggles) (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

#### **Hand Protection**

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Nitrile rubber, Neoprene, Natural rubber, PVC.	See manufacturers recommendations	-	AS/NZS 2161	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### **Skin and body protection**

Long sleeved clothing

#### **Respiratory Protection**

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

#### **Recommended Filter type:**

Particulates filter conforming to EN 143 (or AUS/NZ equivalent)

#### **Recommended half mask:-**

Particle filtering: EN149:2001 (or AUS/NZ equivalent)

When RPE is used a face piece Fit Test should be conducted

### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

### **Environmental exposure controls**

No information available.

## **Section 9 - Physical and Chemical Properties**

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

#### **Appearance**

##### **Physical State**

Solid

##### **Odor**

No information available

##### **Odor Threshold**

No data available

##### **pH**

Not applicable

##### **Melting Point/Range**

No data available

##### **Softening Point**

No data available

##### **Boiling Point/Range**

No information available

##### **Flash Point**

No information available

##### **Evaporation Rate**

Not applicable

##### **Flammability (solid,gas)**

No information available

##### **Explosion Limits**

No data available

**Method -** No information available

Solid

##### **Vapor Pressure**

No data available

##### **Vapor Density**

Not applicable

Solid

Specific Gravity / Density	No data available	
Bulk Density	No data available	
Water Solubility	No information available	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	Not applicable	Solid
Explosive Properties	No information available	
Oxidizing Properties	No information available	

**Other information**

Molecular Formula	C24 H23 Cl N2 O 5S
Molecular Weight	486.97

## Section 10 - Stability and Reactivity

Reactivity	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks.
Incompatible Materials	None known.

**Hazardous Decomposition Products** Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides. Hydrogen chloride.

**Hazardous Polymerization** No information available.

## Section 11 - Toxicological Information

### Information on Toxicological Effects

#### Product Information

**(a) acute toxicity;**

Oral	Based on available data, the classification criteria are not met
Dermal	No data available
Inhalation	No data available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-(chloromethyl)-8-oxo-7-[(phenylacetyl)amino], (4-methoxyphenyl)methyl ester, (6R,7R)-	LD50 > 2500 mg/kg ( Rat )		

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**

Respiratory	Category 1
Skin	Category 1

**Sensitization** May cause sensitization by skin contact

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available  
There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs None known.

(j) aspiration hazard; Not applicable  
Solid

**Symptoms / effects, both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

## Section 12 - Ecological Information

**Ecotoxicity effects** Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

**Persistence and Degradability** No information available

**Bioaccumulative Potential** No information available

**Mobility** No information available.

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

**Waste from Residues/Unused Products** Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**Other Information** Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## Section 14 - Transport Information

**IMDG/IMO** Not regulated

**NZS 5433:2020** Not regulated

**IATA** Not regulated

**Environmental hazards** No hazards identified

**Special Precautions** No special precautions required

**Additional information** None known

## Section 15 - Regulatory Information

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

#### International Inventories

China X = listed U.S.A. (TSCA) Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP)  
Australia (AICS) Korea (KECL) China (IECSC) Japan (ENCS) Philippines (PICCS) Taiwan  
(TCSI) Japan (ISHL) New Zealand (NZIoC) Japan (ISHL)

Component	NZIoC	AICS	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	ISHL	IECSC	KECL
5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-(chloromethyl)-8-oxo-7-[(phenylacetyl)amino]-, (4-methoxyphenyl)methyl ester, (6R,7R)-	-	-	-	-	-	-	-	-	X	X	X	-

**Prohibition or notification/licensing requirements** Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

## Section 16 - Other Information

**This safety data sheet complies with the requirements of WorkSafe New Zealand Regulations**

### Legend

**AICS** - Australian Inventory of Chemical Substances  
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**IECSC** - Chinese Inventory of Existing Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TWA** - Time Weighted Average  
**IARC** - International Agency for Research on Cancer  
**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association  
**MARPOL** - International Convention for the Prevention of Pollution from Ships  
**NZS 5433:2012** - Transport of Dangerous Goods on Land  
**LD50** - Lethal Dose 50%  
**EC50** - Effective Concentration 50%  
**WEL** - Workplace Exposure Limit  
**DNEL** - Derived No Effect Level  
**POW** - Partition coefficient Octanol:Water

**NZIoC** - New Zealand Inventory of Chemicals  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**ENCS** - Japanese Existing and New Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**CAS** - Chemical Abstracts Service  
**ACGIH** - American Conference of Governmental Industrial Hygienists  
Predicted No Effect Concentration (PNEC)  
**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code  
**ADG** Australian Code for the Transport of Dangerous Goods by Road and Rail  
**OECD** - Organisation for Economic Co-operation and Development  
**LC50** - Lethal Concentration 50%  
**ATE** - Acute Toxicity Estimate  
**RPE** - Respiratory Protective Equipment  
**NOEC** - No Observed Effect Concentration  
**BCF** - Bioconcentration factor

**vPvB** - very Persistent, very Bioaccumulative  
**VOC** - (Volatile Organic Compound)

**PBT** - Persistent, Bioaccumulative, Toxic

**Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>  
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

<b>Revision Date</b>	25-Jan-2023
<b>Revision Summary</b>	SDS sections updated

**Disclaimer**

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**End of Safety Data Sheet**