

SAFETY DATA SHEET (SDS)

1.- Identification of the chemical product and the company.

- Identification of the chemical:	ANASAC ZERO 5 EC
- Recommended uses:	Insecticide
- Restrictions of use:	Domestic and recreational use prohibited.
- Provider Name:	ANASAC CHILE S.A.
- Provider Address:	Almirante Pastene 300, Providencia
- Provider phone number:	(56-2) 2 470 6900
- Emergency telephone number in Chile:	(56-2) 2 470 6900
- Telephone number of Toxicological Information in Chile:	(56-2) 2 777 1994 RITA Corporation
- Manufacturer information:	ANASAC CHILE S.A./ GLEBA S.A./ ZHEJIANG LONGYOU EAST ANASAC CROP SCIENCE CO., LTD.
- Supplier's email address:	www.anasac.com

2.- Identification of hazards.

- Classification according to NCh 382: NU 3351, Pyrethroid pesticide, liquid, toxic, flammable.
- Badge according to NCh 2190: 6.1 (3) Toxic-Flammable



- Classification according to GHS rev 6: FLAMMABLE LIQUID CATEGORY 3, ACUTE TOXICITY CATEGORY 4, ACUTE AQUATIC TOXICITY CATEGORY 2.



- GHS Label:
- Hazard statements:

H226: Flammable liquid and vapor.
H302 + H332: Harmful if swallowed or inhaled.
H313: May be harmful if in contact with skin.
H401: Toxic to aquatic organisms.

- Precautionary statements:

P101: If medical advice is needed, have container or label at hand.
P102: Keep out of the reach of children.
P103: Read the label before use.
P210: Keep away from heat/ sparks/ open flames/ hot surfaces.
No Smoking
P261: Avoid inhaling mist/ vapors/ spray
P264: Thoroughly wash hands and faces after handling the product.
P270: Do not eat, drink or smoke while using the product

P272: Contaminated work clothing should not be allowed out of the workplace.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/ clothing/ goggles/ mask.
 P301 + P312: If ingested, call the emergency center if the affected person feels unwell.
 P302 + P352: If it gets on the skin, wash with plenty of water.
 P304 + P340: If inhaled, move the affected person to fresh air, hold it comfortable for breathing.
 P361 + P364: Take off immediately all contaminated clothing and wash before reuse.
 P370 + P378: In case of fire: use dry chemical extinguisher.
 P391: Collect spill.
 P403: Store in a well-ventilated place.
 P501: Dispose of containers according to national regulations.

- Safety sign according to NCh1411 / 4:



- Specific classification (Res. Exempt SAG N ° 2195):

Not available.

- Specific badge:

Not available.

- Dangers:

Flammable liquid and vapor. Harmful if swallowed or inhaled. May be harmful if in contact with skin. Toxic to aquatic organisms.

- Specific hazards:

Does not present.

- Other dangers:

Does not present.

3.- Composition / information of the components.

- Main components of the mixture:

Lambda-cyhalothrin

- Concentration (%):

Lamba-cyhalothrin 5% w/v

- Component of the mixture:

	Component 1	Component 2
Common or generic name	Lambda-cyhalothrin	Xylene
Systematic chemical naming	(R)-a-cyano-3-phenoxybenzyl (1S)-cis-3-[(Z)-2-chloro-3,3,3-trifluoropropenyl]-2,2-dimethylcyclopropanecarboxylate and (S)-a-cyano-3-phenoxybenzyl (1R)-cis-3-[(Z)-2-chloro-3,3,3-trifluoropropenyl]-2,2-dimethylcyclopropanecarboxylate	Dimethylbenzene
Concentration range	5% w/v	qs 100% w/v
CAS number	91465-08-6	1330-20-7

4.- First aid.

- **In case of inhalation:** Remove the patient from the exposed area and take him to fresh air. If not breathing, give artificial respiration. Keep it in a dark place, warm and at rest. In all the cases presented below, the affected person should be taken to a healthcare center as quickly as possible, presenting the product label to the health professional in charge.
- **In case of skin contact:** Remove contaminated clothing and shoes, then thoroughly wipe off product residue and wash skin with soap and water. In all the cases presented below, the affected person should be taken to a healthcare center as quickly as possible, presenting the product label to the health professional in charge.
- **In case of contact with the eyes:** If necessary, remove contact lenses, then immediately flush eyes with warm water, holding eyelids open, for at least 15 minutes. In all the cases presented below, the affected person should be taken to a healthcare center as quickly as possible, presenting the product label to the health professional in charge.
- **In case of ingestion:** DO NOT PROVOKE VOMITING, only administer one or two cups of water as the components of the product are of low acute toxicity. Keep the patient in a quiet, warm and resting place, waiting for the transfer to the hospital. If possible, carry a container or the product label. In all the cases presented below, the affected person should be taken to a healthcare center as quickly as possible, presenting the product label to the health professional in charge.
- **Expected acute effects:** Nausea, vomiting, and diarrhea.
- **Expected delayed effects:** Not described.
- **Most important systems / effects:** Not described.
- **Protection of those providing first aid:** Wear gloves.
- **Notas especiales para el médico tratante:** Carry out symptomatic treatment. Antidote: There are no specific antidotes available.

5.- Fire fighting measures

Extinguishing agents:

Use chemical foam (to avoid vapor ignition) or dry chemical powder to extinguish flames.

Inappropriate extinguishing agents:

Does not apply.

Products formed in combustion and thermal degradation:

Nitrogen oxides, hydrofluoric acid, hydrochloric acid, carbon dioxide and monoxide.

Associated specific hazards:

There is no specific associated hazard.

Specific extinguishing methods:

Sprinkle with water to cool unaffected area. Use as extinction ways the ones already said. Isolate the affected area. Personnel must enter wearing suitable fire fighting clothing and self-contained breathing apparatus.

Precautions for emergency personnel and / or firefighters:

Qualified personnel must enter the affected sector wearing special clothing for fire fighting, self-contained breathing apparatus and safety glasses with side protection.

6.- Measures to be taken in case of accidental spillage

- Personal precautions:

Do not enter the affected area without suitable protective equipment.

- Protective equipment:

Use equipment detailed in point 8.

- Emergency procedures:

Isolate the affected sector, people use the appropriate protection elements.

- Environmental precautions:

Contain spill with inert substances (sand, earth).

Methods and materials for containment, confinement and / or abatement:

In the event of a spill on natural soil, remove the personnel, isolate the affected sector. Remove the contaminated soil and transfer to a container or container for later disposal or recovery. In the event of a spill on the pavement, it is recommended to isolate the affected sector, cover the area with inert material such as sand or earth. Stir the material and transfer to a container or container for later disposal. In the event of spills into water, it is recommended to trap the spilled material in a water storage container. Use activated charcoal to absorb the spilled substance that has dispersed in the water. Use suction tubes to remove spilled material. Use a suction pump for sand or sediment that remains under water. Finally, for all cases it is recommended to transport to an authorized dump for hazardous waste.

Cleaning methods and materials:

- Recovery:

Recovery does not correspond as the substance has been contaminated.

- Neutralization:

Isolate the affected area, if it is possible to contain the spill with inert substances.

- Final disposition:

Dispose of according to what is indicated by the competent authority.

Additional disaster prevention measures:

Prohibit the entry of unauthorized personnel into warehouses, storage or distribution sites. Store in full compliance with Res. 43. Minsal.

7.-Handling and storage

Handling

- Precautions for safe handling:

The personnel involved in the handling of the product must use all the recommended personal protection elements.

- Operational and technical measures:

Wash clothes after handling.

- Precautions:

Do not manipulate without authorization from the security officer. The product is flammable, however smoking, the use of cell phones, lamps and plugs that are not explosion proof or the use of any element that could generate a spark should be avoided.

- **Local / general ventilation:** It must have a ventilation system according to the S.D. 594
- **Contact prevention:** Wear protective clothing.

Storage

- **Conditions for safe storage:**
Store out of direct sunlight in a cool, dry place with good ventilation. Products must be stored on shelves separate from the floor. Do not store together with food and medicines for animal or human use, seeds and any other that comes into direct contact with men and animals. Store only in the original container, tightly closed, at temperatures not lower than 5 ° C and not higher than 25 ° C.
- **Technical measures:**
In authorized warehouse and clearly identified containers.
- **Incompatible substances and mixtures:**
Incompatible with oxidizing or reducing agents whose pH is greater than 9 or less than 4.
- **Container / packaging material:**
Always keep in the original packaging. Sealed containers, with visible label.

8.- Exposure controls / personal protection

Maximum allowable concentration:

- **Weighted Allowable Limit (WAL):** Not determined.
- **Absolute Allowable Limit (AAL):** Not determined.
- **Temporary Allowable Limit (TAL):** Not determined.
- **Odoric threshold:** Not determined.
- **Biological standards:** 3-phenoxybenzoic acid
- **Monitoring procedure:** Urine level of 3-phenoxybenzoic acid

Personal protection items:

- **Respiratory protection:** Mask with organic vapor filter and N95 pre-filter.
- **Hand protection:** Neoprene gloves, latex.
- **Eye protection:** Goggles.
- **Skin and body protection:** Full Tyvek suit with hood.

Engineering measures:

Control the personnel and protection using the product. Restrict access to open containers. Waste disposal.

9.- Physical and chemical properties

- **Physical state:** Liquid
- **How it is presented:** Emulsifiable concentrate
- **Colour:** Yellow
- **Odor:** Solvent.
- **pH:** 6.0 - 7.0 (sol. Ac. 5%)
- **Melting point / freezing point:** Not available.
- **Boiling point, initial boiling point and boiling range:** Not available.
- **Flammability limits (LEL and UEL):** Not available.
- **Explosive limit:** Not explosive.
- **Vapor pressure:** Not available.
- **Vapor density:** Not applicable.
- **Density:** 0,943 g/mL
- **Solubility (ies):** Not available.
- **Partition coefficient n-octanol / water:** Not available.

- Autoignition temperature: Not available.
- Decomposition temperature: Not available.
- Odor threshold: Not available.
- Evaporation rate: Not available.
- Inflammability: Flammable.
- Viscosity: Not available.

10.- Stability and reactivity

- Chemical stability: Stable under normal conditions for two years.
- Dangerous reactions: Not applicable.
- Conditions to avoid: Reactive or highly unstable substances.
- Incompatible materials: Incompatible with oxidizing or reducing agents whose pH is greater than 9 or less than 4.
- Hazardous decomposition products: Not applicable metabolites are biologically inactive.

11.- Toxicological information

- Acute Oral Toxicity: LD 50 rats: > 1276 mg/kg
- Acute Dermal Toxicity: LD 50 rats: > 4000 mg/kg
- Acute Inhalation Toxicity: LC 50 rats: > 2 mg/L (4 hours)
- Skin irritation / corrosion: Not irritating
- Serious eye damage / eye irritation: Not irritating
- Respiratory or skin sensitization: It is not a skin sensitizer
- Reproductive Cell Mutagenicity: The active ingredients are not mutagenic.
- Carcinogenicity: The active ingredients are not carcinogenic.
- Reproductive toxicity: The active ingredients are not teratogenic.
- Specific particular organ toxicity - single exposure: Not available
- Specific Particular Organ Toxicity - Repeated Exposures: Not available
- Inhalation Hazard: Irritant to the respiratory tract.
- Related symptoms: Epigastric discomfort

12.- Ecological information

- Ecotoxicity: Birds: LD50 > 2000 mg/kg
Algae: LC50 > 9,2 mg/L (72 h)
Daphnias: LC50 >100 mg/L (48 h)
Earthworms: Not available
Fish: LC50 > 4,7 mg/L (96 h)
Bees: 0,57 ug/bee LD50 (48 h)
- Persistence and degradability: It degrades rapidly in soil and water by hydrolytic, photolytic and microbial action. DT50 in soils 4 to 12 weeks.
- Bioaccumulative potential: High potential.
- Mobility in soil: Low mobility in soils

13.- Information on final disposal

- Waste:

Incineration in Standard type ovens at a temperature of over 1100°C, 2 "residence. Combustion and destruction efficiency: 99.9%

- Contaminated container and packaging:

Carry out triple washing of the containers, render them useless and send them to authorized collection centers for chipping and subsequent transfer to landfill or recycling. Confine the containers in clearly identified places, until the authority defines the final destination.

- Contaminated material:

Collect in clearly identified containers, finally transfer to an authorized deposit for this type of substances, for later disposal in accordance with the provisions of the competent authority.

14.- Transport information

	Mode of transport		
	LAND	MARITIME	AIR
Regulations	RID/ADR	IMDG	IATA
UN number	3351	3351	3351
Proper shipping name	Pyrethroid pesticide, liquid, toxic, flammable.	Pyrethroid pesticide, liquid, toxic, flammable.	Pyrethroid pesticide, liquid, toxic, flammable.
UN primary hazard classification	6.1	6.1	6.1
UN secondary hazard classification	3	3	3
Packing group / container	III	III	III
Environmental hazards	Toxic to fish and aquatic organisms.	Toxic to fish and aquatic organisms.	Toxic to fish and aquatic organisms.
Special precautions	GRE Guide 131	GRE Guide 131	GRE Guide 131

- Transport in bulk according to MARPOL 73/78, Annex II, and IBC Code:

Not applicable

15.- Regulatory information

- National regulations:

D.S. 594 (Regulation on sanitary and environmental conditions in the workplace)

D.S. 298 (Transportation of dangerous cargo on streets and roads)

D.S. 148 (Health Regulations on hazardous waste management)

D.S. 43 (Storage of dangerous substances)

Exempt Res. 408 of the year 2016 (Approves list of substances dangerous to health)

Exempt Res. 2195 of the year 2000 (Requirements that must be met by the labels of the agricultural pesticide containers)

Exempt Res. 2196 of the year 2000 (Toxicological classification of agricultural pesticides)

ANASAC ZERO 5 EC



- International regulations: RID, IATA, IMDG.
The recipient should verify the possible existence of local regulations applicable to the chemical.

16.- Other information

- Change control: Update to NCh 2245 year 2015
- Abbreviations and acronyms: LD50: Lethal Dose 50.
LC50: Lethal concentration 50.
EC50: Effective concentration 50.
NOEC: No Observed Effect Concentration.
- References: Company studies.
- Validity: 3 years from the update date
It is necessary to have specific training for the handling of the chemical product.