

Safety Data Sheet

Issue Date : April 10, 2020

Revision Date :

Version No. : 1

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

1.1. Product identifier

Name of product: **Pyridaben 10 SC**
Other names: Pyridaben 100 g/L SC, NC-129 10 SC, SANMITE 10 SC, NEXTER 10 SC, POSEIDON 10 SC, CAREX 10 SC
Code name: NC-129-10SC-06
Type of formulation: Suspension Concentrate (SC)

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

Function: Plant protection product, insecticide/acaricide

1.3. Details of the supplier of the safety data sheet

Nissan Chemical Corporation
5-1, Nihonbashi 2-chome, Chuo-ku, Tokyo 103-6119, Japan
Contact person: Mr. Masanori Kai
Phone: +81-(0)-3-4463-8310, Fax: +81-(0)-3-4463-8331

1.4. Emergency telephone number

Nissan Chemical Corporation: +81-(0)-3-4463-8331 (available only during office hours)

2. HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 [CLP]

Acute Tox.4, H302, H332
Aquatic Acute. 1, H400
Aquatic Chronic. 1, H410

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard Pictogram:



Signal Word:

Warning

Hazard Statement:

H302: Harmful if swallowed
H332: Harmful if inhaled
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statement:

P261: Avoid breathing spray
P264: Wash hands thoroughly after handling
P273: Avoid release to the environment
P312: Call a POISON CENTER or doctor/physician if you feel unwell
P391: Collect spillage

2.3. Other hazards

The product will be regarded to be neither PBT nor vPvB.

3. COMPOSITION/INFORMATION OF INGREDIENTS

Substance or mixture: Mixture

Chemical Composition:

Pyridaben 10.0 % w/v
Other inert ingredients 90.0 % w/v

Active Ingredient

Common Name: Pyridaben
Code No.: NC-129
CAS No.: 96489-71-3
Chemical Name (CA): 4-chloro-2-(1,1-dimethylethyl)-5-[[[4-(1,1-dimethylethyl)phenyl]methyl]thio]-3(2*H*)-pyridazinone
Chemical Name (IUPAC): 2-*tert*-butyl-5-(4-*tert*-butylbenzylthio)-4-chloropyridazin-3(2*H*)-one

Classification in accordance with Regulation (EC) No 1272/2008:
Acute Tox.3, Aquatic Acute 1., Aquatic Chronic 1.
H301, H331, H400, H410

REACH registration No.: Not assigned
EINECS or ELINCS No.: EC No. 405-700-3

4. FIRST AID MEASURES**4.1. Description of first aid measures**

Eye contact : Immediately rinse with running water for at least 15 minutes. Seek medical advice.
Skin contact : Remove all contaminated clothing, shoes and socks from the affected area. Wash material off the skin in flowing water or shower with soap. If irritation persists, consult a physician immediately.
Inhalation : If respiratory discomfort occurs, move the person to fresh air. If not breathing, give mouth-to-mouth resuscitation (or an artificial respiration). Keep warm with blanket and keep at rest. Seek emergency medical advice.
Ingestion : Do not induce vomiting. Wash out mouth with water. Do not give anything by mouth if person is unconscious. Seek emergency medical advice.

4.2. Most important symptoms and effects, both acute and delayed

No symptoms have been identified in humans to date.

4.3. Indication of any immediate medical attention and special treatment needed

Treat based on judgment by physician in response to symptoms of patient. No specific antidotes are known.

5. FIREFIGHTING MEASURES**5.1. Extinguishing media**

Suitable extinguishing media : Water, foam, dry chemicals or carbon dioxide.

Extinguishing media which shall not be used for safety reasons : High volume water jet.

5.2. Special hazards arising from the substance or mixture

Carbon dioxide, carbon monoxide, hydrogen chloride and oxides of nitrogen and sulfur are potential thermal decomposed products.

5.3. Advice for firefighters

In the event of fire and/or explosion do not breathe fumes. Use self-contained breathing apparatus and protective clothing.
Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing, shoes, gloves and goggles. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.

6.2. Environmental precautions

Keep unauthorized persons, children and animals away from the affected area. Prevent spillage from entering the drainage systems or watercourses.

6.3. Methods and material for containment and cleaning up

Carefully sweep up and collect the spilled material using an inert absorbent material (sand, vermiculite, or sawdust) and place in a closed container (drum) for disposal. Remove (large quantities) with vacuum truck. Do not raise dust. Wash affected area with water containing detergent.

6.4. Reference to other sections

See section 8 for personnel protective equipment.
See section 13 for waste disposal.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

No specific precautions required when handling unopened packs/containers. Avoid contact with skin or eyes. Protect containers against physical damage. Wear suitable protective clothing, shoes, gloves and goggle during handling. Do not eat, drink, or smoke during when using this product (P270). Prevent spillage from entering the drainage systems or watercourses.

7.2. Conditions for safe storage, including any incompatibilities

Keep tightly closed in original labeled container. Store in a cool and dry place and protect from direct sunlight. Keep away from the reach of children. Keep away from foods, drinks and animal feeding stuffs.

7.3. Specific end use(s)

Use this product only for plant protection.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values (DNEL, PNEC) : Not established.

8.2. Exposure controls

Exposure controls

Occupational exposure controls

- | | | |
|------------------------|---|--|
| Respiratory protection | : | Particle filter with medium efficiency for solid and liquid particles. |
| Hand protection | : | Chemical resistant gloves, Rubber gloves. |
| Eye protection | : | Safety glasses or goggles |
| Skin protection | : | Impervious clothing such as gloves, apron or PVC boots |

Environmental exposure controls : Prevent spillage from entering the drainage systems or watercourses.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Appearance	: Pale grey/brown liquid.
Odour	: Slight vanilla odour.
pH	: 8.0 (1% w/v suspension)
Melting point/melting range	: Not applicable since the product is liquid at ambient temperature.
Boiling point/boiling range	: Not available.
Flash point	: None below 400°C.
Evaporation rate	: Not available.
Flammability	: Not applicable since the product is liquid at ambient temperature.
Vapor pressure	: $< 1 \times 10^{-5}$ Pa at 52.7°C (pyridaben)
Vapor density	: Not available.
Density	: 1.031 at 20°C.
Solubility	: Dispersible in water.
Partition coefficient	: log Pow (n-octanol/water) = 6.37 at 23°C (pyridaben)
Auto-ignition temperature	: No self-ignition temperature below 400°C.
Decomposition temperature	: Not available.
Viscosity	: 40 to 920 mPa.s at 20°C. 40 to 860 mPa.s at 40°C.
Explosive properties	: Not explosive.
Oxidising properties	: Not oxidising.

9.2. Other information

No other information is available.

10. STABILITY AND REACTIVITY**10.1. Reactivity**

May react with strong bases, acids or strong oxidizing agents, such as chlorates, nitrates, peroxides.

10.2. Chemical stability

Stable under normal ambient storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions will not occur.

10.4. Conditions to avoid

Avoid high temperatures. Protect from sunlight, open flame, sources of heat and humidity.

10.5. Incompatible materials

May react with strong bases, acids or strong oxidizing agents, such as chlorates, nitrates, peroxides.

10.6. Hazardous decomposition products

None hazardous decomposition products under normal conditions of storage and use. Thermal decomposition products include carbon monoxide, sulfur oxides and halogenated compounds.

11. TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Product**

Acute oral toxicity	: LD ₅₀ (rats)	300 - 2000 mg/kg
Acute dermal toxicity	: LD ₅₀ (rats)	>2,000 mg/kg
Acute inhalation toxicity	: LC ₅₀ (rats)	>3.1/1.6 mg/L (M/F) (4 hrs.)
Eye irritation	: (rabbit)	Not irritating
Skin irritation	: (rabbit)	Mildly irritating (H315 is not required)
Sensitization	: (guinea pig)	Not sensitizing

11. TOXICOLOGICAL INFORMATION (continued)**The followings are data of the active ingredient, pyridaben**

Toxicokinetics, metabolism and distribution	:	Widely distributed in all tissues, but no potential for accumulation. Extensively metabolized and none accounted for >5% of the dose.
Short-term oral toxicity (90 days)	:	NOEL (rats, M/F) 2.30/2.64 mg/kg/day
Short-term oral toxicity (1 year)	:	NOEL (dogs) 1.0 mg/kg/day
Short-term dermal toxicity (21 days)	:	NOEL (rats) 100 mg/kg/day
Chronic (1.5 years)	:	NOEL (mice) 0.81/0.91 mg/kg/day
Carcinogenicity (2 years)	:	NOEL (rats, M/F) 1.1/1.5 mg/kg/day. Not carcinogenic.
Reproductive toxicity	:	NOEL (rats) 2.02 mg/kg/day (Two-generation study) No effects on reproduction.
Developmental toxicity	:	NOEL (rats) 13 mg/kg/day. Not teratogenic.
Mutagenicity	:	Not mutagenic (Negative in <i>in vitro</i> & <i>in vivo</i> studies)

12. ECOLOGICAL INFORMATION**12.1. Toxicity****Product**

Toxicity to fish	:	LC ₅₀ (96h, Rainbow trout)	30.3 µg/L
Toxicity to Daphnia	:	EC ₅₀ (48h, <i>Daphnia magna</i>)	8.58 µg/L
Toxicity to algae	:	EC ₅₀ (72h, <i>P. subcapitata</i>)	>100 mg/L
Toxicity to bees	:	LC ₅₀ (Oral, 48h/Contact, 72h, <i>Apis mellifera</i>)	13.48/13.09 µg/bee

The followings are data of the active ingredient, pyridaben

Toxicity to algae	:	EC ₅₀ (96h, <i>S. capricornutum</i>)	> 1 mg/L
Toxicity to earthworm	:	LC ₅₀ (14days, <i>Eisenia foetida</i>)	38 ppm (mg/kg dry soil)
Toxicity to bird	:	LD ₅₀ (Bobwhite quail/Mallard duck)	>2,250/>2,500mg/kg
Soil micro-organism	:	No unacceptable effect at 6 kg/ha.	
Sewage treatment	:	No inhibitory effect.	

12.2. Persistence and degradability**Product**

No information is available for the product.

The followings are data of the active ingredient, pyridaben

Pyridaben is hydrolytically stable in water, but is readily degraded under the light condition.

Hydrolysis (20°C)	:	Stable for 30 days at 25°C (pH 5, 7 and 9)
Aqueous photolysis (25°C)	:	DT ₅₀ 5.3 minutes at 25°C (pH 7, xenon arc lamp)
Degradation in soil (field)	:	DT ₅₀ 4-146 days
Ready biodegradability	:	Not readily biodegradable

12.3. Bioaccumulative potential**Product**

No information is available for the product.

The followings are data of the active ingredient, pyridaben

The potential of the active ingredient to accumulate in biota and pass through the food chain is considered to be low based on the degradability of the substance and the value of BCF.

Partition coefficient (n-octanol/water)	:	log Pow	6.37
Bioconcentration	:	BCF (Rainbow trout)	342-439

12.4. Mobility in soil**Product**

No information is available for the product.

12. ECOLOGICAL INFORMATION (continued)**The followings are data of the active ingredient, pyridaben**

Pyridaben is considered not to leach into ground water.

Adsorption/desorption : Pyridaben $K_{f\text{abs}_{oc}}$: 34900-2150000 (immobile class)

12.5. Results of PBT and vPvB assessment**Product**

No information is available for the product, but it will be regarded to be neither PBT nor vPvB based on the data of active ingredient.

The followings are data of the active ingredient, pyridaben

Based on the values of DT_{50} in soil and BCF of the active ingredient, it is considered to be neither PBT nor vPvB.

12.6. Other adverse effects

Not available.

13. DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Do not contaminate water, foodstuffs, feed or seed by disposal. Dispose of contents/container in accordance with all applicable regulations (P501).

PRODUCT DISPOSAL

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or burned in incinerator in accordance with all applicable regulations.

CONTAINER DISPOSAL

Completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Do not reuse container. Triple rinse container, then puncture and dispose of by incineration in accordance with all applicable regulations.

14. TRANSPORT INFORMATION**14.1. UN number**

3082

14.2. UN proper shipping name

Environmentally hazardous substance, liquid, n.o.s. (pyridaben)

14.3. Transport hazard class(es)

Class 9

14.4. Packing group

Packing Group III

14.5. Environmental hazards

Marine Pollutant Label : Marine Pollutant

14.6. Special precautions for user

No special precautions available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No bulk transportation intended.

14. TRANSPORT INFORMATION (continued)**14.8. Supplemental information****IMDG**

UN No. : 3082
 Class : 9
 Packing Group : III
 Ems : F-A, S-F
 Hazard Label : Miscellaneous
 Marine Pollutant Label : Marine Pollutant
 Proper Shipping Name : Environmentally hazardous substance, liquid, n.o.s. (Pyridaben)

ICAO/IATA

UN No. : 3082
 Class : 9
 Packing Group : III
 Proper Shipping Name : Environmentally hazardous substance, liquid, n.o.s. (Pyridaben)

ADR/RID

UN No. : 3082
 Class : 9
 Packing Group : III
 Proper Shipping Name : Environmentally hazardous substance, liquid, n.o.s. (Pyridaben)

ADN/ADNR

UN No. : 3082
 Class : 9
 Packing Group : III
 Proper Shipping Name : Environmentally hazardous substance, liquid, n.o.s. (Pyridaben)

15. REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU**

The product is regulated under the EU Directive(s) or Regulation(s) on plant protection products since it is one of plant protection products.

JAPAN

The product for use of pesticides is controlled under Agricultural Chemicals Regulation Law.
 Not classified under Poisonous and Deleterious Substances Control Law.

Further Information

WHO Classification: III (Slightly hazardous)

15.2. Chemical safety assessment

The chemical safety assessment has not been carried out for this product yet.

16. OTHER INFORMATION**16.1 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 [CLP]**

Classification according to Regulation (EC) No 1272/2008 [CLP]	Classification procedure
Acute Tox. 4, H302	On basis of test data
Acute Tox. 4, H332	On basis of test data
Aquatic Acute. 1, H400	On basis of test data
Aquatic Chronic. 1, H410	On basis of test data

16. OTHER INFORMATION (continued)**16.2 relevant H-statements (see Sec 2 and 3)**

Hazard Statement: H301: Toxic if swallowed
 H302: Harmful if swallowed
 H331: Toxic if inhaled
 H332: Harmful if inhaled
 H400: Very toxic to aquatic life
 H410: Very toxic to aquatic life with long lasting effects

Version	Changes	Date
Version 1	First version	April 10, 2020

This Safety Data Sheet is prepared in accordance with **Commission Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006 and Globally Harmonized System of Classification and Labeling of Chemicals (GHS), 7th revised edition**.

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