

### Icaridin;Picaridin

**(The most efficient mosquito repellent to Zika Virus recognized by WHO)**

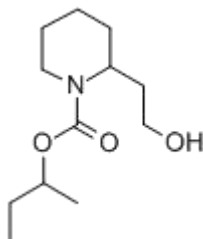
**Product:** Icaridin; Picaridin; Sec-Butyl 2-(2-hydroxyethyl) piperidine-1-carboxylate

**CAS No.:** 119515-38-7

**ELINCS number:** 423-210-8

**Molecular Formula:** C<sub>12</sub>H<sub>23</sub>NO<sub>3</sub>

**Constitutional Formula:**



#### Specifications:

Relative Molecular Mass: 229.3g/Mol

Form: liquid, clear

Solidifying point: < -170°C

Viscosity: 30.7 sec. flow time according to DIN53211

Initial boiling point: 296°C at 1013Hpa

Vapour pressure

3.4 × 10<sup>exp-4</sup>Hpa at 20°C

5.9 × 10<sup>exp-4</sup>Hpa at 25°C

7.1 × 10<sup>exp-3</sup>Hpa at 50°C

Irritation: Non-irritant

Color: Colorless-brownish

Odor: Nearly odourless

Density: 1.07g/cm<sup>3</sup> at 20°C

Solubility : In Water 8.6g/L at 20°C

In Acetone 7250g/L at 20°C

#### Characteristics:

- ◆ Repels against mosquitoes, flies, sandflies and other annoying and biting insects.
- ◆ Odourless.
- ◆ Cosmetics grade repellent with low irritant on skin.
- ◆ Non-greasy.
- ◆ Suitable for children.
- ◆ No harm to plastic, leather, textile etc.

#### Application:

Picaridin is recognized by WHO as the most efficient mosquito repellent. It is tested against mosquitoes, flies and ticks in both field studies and in laboratory cage tests. Against certain strains of mosquitoes, Picaridin provides equal or longer protection than identical concentrations of DEET. Efficacy against ticks has been demonstrated in laboratory cage tests.

The most important is that it is safe and non-toxic which can be directly used on infants and the pregnant. Picaridin has been successfully tested with dermatologist. It will not cause irritations on your skin and is nearly odorless. The affect of Picaridin on various materials was also tested and results showed that Picaridin has no adverse affect on plastics, synthetics, plastic coatings and sealants.

**Storage Conditions:** Store in a cool and dry place. Do not store in direct sunlight.

**Packing:** 25kg/drum;50kg/drum or packed as client's request.

### **Icaridin Insect Repellent Formula:**

Material:

99% Icaridin: 30.3g

Ethyl Alcohol: 120g

Pure water: 148g

Citric Acid: 0.5g

Flavor: 0.3g

Stir the above material in magnetic stirring beaker under room temperature to adjust 10% Icaridin Insects Repellent formula.

Adjust Icaridin quantity to make 5%, 15%, 20% insect repellent formula.

Icaridin (%)	5.03	10.02	15.03	20.02
Effective Mosquito Repellent Time(h)	2	6	8	10

### **Note:**

- 10% Icaridin Insect Repellent is effective for 6 hours which meets the daily life mosquito repellent demands.
- 20% Icaridin Insect Repellent is effective for 10 hours which meets the mosquito repellent demands for military soldier outdoor training.
- Adding some citric acid can decrease the volatilization and make longer effective period.
- Adding some flavor brings fresh and pleasant feeling.