

Product Name: 5-Thiazole Wing PNP Carbonate HCl
Issued: Apr-24-2015

abbvie
SAFETY DATA SHEET

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: 5-Thiazole Wing PNP Carbonate HCl
Chemical Name: 4-Nitrophenyloxycarbonyl-5-thiazoylmethyl Carbonate Hydrochloride
Synonyms: Ritonavir Intermediate; 5-Thiazole Wing PNP Carbonate HCl; 5-Wing; 5-Thiazole Wing; 5-Thiazole Carb.
Reach Registration Number 01-0000016153-79-0006
Drug Code Number: 88127; 20027976; 20027687; 20027686; 20027689; 20027977; 20027690

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

Recommended use: Process Intermediate
Scientific research and development

1.3 Details of the supplier of the safety data sheet

Supplier: AbbVie Inc.
1 North Waukegan Road
North Chicago, IL 60064
USA
+1-847-932-7900
Customer Service Telephone: 1-800-255-5162 (US and Canada only)
+1-847-937-7433
E-mail Address: AbbVie.SDS@abbvie.com

1.4 Emergency telephone number

Emergency Telephone: CHEMTREC: 1(800) 424-9300 (in USA and Canada)
or +1-703-527-3887 (international)

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008

General Note

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Chronic aquatic toxicity	Chronic toxicity 4
None	

Classification according to EU Directives 67/548/EEC or 1999/45/EC

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Indication of danger: Xi - Irritant
N - Dangerous for the environment

Risk Phrases: R38 - Irritating to skin
R41 - Risk of serious damage to eyes
R43 - May cause sensitization by skin contact
R51 - Toxic to aquatic organisms
R53 - May cause long-term adverse effects in the aquatic environment

2.2 Label elements



Signal Word: Danger

Hazard Statements: H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H413 - May cause long lasting harmful effects to aquatic life

Precautionary Statements P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P264 - Wash face, hands and any exposed skin thoroughly after handling
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P273 - Avoid release to the environment

2.3 Other hazards

Not determined

Section 3. Composition/information on ingredients

Chemical Name	Percent	EINECS/ELINCS Number	EEC Classification	EU - GHS Substance Classification	REACH No.
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	100	NA	Xi, R38, R41; R43; N, R51, R53	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Chronic 4 (H413)	01-0000016153-79-0006

Not Hazardous* - Based on available data, not classified as hazardous according to the criteria of the Globally Harmonized System.

For the full text of the R-phrases mentioned in this Section, see Section 16
For the full text of the H-Statements mentioned in this Section, see Section 16

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Section 4. First aid measures

4.1 Description of first aid measures

Eye Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Skin Contact: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Inhalation: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Ingestion: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Protection of First-aiders: Use personal protective equipment

4.2 Most important symptoms and effects, both acute and delayed

Signs and Symptoms: None known from occupational exposure. Available information support the following: eye burns, eye injury, skin discoloration, skin ulceration, skin burns, gastrointestinal pain, bloating.

Medical Conditions Aggravated by Exposure: Hypersensitivity to the material and/or similar materials. Available information suggest pre-existing ailments of the following organs: eyes, skin, gastrointestinal system.

4.3 Indication of any immediate medical attention and special treatment needed

Notes To Physician: Treat symptomatically

Section 5. Firefighting measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire

Unsuitable Extinguishing Media: Not determined

5.2 Special hazards arising from the substance or mixture

Special Exposure Hazards: Not determined

5.3 Advice for firefighters

Protective Equipment and Precautions for Firefighters: As in any fire, wear self-contained breathing apparatus and full protective gear

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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Personal Precautions: For personal protection see section 8.

6.2. Environmental precautions

Environmental Precautions: Contain material and prevent release to waterways or soil.

6.3. Methods and material for containment and cleaning up

Methods for Cleaning Up: Recover product and place in an appropriate container for disposal.

6.4. Reference to other sections

Refer to Sections 8, 12, and 13 for further information.

Section 7. Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store according to label instructions.

7.3. Specific end use(s)

Recommended use: Process Intermediate
Scientific research and development

Section 8. Exposure controls/personal protection

8.1. Control parameters

Exposure limits:

Chemical Name	Employee Exposure Limit	Skin Notation
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	1000 mcg/m ³	None

8.2. Exposure controls

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Respiratory Protection: An approved respirator (i.e. NIOSH, EN, etc.) should be worn when exposures are expected to exceed the applicable limits.

Eyes: Wear eye protection appropriate to handling activities.

Gloves: Impervious gloves.

Other PPE Data: Wear appropriate body coverings if contact may occur.

Environmental Exposure Controls: Not determined

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Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Off-white to tan Powder
Odor:	Odor not determined.
Odor Threshold:	Not determined
pH:	Not determined.
Boiling Pt. @ 760 mm Hg (°C):	Not determined.
Melting/Freezing Point (°C):	108.5 - 119
Flash Point (°C):	Not determined.
Evaporation Rate at 20°C:	Not determined.
Flammability (Solid):	Not determined.
Lower Explosive Limit:	Not determined.
Upper Explosive Limit:	Not determined.
Vapor Pressure (mm Hg):	0.00000113 at 25 deg. C
Vapor Density (Air = 1):	Not determined.
Bulk Density at 20°C:	1.4949
Specific Gravity:	Not determined.
Solubility(ies):	Slightly soluble in: water.
Partition coefficient:	Not determined.
n-octanol/water	
Autoignition Temp. (°C):	Not determined.
Decomposition temperature (°C):	Not determined.
Viscosity (centipoise):	Not determined.
Explosion Severity:	Not determined.
Oxidizer Properties:	Not determined.

9.2. Other information

Not determined

Min. Ignition Energy-Cloud (mJ):	7.9
Min. Explosive Conc. (g/m³):	43

Section 10. Stability and reactivity

10.1. Reactivity

Not determined

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reactions:	Not determined.
Self-Heating Tendency:	No exotherms seen below 100 deg C in DSC testing.

10.4. Conditions to avoid

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Not determined.

10.5 Incompatible materials

Not determined

10.6 Hazardous decomposition products

Carbon oxides, Nitrogen oxides (NO_x), Hydrogen chloride

Section 11. Toxicological information

11.1. Information on toxicological effects

Routes of Exposure:

Oral: Not determined.
Dermal: Not determined.
Inhalation: Not determined.

Acute Toxicity - Oral: Data for component (s) given below.

Chemical Name	Acute Test	Value	Units	Species
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	LD50 >	2000	mg/kg	Rats

Acute Toxicity - Dermal: Data for component (s) given below.

Chemical Name	Acute Test	Value	Units	Species
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	LD50 >	2000	mg/kg	Rats

Acute Toxicity - Inhalation: Not determined.

Corrosivity: Not determined.

Dermal Irritation: Produced mild to moderate skin irritation in animals.

Eye Irritation: Produced mild to severe eye irritation in animal testing. Produced corneal opacity, iritis and conjunctival redness, swelling and discharge. No recovery after 21 days.

Sensitization: Produced greater than 60 % sensitization response in guinea pigs.

Toxicokinetics/Metabolism: Not determined.

Target Organ Effects: Based on animal studies, target organ include: gastrointestinal tract, hematopoietic system.

Reproductive Effects: Not determined.

Carcinogenicity: Not determined.

Mutagenicity: Not determined.

Aspiration hazard: Not determined

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Notes:

1. **ALD:** Approximate lethal dosage
2. **LC50:** Concentration in air that produces 50% mortality
3. **LD50:** Oral or dermal dosage that produces 50% mortality

Section 12. Ecological information

12.1. Toxicity

Data for component (s) given below.

Chemical Name	Percent	LC 50 (mg/l)	Species	Duration
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	100	1.2	Trout	96 Hours

Chemical Name	Percent	48h EC50 (daphnia - mg/l) (48HLCD)	Species	Duration
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	100	2.5	Daphnia magna	48 Hours

12.2. Persistence and degradability

Data for component (s) given below.

Chemical Name	Percent	% Degradation	Duration
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	100	0	28 days

12.3. Bioaccumulative potential

Data for components given below.

Chemical Name	Percent	Log Po/w
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	100	1.94

12.4. Mobility in soil

Not determined.

12.5. Results of PBT or vPvB assessment

Chemical safety report is not required for this substance/product.

12.6. Other adverse effects

Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

Notes:

1. **EC50:** Concentration in water that produces 50% mortality in *Daphnia* sp.
2. **LC50:** Concentration in water that produces 50% mortality in fish.
3. **EbC50/ErC50:** Concentration in water that produces 50% inhibition of growth and in algae.

Section 13. Disposal considerations

13.1 Waste treatment methods

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Waste Disposal Methods: Disposal should be made in accordance with country, federal, state and local regulations.

Section 14. Transport information

ADR, ICAO/IATA, IMDG/IMO

Status: Regulated

14.1. UN Number: UN3077

14.2. Proper shipping name: Environmentally hazardous substance, solid, n.o.s.
(4-Nitrophenyloxycarbonyl-5-thiazoylmethyl Carbonate Hydrochloride)

14.3. Hazard class: 9

14.4. Packing group: III

14.5. Environmental hazard: Yes

14.6. Special Provisions: IATA A197

14.7. Transport in bulk Not applicable

**according to Annex II of
MARPOL 73/78 and the IBC**

Code:

DOT

Status: Not regulated

Section 15. Regulatory Information

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

International Inventories

Chemical Name	EINECS/ ELINCS	TSCA	DSL	NDSL	PICCS
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	-	-	-	Not listed.	-

Chemical Name	ENCS	ISHL	IECSC	AICS	KECL	New Zealand
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	-	-	-	-	-	

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

ISHL - Japan Industrial Safety and Health Law

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

Carcinogenicity Rating:

Chemical Name	Percent	NTP:	IARC:	ACGIH:
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	100	Not Listed	Not Listed	Not Listed

SARA 313 Information

Product Name: 5-Thiazole Wing PNP Carbonate HCl
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Chemical Name	Percent	SARA 313 Chemical:	CERCLA RQ/SARA EHS RQ (lbs):	SARA EHS TPQ (lbs):
5-Thiazole Wing PNP Carbonate Hydrochloride (CAS: 154212-59-6)	100	No	Not Applicable	Not applicable

Immediate Health: Yes

Delayed Health: No

Fire: No

Sudden Pressure: No

Reactivity: No

RCRA Status: Not determined.

Proposition 65 Status: Does not contain chemicals known to the state of California to cause cancer or reproductive harm.

WHMIS Hazard Class: Not determined.

NFPA Rating:

Health: 3

Fire: 1

Reactivity: 0

Notes:

1. SARA = Superfund Amendments and the Reauthorization Act.
2. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act.
3. FIFRA = Federal Insecticide, Fungicide and Rodenticide Act.
4. TSCA = Toxic Substances Control Act.
5. EC = European Community.
6. WHMIS = Canadian Workplace Hazardous Materials Information System.
7. UN GHS = United Nations Globally Harmonized System for Hazard Identification.

15.2. Chemical safety assessment

Chemical safety assessment has not been conducted on the substance/product.

Section 16. Other information

Risk Phrases:

R38 - Irritating to skin

R41 - Risk of serious damage to eyes

R43 - May cause sensitization by skin contact

R51 - Toxic to aquatic organisms

R53 - May cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under sections 2 and 3

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H413 - May cause long lasting harmful effects to aquatic life

Document Authored By: Occupational and Environmental Toxicology

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