1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information
Product Name: Aliqopa
Synonyms: Copanlisib lyophilisate
SDS Number: 122000014941

Use : Medicinal products

Company
Bayer HealthCare, LLC
Pharmaceuticals
100 Bayer Boulevard PO Box 915
Whippany, NJ 07981-0915
UNITED STATES OF AMERICA
1888-84-BAYER

In case of emergency: 1888-84-BAYER
Chemtrec: (800) 424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to national GHS implementation:
Reproductive toxicity, Category 1B (H360FD)
Specific target organ toxicity - repeated exposure, Category 1 (H372)

Label elements

Labelling according to national GHS implementation:

Danger

Hazard statements:

H360FD May damage fertility. May damage the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements:

Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Hazardous components which must be listed on the label:

Components:	**CAS-No.**
Copanlisib Dihydrochloride / BAY 84-1236	1402152-13-9

Other hazards

Other hazards which do not result in classification:
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Hazardous components

Copanlisib Dihydrochloride / BAY 84-1236
Concentration [Weight percent] 35.46
CAS-No.: 1402152-13-9
CAS name: 5-Pyrimidinecarboxamide, 2-amino-N-[2,3-dihydro-7-methoxy-8-[3-(4-morpholinyl)propoxy]imidazo[1,2-c]quinazolin-5-yl]-, hydrochloride (1:2)

GHS Classification:

Repr. 1B H360FD
STOT RE 1 H372

Citric acid
Concentration [Weight percent] 2.97
CAS-No.: 77-92-9
CAS name: 1,2,3-Propanetricarboxylic acid, 2-hydroxy-

GHS Classification:

Eye Irrit. 2A H319

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

4. FIRST AID MEASURES

Description of first aid measures

General advice: No hazards which require special first aid measures.

If inhaled: Not an expected entry route.

In case of skin contact: After contact with skin, wash immediately with plenty of soap and water. If skin reactions occur, contact a physician.

In case of eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed: In case of accidental ingestion, contact your regional poison center or physician

immediately.

Most important acute symptoms/effects

Indication of any immediate medical attention and special treatment needed

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Any

Special hazards arising from the substance or mixture

Specific hazards during firefighting: Fire may cause evolution of: Carbon monoxide (CO) Carbon dioxide (CO_2)

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system.

Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Environmental precautions

Methods and materials for containment and cleaning up

Methods for cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Reference to other sections

Additional advice: Avoid dust formation.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling:
Industrial uses Avoid dust formation. Only handle product with local exhaust ventilation. Avoid contact with skin, eyes and clothing.

No special protective measures against fire required.

Conditions for safe storage, including any incompatibilities

Specific end use(s)

No statements available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
Copanlisib Dihydrochloride / BAY 84-1236	1402152-13-9
Citric acid	77-92-9

Personal protective equipment

Respiratory protection : Recommended Filter type:
HEPA

None required for consumer use of this product.

Hand protection
Material : Chemically resistant gloves.

Remarks : None required for consumer use of this product.

Eye protection : Safety glasses
None required for consumer use of this product.

Protective measures : No special safety precautions are required during handling of pharmaceuticals in their intended finished form (tablets or liquid formulations) by chemists, the hospital's medical staff or patients.
Wear suitable protective equipment.
For the intake of ready for use pharmaceutials or the external use on the skin please read the label and the package leaflet.
Please consult label for end-user requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form:	solid
Colour:	No statements available.
Odour:	No statements available.
Melting point/range:	No statements available.
Boiling point/boiling range:	No statements available.
Density:	No statements available.
Bulk density:	No statements available.
Vapour pressure:	No statements available.

Viscosity, dynamic:	No statements available.	
Viscosity, kinematic:	No statements available.	
Flow time:	No statements available.	
Surface tension:	No statements available.	
Water solubility:	No statements available.	
Solubility(ies):	No statements available.	
pH:	No statements available.	
Corrosive to metal:	No statements available.	
Partition coefficient (n-octanol/water):	Citric acid log Pow: -1.61	experimental
Flash point:	Not applicable	
Inflammability (solid, gaseous):	No statements available.	
Explosion limits:	No statements available.	

Other information

Miscibility with water:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity
No statements available.

Reactions with water / air:
No statements available.

Ignition temperature:
No statements available.

Burning number:
No statements available.

Chemical stability
No statements available.

Thermal decomposition:
No data available

Dust explosion characteristic number:
No statements available.

Dust explosion class:

No data available

Impact sensitivity:

No data available

Hazardous reactions:

No data available

Explosive properties:

No statements available.

Possibility of hazardous reactions

deflagration ability:
No statements available.

Smoldering combustion:
No statements available.

Conditions to avoid
No data available

Minimum ignition energy:
No data available

Oxidizing properties:
No statements available.

Incompatible materials

Materials to avoid:
Oxidizing agents

Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO2)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate (ATE): > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate (ATE): > 5,000 mg/kg Method: Calculation method

Components:

Copanlisib Dihydrochloride / BAY 84-1236:

Acute toxicity (other routes of administration)	:	30 mg/kg Application Route: intravenous Method: expert opinion Test substance: argument by analogy Remarks: Single administration did lead to fatalities.

Citric acid:

Acute oral toxicity	:	LD50 (Rat): 3,000 mg/kg
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD 402 GLP: yes

Skin corrosion/irritation

Components:

Citric acid:

Species: Rabbit
Exposure time: 72 h
Method: OECD 404
Result: Mild skin irritation

Serious eye damage/eye irritation

Components:

Citric acid:

Species: Rabbit
Result: Eye irritation
Exposure time: 72 h
Assessment: Causes serious eye irritation.
Method: OECD 405

Respiratory or skin sensitisation

Components:

Citric acid:

Assessment: Causes serious eye irritation., May be harmful if swallowed., May be harmful in contact with skin.

Germ cell mutagenicity

Components:

Copanlisib Dihydrochloride / BAY 84-1236:

Genotoxicity in vitro : Test Type: Mouse lymphoma assay
Method: expert opinion
Result: No indication of clastogenic effects.
Test substance: argument by analogy

: Test Type: Micronucleus test
Method: expert opinion
Result: No evidence of a genotoxic effect.
Test substance: argument by analogy

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: expert opinion
Result: No evidence of a genotoxic effect.
Test substance: argument by analogy

Citric acid:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

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.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
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.

Reproductive toxicity

Components:

Copanlisib Dihydrochloride / BAY 84-1236:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments., Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - repeated exposure

Components:

Copanlisib Dihydrochloride / BAY 84-1236:

Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Copanlisib Dihydrochloride / BAY 84-1236:

Species: Rat
NOAEL: < 0.6 mg/kg
Application Route: intravenous
Exposure time: 21 days
Number of exposures: Once weekly
Method: expert opinion
Test substance: argument by analogy
Target Organs: Kidney, Liver, Haematopoietic system, Bone, Teeth

Species: Dog
NOAEL: < 0.2 mg/kg
Application Route: intravenous
Exposure time: 21 days
Number of exposures: Once weekly
Test substance: argument by analogy
Target Organs: Gastro-intestinal system, Blood pressure, Glucose Metabolism

Citric acid:

Repeated dose toxicity - Assessment	:	Causes serious eye irritation., May be harmful if swallowed., May be harmful in contact with skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Citric acid:

Toxicity to bacteria	:	EC0 (Bacteria): 10,000 mg/l Method: DIN 38412

Ecotoxicology Assessment

Acute aquatic toxicity	:	This product has no known ecotoxicological effects.

Persistence and degradability

Components:

Copanlisib Dihydrochloride / BAY 84-1236:

Stability in water	:	Test Type: Hydrolysis Degradation half life: > 365 d pH: 4 Method: Directive 67/548/EEC, Annex V, C.7 Degradation half life: 121 d pH: 7 Method: Directive 67/548/EEC, Annex V, C.7 Degradation half life: 85 d pH: 9 Method: Directive 67/548/EEC, Annex V, C.7

Citric acid:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 98 % Exposure time: 2 d Method: OECD 302B
Biochemical Oxygen Demand (BOD)	:	575 - 675 mg/g
Chemical Oxygen Demand (COD)	:	700 - 800 mg/g

Bioaccumulative potential

Components:

Citric acid:

Bioaccumulation	:	Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water	:	log Pow: -1.61 Method: experimental

Mobility in soil

No data available

Other adverse effects

Product:

Results of PBT and vPvB assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Additional ecological information	:	Do not allow to enter surface waters or groundwater.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

14. TRANSPORT INFORMATION

US Land transport (CFR)
non-regulated

Sea transport (IMDG)
non-regulated

Air transport (IATA)
non-regulated

15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Chronic Health Hazard
SARA 302	:	This material does not contain any components with a section 302 EHS TPQ.
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

New York City Hazardous Substances

No components listed on the New York City Hazardous Substances List

California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA	Not On TSCA Inventory Copanlisib Dihydrochloride / BAY 84-1236

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

16. OTHER INFORMATION

Full text of H-Statements mentioned in chapters 2 and 3

H319	Causes serious eye irritation.
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

Further information

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.