

## 1 Identification

- **Product identifier**
- **Product Name:** Baythroid
- **Part Name:** LCS-376
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Spex CertiPrep, LLC.  
203 Norcross Ave, Metuchen,  
NJ 08840 USA  
732-549-7144  
USMet-CRMSales@antylia.com
- **Information department:** product safety department
- **Emergency telephone number:**  
Emergency Phone Number (24 hours)  
CHEMTREC (800-424-9300)  
Outside US: 703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 2      H225 Highly flammable liquid and vapor.



GHS07

Acute Toxicity - Oral 4      H302 Harmful if swallowed.  
Acute Toxicity - Dermal 4      H312 Harmful in contact with skin.  
Acute Toxicity - Inhalation 4      H332 Harmful if inhaled.  
Eye Irritation 2A      H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
acetonitrile  
alpha-cyano-4-fluoro-3-phenoxybenzyl-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate
- **Hazard statements**  
H225      Highly flammable liquid and vapor.  
H302+H312+H332      Harmful if swallowed, in contact with skin or if inhaled.  
H319      Causes serious eye irritation.
- **Precautionary statements**  
P210      Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233      Keep container tightly closed.  
P240      Ground/bond container and receiving equipment.  
P241      Use explosion-proof electrical/ventilating/lighting/equipment.  
P261      Avoid breathing dust/fume/gas/mist/vapors/spray  
P280      Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312      If swallowed: Call a poison center/doctor if you feel unwell.  
P303+P361+P353      If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340      IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338      If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321      Specific treatment (see on this label).  
P330      Rinse mouth.  
P362+P364      Take off contaminated clothing and wash it before reuse.  
P403+P235      Store in a well-ventilated place. Keep cool.

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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

75-05-8	acetonitrile	99.9%
68359-37-5	alpha-cyano-4-fluoro-3-phenoxybenzyl-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate	0.1%

**4 First-aid measures**

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Immediately call a doctor.  
Do not give anything to eat or drink - Do not induce vomiting
- **Information for Doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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**Protective Action Criteria for Chemicals**

<b>· PAC-1:</b>	
75-05-8	acetonitrile 13 ppm
<b>· PAC-2:</b>	
75-05-8	acetonitrile 50 ppm
<b>· PAC-3:</b>	
75-05-8	acetonitrile 150 ppm

**7 Handling and storage**

- Handling:**
- Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities**
- Storage:**
- Requirements to be met by storerooms and receptacles:** Store in a cool location.
- Information about storage in one common storage facility:** Not required.
- Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- Additional information about design of technical systems:** No further data; see item 7.
- Control parameters**
- Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

<b>75-05-8 acetonitrile</b>	
PEL	Long-term value: 70 mg/m <sup>3</sup> , 40 ppm
REL	Long-term value: 34 mg/m <sup>3</sup> , 20 ppm
TLV	Long-term value: 20 ppm
	Skin, A4

- Additional information:** The lists that were valid during the creation were used as basis.
- Exposure controls**
- Personal protective equipment:**
- General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- Protection of hands:**



Protective gloves

- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- Penetration time of glove material** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:



Tightly sealed goggles

## 9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Liquid
Color:	According to product specification
· Odor:	Characteristic
· Odour Threshold:	Not applicable.
· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	81 °C (177.8 °F)
· Flash point:	< 23 °C (< 73.4 °F)
· Flammability (solid, gaseous):	Highly flammable.
· Ignition temperature:	525 °C (977 °F)
· Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapor pressure at 20 °C (68 °F):	97 hPa (72.8 mm Hg)
· Density	Not applicable.
· Relative density	Not applicable.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Partition coefficient (n-octanol/water): Not applicable.	
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
VOC content:	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**75-05-8 acetonitrile**

Oral	LD50	2,730 mg/kg (rat)
Dermal	LD50	1,250 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.





**14 Transport information**

· <b>UN-Number</b>	
· <b>DOT, ADR, IMDG, IATA</b>	UN1648
· <b>UN proper shipping name</b>	
· <b>DOT</b>	Acetonitrile
· <b>ADR</b>	1648 ACETONITRILE, ENVIRONMENTALLY HAZARDOUS
· <b>IMDG, IATA</b>	ACETONITRILE

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· <b>Transport hazard class(es)</b>	
· <b>DOT</b>	
	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
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· <b>ADR</b>	
 	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
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· <b>IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
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· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b> II	
· <b>Environmental hazards:</b>	
· <b>Special marking (ADR):</b> Symbol (fish and tree)	
· <b>Special precautions for user</b> Warning: Flammable liquids	
· <b>Hazard identification number (Kemler code):</b> 33	
· <b>EMS Number:</b> F-E,S-D	
· <b>Stowage Category</b> B	
· <b>Stowage Code</b> SW2 Clear of living quarters.	
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> Not applicable.	
· <b>Transport/Additional information:</b>	
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· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b> Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml	
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· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b> 1L	
· <b>Excepted quantities (EQ)</b> Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml	
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· <b>UN "Model Regulation":</b> UN 1648 ACETONITRILE, 3, II, ENVIRONMENTALLY HAZARDOUS	

**15 Regulatory information**

· **Safety, health and environmental regulations/legislation specific for the substance or mixture** No further relevant information available.

· **Sara**

· **Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

75-05-8 | acetonitrile

ACTIVE

· **Hazardous Air Pollutants**

75-05-8 | acetonitrile

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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Printing date 06/06/2023

Reviewed on 06/06/2023

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· <b>Chemicals known to cause reproductive toxicity for females:</b>	
None of the ingredients is listed.	
· <b>Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients is listed.	
· <b>Chemicals known to cause developmental toxicity:</b>	
None of the ingredients is listed.	
· <b>Carcinogenic categories</b>	
· <b>EPA (Environmental Protection Agency)</b>	
75-05-8   acetonitrile	CBD, D
· <b>TLV (Threshold Limit Value)</b>	
75-05-8   acetonitrile	A4
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
None of the ingredients is listed.	

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02      GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

acetonitrile

alpha-cyano-4-fluoro-3-phenoxybenzyl-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

· **Hazard statements**

H225      Highly flammable liquid and vapor.

H302+H312+H332      Harmful if swallowed, in contact with skin or if inhaled.

H319      Causes serious eye irritation.

· **Precautionary statements**

P210      Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233      Keep container tightly closed.

P240      Ground/bond container and receiving equipment.

P241      Use explosion-proof electrical/ventilating/lighting/equipment.

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

P280      Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312      If swallowed: Call a poison center/doctor if you feel unwell.

P303+P361+P353      If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P305+P351+P338      If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321      Specific treatment (see on this label).

P330      Rinse mouth.

P362+P364      Take off contaminated clothing and wash it before reuse.

P403+P235      Store in a well-ventilated place. Keep cool.

P501      Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** product safety department

· **Contact:**

Spex CertiPrep, LLC.

1-732-549-7144

· **Date of preparation / last revision** 06/06/2023

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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Printing date 06/06/2023

Reviewed on 06/06/2023

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*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*NIOSH: National Institute for Occupational Safety*  
*OSHA: Occupational Safety & Health*  
*TLV: Threshold Limit Value*  
*PEL: Permissible Exposure Limit*  
*REL: Recommended Exposure Limit*  
*Flammable Liquids 2: Flammable liquids – Category 2*  
*Acute Toxicity - Oral 4: Acute toxicity – Category 4*  
*Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A*

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