



Picaridin (Saltidin®)

THE HIGHLY EFFICIENT ACTIVE INGREDIENT
FOR USE IN YOUR INSECT REPELLENT

saltigo
customized competence

*This document contains important information
and must be read in its entirety.*

A company of the
LANXESS
Group

THE PICARIDIN SALTIDIN®/ ADVANTAGE



Picaridin, sold elsewhere in the world as Saltidin® and icaridin, is an active ingredient for insect repellents that offers the perfect balance of efficacy, safety and user-friendliness for those who prefer a DEET-free formulation.

- Long-lasting effective protection against mosquitoes that may transmit West Nile and Zika viruses and ticks that may transmit Lyme disease
- Safe toxicology profile with low skin absorption
- Good solubility
- High stability, non-corrosive and non-hazardous
- Colorless and odorless
- Excellent and pleasant cosmetic properties
- Non-sticky, non-greasy, and does not significantly attack common household materials including plastics, synthetics, coatings, foils and varnishes. Tests were performed with: polycarbonate (PC), polyvinylchloride (PVC), low density polyethylene (LDPE), high density polyethylene (HDPE), polymethylmethacrylate (PMMA), polyethylene terephthalate (PET), polyester fiber, polyamide fiber, nail polish and car paint.

YOUR PRODUCT DEVELOPMENT PARTNER

Saltigo offers a broad range of guide formulations to facilitate product development:

EPA-Approved Formulations

- Saltidin® Spray 20%*
- All Family Insect Repellent Spray 20%
- All Family Insect Repellent Cream 20%

Global Formulations

- All Family Insect Repellent Spray Emulsion 20%
- Saltidin® Milk Waterproof 20%
- Saltidin® Spray Emulsion 15%
- Saltidin® Spray Emulsion 10%
- Saltidin® Clear Gel 15%
- Saltidin® Clear Gel 20%
- Saltidin® Combisun 15%**
- Saltidin® Aerosol 20% (oil/water/solvent based)
- Saltidin® Wax Sticks 20%
- Saltidin® Wipe 20%
- ICA 10 F Spray 10%

EFFECTIVE

Picaridin/Saltidin® provides long-lasting, 12-14 hour protection (depending on the formulation) from:

- Mosquitoes that may transmit West Nile Virus, Chikungunya, Dengue or Zika
- Ticks that carry Lyme disease and tick-borne encephalitis

Also repels for up to eight hours: Biting flies, Stable flies, Black flies, Gnats, Chiggers, Sand flies, cotton biting midges

SUSTAINABLY TESTED

The toxicological profile of Picaridin/Saltidin® has been extensively evaluated following a program of protocols developed in close cooperation with the U.S. Environmental Protection Agency (EPA). Dermal studies were conducted using Picaridin/Saltidin®-based products to the skin measuring dermal exposure. No adverse outcomes were identified in any studies in the program.

REGULATORY AFFAIRS

In the United States, insecticides are regulated by the U.S. EPA, which establishes strict standards for safety, effectiveness and product quality. Picaridin/Saltidin® was approved as a repellent active ingredient by the U.S. EPA in 2001.

Saltigo registered the 20% pump spray and 20% cream formulations in the U.S. in 2006. The formulation All Family Insect Repellent Spray (20%) is registered also in Canada (2012) and in China (2011).

Picaridin/Saltidin® is approved by the U.S. Environmental Protection Agency and the Canadian Pest Management Regulatory Agency and recommended by the following institutions:

- World Health Organization (USA)
- Center for Disease Control and Prevention (USA)
- European Centre for Disease Prevention and Control
- Consumer Organization "Stiftung Warentest" (Germany)
- Queensland Government Queensland Health (Australia)
- Swiss Tropical Institute (Switzerland)
- Advanced Pest Solutions at the University of Edinburgh's Biospace Incubator facility (Scotland)

* contains less fragrance to reduce allergy potential

** insect repellent with additional sunscreen protection

Saltidin® Mosquito Test:
Left hand - without Saltidin®
Right hand - with Saltidin®



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The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.

Health and Safety Information: Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling the LANXESS products mentioned in this publication. For materials mentioned which are not LANXESS products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be followed. Before working with any of these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., safety data sheets and product labels. Consult your LANXESS Corporation representative or contact the Product Safety and Regulatory Affairs Department at LANXESS.

Regulatory Compliance Information: Some of the end uses of the products described in this publication must comply with applicable regulations, such as the FDA, NSF, USDA, CPSC and BfR. If you have any questions on the regulatory status of these products, contact your LANXESS Corporation representative or Regulatory Affairs Manager at LANXESS.

Note: The information contained in this publication is current as of June, 2017. Please contact LANXESS Corporation to determine if this publication has been revised.

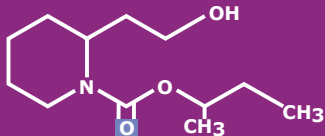
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PICARIDIN CHEMICAL AND PHYSICAL PROPERTIES

Structure	
Empirical Formulas	C ₁₂ H ₂₃ NO ₃
Chemical name	1-piperidinecarboxylic acid 2- (2-hydroxyethyl)- 1-methylpropylester
Commercial name	Saltidin®
Common name	Picaridin/Icaridin
Elincs number	423-210-8
CAS number	119515-38-7
Relative molecular mass	229.3 g/mole
Form	liquid/clear
Solidifying point	< -170°C
Viscosity	30.7 sec. flow time according to DIN 53211,129 mPa.s at 20°C
Boiling point	272°C at 1013 hPa
Vapor pressure	3.4 x 10 Exp-4 hPa at 20°C 5.9 x 10 Exp-4 hPa at 25°C 7.1 x 10 Exp-4 hPa at 50°C
Irritation	non-irritant
Color	colorless/brownish
Odor	almost no odor
Purity of technical product	min. 97%
Flashpoint	142°C
Density	1.036 g/cm ³ at 20°C
Solubility	in water: 8.6 g/l at 20°C, in acetone: > 250 g/l at 20°C, in n-hep- tane: > 250 g/l at 20°C, in propane-2-ol: > 250 g/l at 20°C, in xylene: > 250 g/l at 20°C
Storage conditions	store at room temperature