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SIMPSSN™ ODPABA

(INCI Name: **Ethylhexyl Dimethyl PABA**)

**Oil Soluble UVB Filter and Absorber Active
Ingredient for
Cosmetic and Pharmaceutical Topical
Formulations**

**Product Instruction Sheet
(PIS)**



SIMP GROUP

Shanghai SIMP Biotechnology Co., Ltd.

Web site: www.simpbiotech.com

E-mail: simpbiotech@simpbiotech.com

| | | |
|------------------------------|---|-----------------------------|
| Shanghai Headquarters | Tel: 86-21-5990 7606, 5990 7607 | Fax: 86-21-5990 7602 |
| Guangzhou Office | Tel: 86-20-6684 4588 | Fax: 86-20-6684 4588 |
| Beijing Office | Tel: 86-10-6447 5821, 6447 5822, 6447 5823 | Fax: 86-10-6447 5819 |

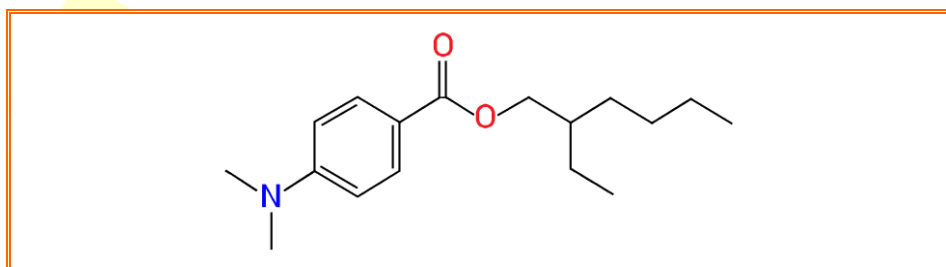
SIMPSSN™ ODPABA

Oil Soluble UV-B Filter and Absorber for Cosmetic and Pharmaceutical Topical Formulations

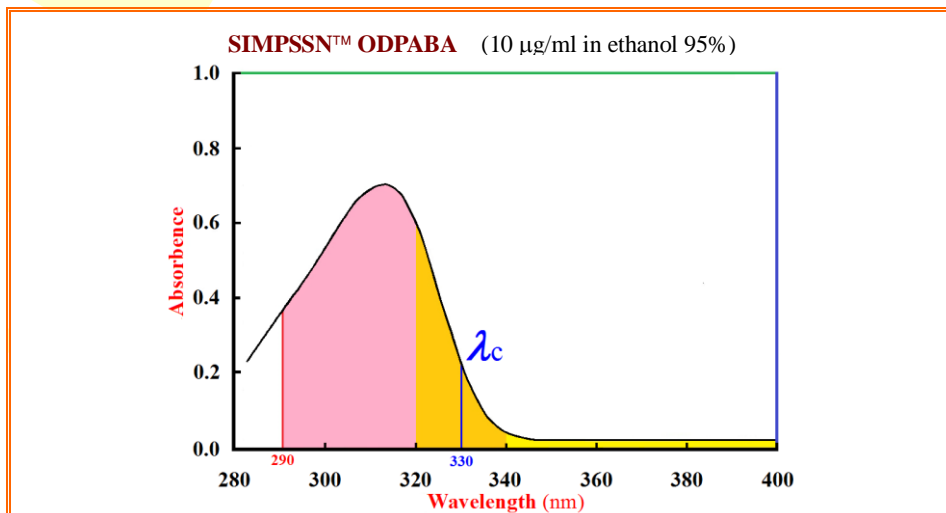
Product Information

| | | | |
|---------------------------|--|--------------------------|------------------|
| Product Name: | SIMPSSN™ ODPABA | | |
| INCI Name: | Ethylhexyl Dimethyl PABA | (EHPABA / ODPABA) | |
| USP Name: | Padimate O | | |
| Chemical name: | 2-Ethylhexyl 4-dimethylaminobenzoate; N,N-Dimethyl-4-aminobenzoic acid 2-ethylhexyl ester | | |
| Synonyms: | Octyl dimethylaminobenzoate; Octyl dimethyl PABA; ODAP; EHPABA; ODPABA. | | |
| CAS Name: | Benzoic acid, 4-(dimethylamino)-, 2-ethylhexyl ester | | |
| CAS No.: | 21245-02-3 | EINECS No: | 244-289-3 |
| Molecular formula: | C ₁₇ H ₂₇ NO ₂ | Molecular Weight: | MW =277.41 g/mol |

Structural formula:



UV Absorption spectrum:



Definition, Properties, Benefits and Applications

Description: **SIMPSSN™ ODPABA** is a powerful oil-soluble **UV-B** absorber. It is used in cosmetics as a sunscreen. Provides cost-effective performance. Excellent safety profile. U.S. and E.U. approved use level: up to 8.0%. Use level in combination with other sunscreen actives: 1.4 - 8.0%. Approval Status: Globally approved

EU-Functions: **UV FILTER**
(INCI) **UV ABSORBER** {Cosmetics - CosIng [EC Regulation (v.2)] 2017}.

Key Properties: Liquid **UV-B** filter, oil soluble, very good protection potential, excellent dissolving properties for solid organic **UV** filters.

Solubility: Insoluble in water.
Soluble in organic solvents and most of cosmetic oils.

Solubility of SIMPSSN™ ODPABA in different solvents at 20°C (% w/v)

| Solvent | Concentration |
|--------------------------------|------------------------|
| Water | (0.3 mg / l) insoluble |
| Acetone | > 50 |
| Methanol | > 50 |
| Methylmethacrylate | > 50 |
| 1,6-Hexanediol diacrylate | 30 |
| Tetra-methylpropanetriacrylate | 22 |
| N-Vinyl pyrrolidone | 30 |
| Ethanol | > 50 |
| Ethyl Acetate | > 50 |
| Toluene | > 50 |

Applications **SIMPSSN™ ODPABA** is an excellent **UV-B** absorber, insoluble in water. It is an excellent SPF booster widely used with other **UV** absorbers. **SIMPSSN™ ODPABA** is often found in sunscreen preparations having SPF factors greater than 35. However, **UV** filters are seldom used in isolation in a formulation but rather jointly in a harmonious and efficacious protection system covering the spectrum from **UV-B** to **UV-A**. **SIMPSSN™ ODPABA** and **SIMPSSN™ OMC** are the ideal choice for boosting and reaching higher **SPF** in conjunction with other popular **UV-AB** filters like **SIMPSSN™ BEMT**, **SIMPSSN™ MBBT-N**, **SIMPSSN™ BP-3** and **UV-A** filters like **SIMPSSN™ DHHB**, **SIMPSSN™ BMDM** etc.

Use level: (**National regulations have to be observed**) ≤ 8 %.
(W/W)

Generally concentration used: 2-7%

The concentration recommended is 3-6%.

As the Photostabilizer to protect the sensitive products in formulations:

0.05-0.5 %; generally: 0.1-0.3%

Toxicological Information

Toxicological Information:

The **SIMPSSN™ ODPABA** has been toxicologically assessed for its suitability in cosmetic preparations. On the basis of information at our disposal and provided that the recommended concentrations and fields of application are adhered to, there is no evidence of any toxicological risk associated with their use.

Acute toxicity:

LD₅₀ / oral/rat: ≥ 5000 mg/kg (BW)

LD₅₀ / demal/rat: ≥ 2000 mg/kg (BW)

Sensitization:

Primary skin irritation / rabbit / **SIMP** test: non-irritant

Primary mucous membrane irritation / rabbits' eyes / **SIMP** test: Slight -irritant

Safety:

Acute inhalation hazard (rat; test results depending on toxicity and volatility): **SIMPSSN™ ODPABA** can be safely handled without any irritation caused to the skin at recommended use level. Read and understand the **Material Safety Data Sheet (MSDS)** before using or handling this product.

Product Technical Information

Properties & Specification:

| | |
|--------------------------|---|
| Appearance: | Yellowish to greenish, viscous, (RT) transparent liquid, with weak characteristic odor. |
| Identity: | IR and UV spectrum conforms QB/USP |
| Assay: | ≥ 98.0 %, (GC/HPLC) |
| Density: | 0.950-1.100 g/cm ³ (25°C) |
| Boiling point: | ≥ 325 °C |
| Flash point: | 198 °C (Closed cup) |
| Moisture content: | ≤ 0.5 % (K. Fischer) |
| Heavy metals: | ≤ 10 ppm |
| Log POW: | 4.46 (Octanol / water partition coefficient) |

Note:

The properties and specification in detail also can be seen on **TDS** ('**Technical Data Sheet**') of **SIMPSSN™ ODPABA**. A '**Technical Data Sheet**' (**TDS**) of the product is available upon requirement.

“**Product Specification or Quality Standards**” — Please see the **COA** (Certificate Of Analysis) from the product **SIMPSSN™ ODPABA** of the **SIMP**, and / or **order on agreement!**

The Quality of the product **SIMPSSN™ ODPABA** meets the requirements from the **STSC** [**STSC** = 《Safety and Technical Standards for Cosmetics》 Version 2015, **China**] and / or **EU** and the like.

REGULATIONS

SIMPSSN™ ODPABA is approved world-wide. Concentration maximum varies according to local legislation.

Approval status:

Max. amounts: (W/W)

| EU | China | Australia | USA | Japan |
|--------|---------|-----------|-------------|---------|
| + (8%) | + (8 %) | + (8%) | + (1.4-8 %) | + (10%) |

+ = Approved as a sunscreen agent (with max. concentration) .

SIMPSSN™ ODPABA [INCI Name: Ethylhexyl Dimethyl PABA (EHDPA/ODPABA)] is approved for use in Europe by the European Union's Scientific Committee for Cosmetic Products & Non-Food Products. It is also approved in China, Canada by Health Canada, in Australia, Brazil, South Africa, the Asian states and other countries.

It is approved for use in the **USA** by the Food and Drug Administration. It's also permitted in **Japan**.

Other Information

| | |
|-----------------------------|--|
| Packaging: | Drums of net: 200kg/drum capacity. or order on agreement! |
| Storage: | Store in tightly-closed containers under normal conditions (RT). (protected from sunlight). Storage class (VCI): Flammable liquids if not storage class 3A or B. |
| Stability: | The minimum storage time for the SIMPSSN™ ODPABA in the original sealed containers is at least 2 years. |
| Shipping / Handling: | National legislation. No restrictions. See Material Safety Data Sheet (MSDS) |

Order Information

- A. Product Trade Name:** **SIMPSSN™ ODPABA**
- B. Package:** Net: 200kg /lacquer-lined drum.
or order on agreement!

TDS & MSDS

The 'Technical Data Sheet' (TDS) and 'Material Safety Data Sheet' (MSDS) of the product also is available on requirement.

Different reference formulations with SIMPSSN™ ODPABA are available and can be sent on request.

Remark

Although these data and information have been prepared with the utmost possible care, we reserve the right to make changes due to product improvement and other considerations.

Contact us and credit:

SIMP GROUP

Shanghai SIMP Biotechnology Co., Ltd.

General Editor: Z.M.Jiang / Dec. 2020

Address: Shang-xue Road 229 (Feng-mao Road 580), Jiading District, Shanghai 201 801, CHINA

Web Site: www.simpbiotech.com

E-mail: simpbiotech@simpbiotech.com

Tel.: ☎ 86-21-5990 7606, 5990 7607

Fax: ☎ 86-21-5990 7602

Guangzhou Office: ☎ 020-6684 4588

Beijing Office: ☎ 86-10-6447 5821, 6447 5822, 6447 5823

Advice:

The information and statements presented herein, while not guaranteed, were prepared by technical personnel and, to the best of our knowledge and belief, is true and accurate as of the date hereof.

Before using one of these products of SIMP GROUP COMPANIES, read, understand and comply with the information and precautions in the **Product Instruction Sheet (PIS)**, the **Technical Data Sheet (TDS)**, the **Material Safety Data Sheets (MSDS)**, label and other literature about the product. No warranty, representation or guarantee, express or implied, is made regarding accuracy, performance, stability, reliability or use. This information is not intended to be all-inclusive, because the manner and conditions of use, handing, storage and other factors may involve other or additional safety or performance considerations. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information, products or vendors referred to herein. **NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.** Nothing herein is to be taken as permission, inducement or recommendation to practice any patented invention without a license.

Note:

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According to
《Safety and Technical Standards for Cosmetics》(STSC) Version 2015, China.
And Regulation (EC) No. 1907/2006

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