# SAFETY DATA SHEET

**According to Regulation (EC) Nº 1907/2006 (REACH); 453/2010/EC**

## 1. Substance/preparation and company name

**Trade Name** Blue Sun -28ºC
**BDR Codes** 7862964 / 7862965 / 7862966

**Typical Applications** Coolant – Antifreeze, Heat Transfer Fluid.

**Company** Sucesores de Carmelo Pérez Martínez
Calle Titanio 15, Pol. PTR
50.720 La Cartuja Baja, Zaragoza (Spain)
Phone: +34 976 42 18 50
e-mail: carpemar@carpemar.com

| | | |
|---|---|---|
| **Emergency phone no. 24h** | SPAIN | +34 91 562 04 20 |
| INFOTRAC | ITALY | +39 800 761 621 |
| | FRANCE | 0 805 08 90 17 |
| | GERMANY | 0800 1812924 |

---

## 2. Hazard identification

*2.1. Classification of the substance or mixture*
No particular hazards known.

Classification according to Regulation (EC) No. 1272/2008 [CLP]:
The product is not subject to classification

*2.2. Label elements*
Label according to Regulation (CE)N° 1272/2008 [CLP]:
The product is not subject to labeling

---

## 3. Composition/Information on ingredients

Propylene Glycol with corrosion inhibitors.

| **Chemical name** | **CAS-No** | **CEE number** | **%** |
|---|---|---|---|
| 1,2-Propanediol | 57-55-6 | 200-338-0 | 45 |

---

## 4. First aid measures

| | |
|---|---|
| **General advice** | Remove contaminated clothing. |
| **On contact with eyes** | Wash affected eyes for at least 15 minutes under running water with eyelids held open. |
| **On skin contact** | Wash thoroughly with soap and water. |
| **If inhaled** | If difficulties occur after vapour/aerosol has been inhaled remove to fresh air and seek medical attention. |
| **On Ingestion** | Rinse mouth and then drink water (two glasses at the most). Consult doctor if feeling unwell. |
| **Note to physician** | Symptomatic treatment (decontamination, vital functions), no known specific antidote. |

---

## 5. Fire fighting measures

| | |
|---|---|
| **Suitable extinguishing media:** | Water spray, alcohol resistant foam, dry extinguishers, carbon dioxide ($CO_2$) |
| **Specific hazards** | Evolution of fumes/fog. The substances/group of substances mentioned can be released in case of fire.<br>Vapours heavier than air. |
| **Special protective equipment** | In case of fire, wear a self contained breathing apparatus. |
| **Further Information** | The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed according to official regulations. |

---

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions:** | Use personal protective clothing.<br>Do not inhale vapors/aerosol. |
| **Environmental precautions:** | Do not discharge into drains, surface waters, ground water. |
| **Methods for cleaning up/taking up:** | Large amount: Pump off products. |

Residues/spills: Bind the liquid by using a suitable absorbent material and dispose it according to the regulations.

---

## 7. Handling and storage

**Handling** Ensure thorough ventilation of stores and working areas.

**Protection against fire and explosion**. Take precautionary measures against static discharges. If exposed to fire, keep containers cool by spraying with water.

**Storage** Product is hygroscopic. Containers should be stored tightly sealed in dry place. Since zinc is not compatible with propylene glycol, storage in galvanized containers is not recommended.

---

## 8. Exposure controls and personal protection

**General safety and hygiene measures:** Wash hands and forearms after handling. Do not smoke, eat or drink during manipulations.

**Personal protective equipment:**

**Respiratory protection:** Only in case of release of fumes/fog. Well ventilated areas are recommended for manipulation.
Required when vapors/aerosols are generated. Filter A-(P2)

**Hands:** Chemical resistant protective gloves are recommended.

**Eyes:** Safety glasses with side-shields.

**DNEL (Workers):**

| *Substance* | | *Acute* | | *Long Term* | |
|---|---|---|---|---|---|
| | | Systemic | Local | Systemic | Local |
| 1,2 Propanediol | Ingestion | Not relevant | Not relevant | Not relevant | Not relevant |
| CAS 57-55-6 | Skin Contact | Not relevant | Not relevant | Not relevant | Not relevant |
| CE: 200-338-0 | Inhalation | Not relevant | Not relevant | 186 mg/m$^3$ | 10 mg/m$^3$ |

**DNEL (Consumers):**

| *Substance* | *Acute* | *Long Term* |
|---|---|---|

| | | Systemic | Local | Systemic | Local |
|---|---|---|---|---|---|
| 1,2 Propanediol | Ingestion | Not relevant | Not relevant | Not relevant | Not relevant |
| CAS 57-55-6 | Skin Contact | Not relevant | Not relevant | Not relevant | Not relevant |
| CE: 200-338-0 | Inhalation | Not relevant | Not relevant | 50 mg/m$^3$ | 10 mg/m$^3$ |

**PNEC Values**

| *Substance* | *Fresh Water* | *Sea Water* | *Water (Intermittent Releases)* | *Fresh Water Sediment* | *Sea Sediment* | *Soil* | *Sewage Treatment Plant* |
|---|---|---|---|---|---|---|---|
| 1,2 Propanediol | 260 mg/l | 26 mg/l | 183 mg/l | 572 mg/Kg dry | 57,2 mg/Kg dry | 50 mg/Kg dry | 20.000 mg/l |

---

## 9. Physical and Chemical properties

| | |
|---|---|
| **Physical state** | Liquid |
| **Color** | Fluorescent pink |
| **Odour** | Weak, characteristic. |
| **pH** | 8,0-9,0 |
| **Boiling point/range** | aprox.104ºC |
| **Solidification temperature** | -30ºC |
| **Vapour pressure at 20ºC** | 0.1 mbar a 20ºC |
| **Flash point** | >100ºC |
| **Lower explosion limit** | 2,6% V/V |
| **Upper explosion limit** | 12,6% V/V |
| **Ignition temperature** | >200ºC |
| **Density** | 1.03-1.04 g/cc at 20ºC |
| **Solubility in water** | Unlimited. |
| **Solubility in other solvents** | Soluble in polar solvents. |

---

## 10. Stability and reactivity

| | |
|---|---|
| **Hazardous reactions** | No hazardous reactions if stored and handle as prescribed. |
| **Substances to avoid** | Powerful oxidizing agents and strong acids. |
| **Hazardous decomposition products** | No hazardous decomposition products if stored and handle as prescribed. |

---

## 11. Toxicological data

***1,2 Propanediol data:***

**Acute Toxicity:**

| *Exposure* | *Parameter* | *Test* | *Value* | *Exposure time* | *Specie* | *Value* |
|---|---|---|---|---|---|---|
| Ingestion | DL50 | OCDE 401 | 22.000 mg/Kg | - | Rat | Experimental |
| Skin Contact | DL50 | OCDE 402 | >2000 mg/Kg. | 24 h | Rabbit | Experimental |
| Inhalation | CL50 | OCDE 403 | 317042 mg/l | 2 h | Rabbit | Experimental |

**Conclusion:**

Acute Oral toxicity: Low
Acute Dermal toxicity: Low
Acute Inhalation toxicity: Low

**Corrosion o irritation:**

| *Exposure* | *Result* | *Test* | *Exposure time* | *Specie* | *Value* |
|---|---|---|---|---|---|
| Ingestion | No irritating | OCDE 405 | 24, 48, 72 h | Rabbit | Experimental |
| Skin Contact | No irritating | OCDE 404 | 24, 48, 72 h | Rabbit | Experimental |
| Skin Contact | Slightly irritating | Patch | 24 h | Human | Experimental |

**Conclusion:**

Not classified as irritating to the skin.
Not classified as irritating to eyes.

**Respiratory or Skin sensitization:**

| *Exposure* | *Result* | *Test* | *Exposure time* | *Specie* | *Value* |
|---|---|---|---|---|---|
| Skin Contact | not sensitizing | OCDE 429 | | Rat | Experimental |
| Skin Contact | not sensitizing | Patch | 24 h | Human | Experimental |
| Inhalation | No relevant | | | | |

**Conclusion:**

No skin sensitizer.
Not available data for respiratory sensitization.

## Specific Target Organ Toxicity.

| Exposure | Test | Value | Effect | Exposure time | Specie | Value |
|---|---|---|---|---|---|---|
| Ingestion | OCDE 429 | 1700 mg/Kg day | No effect | >102 weeks(daily, 5 days/week) | Rat | Experimental |
| Skin Contact | Patch | 0,02 ml (twice a week) | No effect | 10 weeks (daily, 5 days/week) | Mouse | Experimental |
| Inhalation | LOAEC | 160 mg/m$^3$ | No effect | 90 days | Rat | Experimental |

## Conclusion:

Subchronic dermal toxicity: Low.
Subchronic oral toxicity: Low
Subchronic inhalation toxicity: Low

## Germ cell mutagenicity (in vitro)

| Result | Test | Test substrate | Effect | Value |
|---|---|---|---|---|
| Negative | Others | Bacteria (S.typhimurium) | | Experimental |
| Negative | OCDE 473 | Human lymphocytes | | Experimental |

## Carcinogenicity

| Exposure | Test | Value | Exposure time | Specie | Valor | Effect |
|---|---|---|---|---|---|---|
| Inhalation | NOAEC | >350 mg/m$^3$ air | 18 months | Rat | Experimental | No effect |
| Skin Contact | NOAEL | 0,02 ml (twice per week) | | Mouse | Experimental | No effect |
| Ingestion | NOAEL | 1700 mg/Kg. | 2 years | Rat | Experimental | No effect |
| Ingestion | NOAEL | 3040 mg/Kg. | 105 weeks | Rat | Experimental | No effect |
| Ingestion | NOAEL | 2390 mg/Kg.day | 105 weeks | Mouse | Experimental | No effect |

## Reproductive toxicity

| Study | Test | Valor | Exposure time | Specie | Effect |
|---|---|---|---|---|---|
| Effect on fertility | OCDE 416 | 10100 mg/Kg day | | Mouse | No Effect |
| Developmental Toxicity | OCDE 414 | 10400 mg/Kg day | 9 days | Mouse | No Effect |

**Conclusion CMR**

Not classified for carcinogenicity.
Not classified for mutagenic or genotoxic toxicity.
Not classified for reproductive toxicity or developmental toxicity.

---

## 12. Ecological data

***Data for 1,2 Propanediol***

**Toxicity**

| *Study* | *Parameter* | *Test* | *Value* | *Test Time* | *Specie* | *Environment* |
|---|---|---|---|---|---|---|
| Acute Toxicity fishes | CL50 | | 40613 mg/l | 96 h | Oncorhynchus Mykiss | Fresh Water |
| Acute Toxicity invertebrates | CL50 | EPA 600/4-90/027 | 18340 mg/l | 48 h | Ceriodaphnia Dubia | Fresh Water |
| Acute Toxicity invertebrates | CL50 | FIFRA 72-3 | 18800 mg/l | 96 h | Americamysis bahía | Sea Water |
| Threshold limit algae | CE50 | OCDE 201 | 19000 mg/l | 96 h | Pseudokirchenerielle a subcapita | Fresh Water |
| Threshold limit algae | CE50 | OCDE 201 | 19100 mg/l | 96 h | Skeletonema Costatum | Sea Water |
| Acute Toxicity fishes | ChV | ECOSAR | 2500 mg/l | 30 days | | Fresh Water |
| Acute Toxicity aquatic invertebrates | NOEC | EPA 600/4-89/001 | 13020 mg/l | 7 days | Ceriodaphnia Sp. | Fresh Water |
| Toxicity aquatic microorganisms | NOEC | | 20000 mg/l | 18 days | Pseudonomas Putida | Fresh Water |
| Toxicity sedimentary organisms | CL50 | | 69836 mg/Kg sediment | 10 days | Corophium volutator | Fresh Water |

**Conclusion**
Harmless to fish (CL50 (96h) > 1000 mg/l)
Not harmful to invertebrates (CE50 (48) >1000 mg/l)
Harmless to algae (CE50 (72h) >1000 mg/l)
Harmless to bacteria (CE50 >1000 mg/l)

**Persistence and degradability**

**Biodegradation in water:**

| *Test* | *Value* | *Test Duration* | *Value* |
|---|---|---|---|
| OCDE 301F | 81,7% | 28 days | Experimental |

Biodegradation in soil:

| *Test* | *Value* | *Duration* | *Value* |
|---|---|---|---|
| Others | 98% | 105 days | Experimental |

Phototransformation aire (DT50 water)

| *Test* | *Value* | *Conc. Radicals OH* | *Value* |
|---|---|---|---|
| AOPWIN v1.92 | 0,83 days | $1.5x10^6$ /$cm^3$ | QSAR |

Phototransformation water (DT50 water)

| *Test* | *Value* | *Conc. Radicals OH* | *Value* |
|---|---|---|---|
| Others | 2,3 years | $1.5x10^6$ /$cm^3$ | Calculate |

**Conclusion:**
Readily biodegradable in water
Biodegradable in soil under anaerobic conditions.
Photodegradation in water occurs slowly.

**Bioaccumulation potential**

Log Pow

| *Test* | *Value* | *Temperature* | *Value* |
|---|---|---|---|
| OCDE 107 | -1,07 | 20,5ºC | Experimental |

**Percentage distribution**

| *Test* | *Air Fraction* | *Biota Fraction* | *Sediment Fraction* | *Soil Fraction* | *Water Fraction* | *Value* |
|---|---|---|---|---|---|---|
| Level of Mackay III | 2,98% | | 0,07% | 48,1% | 48,8% | Calculate |

**Additional information** Do not release into natural waters.

## 13. Disposal considerations

**Contaminated packaging**
Uncontaminated packaging can be reused.
Containers that cannot be cleaned should be disposed of according to applicable legislation in the same way as the content.

**Waste code:**
Commission Decision of December 18, 2014 amending Decision 2000/532/EC, on the list of waste, in accordance with Directive 2008/98/EC of the European Parliament and of the Council:
**16 01 15** Antifreeze other than those specified in code 16 01 14*.

**Removal Methods:**
Do not discharge into surface water

**Container/Packaging:**
Commission Decision of December 18, 2014 amending Decision 2000/532/EC, on the list of waste, in accordance with Directive 2008/98/EC of the European Parliament and of the Council:
**15 01 02** plastic containers

**Disposal of contaminated packaging:**
Completely empty the containers
Dispose of at authorized waste collection point
Recommended cleaning method: cleaned by a recycling center or specialized company

---

## 14. Transport information

Not classified as hazardous under transport regulations.
(ADR / RID / ADNR / IMDG/GGVSee ICIAO/IATA)

---

## 15. Regulatory information

Regulations of the European Union (labeling) / National legislation / Regulations:

Hazard symbol
H-phrases:
P-phrases:

---

## 16. Further information

**Abbreviations and acronyms:**

***PNEC***: Predicted No Effect Concentration.

***Intermittent Release***: Intermittent but only recurring infrequently i.e. less than once per month and for no more than 24 hours.

This safety data sheet is intended to provide information and recommendations as to: 1. how to handle chemical substances and preparations in accordance with the essential requirements of safety precautions and physical, toxicological and ecological data. 2. How to handle, store, use and transport them safety.

No liability for damage occurred in connection with the use of this information or with the use, application, adaptation or processing the products here described will be accepted. No liability will be accepted for damage indirectly incurred.

We provide this information data according to our present level of knowledge and experience. No assurances concerning the characteristics of our product are hereby furnished.