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# SIMPSSN™ OSC

(INCI Name: **Ethylhexyl Salicylate**)

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

**Product Instruction Sheet  
(PIS)**



**SIMP GROUP**

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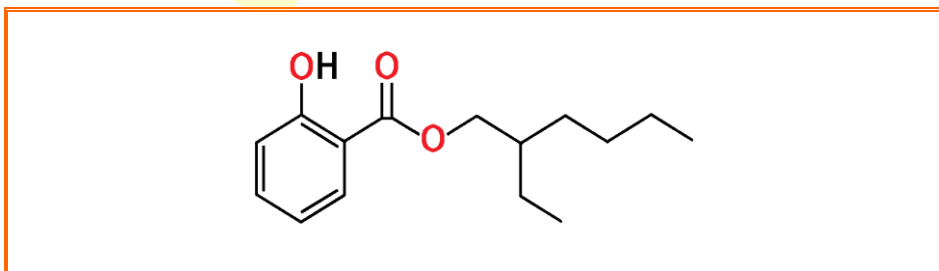
# SIMPSSN™ OSC

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

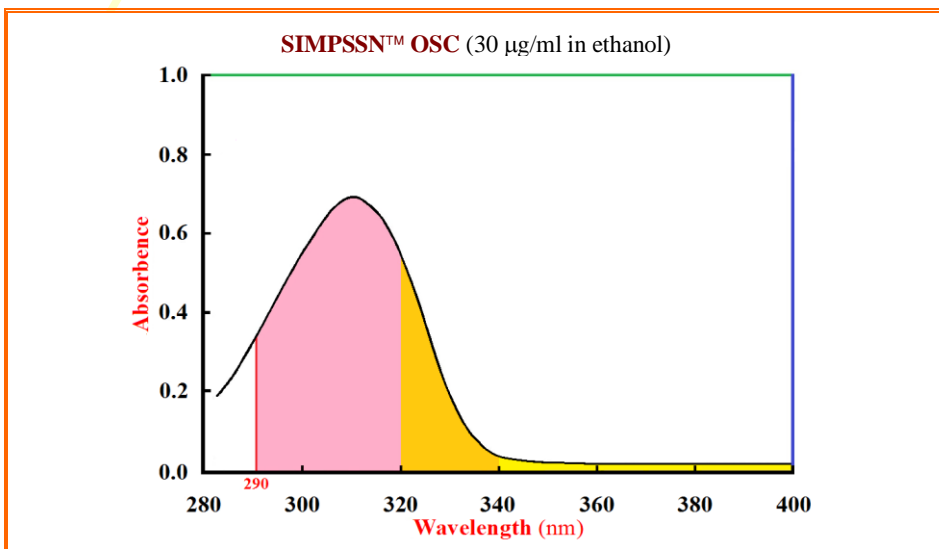
### Product Information

<b>Product Name:</b>	<b>SIMPSSN™ OSC</b>	
<b>INCI Name:</b>	Ethylhexyl Salicylate ( <b>EHSC/OSC</b> )	
<b>USP Name:</b>	Octisalate	
<b>Chemical name:</b>	2-Ethylhexyl salicylate	
<b>Synonyms:</b>	Octyl Salicylate, Salisate, 2-ETHYLHEXYL SALICYLATE * USAF DO-11 * WMO * OSC; EHSC	
<b>CAS Name:</b>	Benzoic acid, 2-hydroxy-, 2-ethylhexyl ester	
<b>CAS No:</b>	118-60-5	<b>EINECS No:</b> 204-263-4
<b>Formula:</b>	C <sub>15</sub> H <sub>22</sub> O <sub>3</sub>	<b>Molecular Weight:</b> MW =250.34 g/mol

**Structural formula:**



**UV Absorption spectrum:**



## Definition, Properties, Benefits and Applications

**Description:** **SIMPSSN™ OSC** (Ethylhexyl Salicylate; Octyl Salicylate) belongs to the category of classic **UV-B** filters, already used as early as in 1960's in USA. However the number of new products from around the world containing **SIMPSSN™ OSC** today is still increasing. It is a useful **UV** filter additive for cosmetics and sun care products.

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

**Key Properties:** **SIMPSSN™ OSC** is the liquid **UV-B** filter, oil soluble, very good protection potential, excellent dissolving properties for other solid organic **UV** filters. Moreover they are excellent solubilisers for non-soluble cosmetic ingredients such as **SIMPSSN™ BP-3**, **SIMPSSN™ BMDM**, or other **SIMPSSN™ UV filters**, so that the overall solvent load could be reduced.

**Solubility:** Soluble in organic solvents and cosmetic oils; Insoluble in water.

**Solubility of SIMPSSN™ OSC in different solvents at 20°C**

Solvent	Concentration
Water	0.5 mg/l
Ethanol	Miscible
Isopropanol	50%
Mineral Oil	50%
Octyl Dodecanol	50%
Peanut Oil	50%
Caprylic Capric Triglyceride	50%
Isopropyl Myristate	50%
Butyl Methoxy-dibenzoylmethane	20%
4-Methylbenzylidene Camphor	33%
Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine	20%
Ethylhexyl Triazone	4%
Diethylhexyl Butamido Triazone	4%

Note: These values are taken out of Technical Data Sheets or Material Safety Data Sheets.

**Very stable:** **SIMPSSN™ OSC** is very stable in all environment, polar or non polar because their active groups are hydrogenbonded intramolecularly. Their electrons are therefore less available for interaction with other ingredients in a formula or biological substrates on the skin.

**An extra boost to getting high SPF:** **SIMPSSN™ OSC** is an excellent **UV-B** absorber, insoluble in water. It is an excellent **SPF** booster widely used with other **UV** absorbers. **SIMPSSN™ OSC** 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™ OSC** and **SIMPSSN™ HMS** are the ideal choice for boosting and reaching higher **SPF** in conjunction with other popular **UV-A** filters like **SIMPSSN™ DHHB**, **SIMPSSN™ BMDM** and **UV-AB** filters like **SIMPSSN™ BP-3** and **SIMPSSN™ MBBT-N**.

**Added value for sunscreen formulations:**

An UV filter is often chosen if it has further desirable properties above UV protection. SIMPSSN™ OSC score well by contributing to the non-water solubility of sun care products and can also improve sensory profile by providing emolency to the formulations.

**Note:**

**Conditions to avoid:** Heat

**Materials to avoid:** Strong oxidizing agents

**Use level:**  
(W/W)

(National regulations have to be observed) ≤ 5 %

Generally concentration used: 2-4%

As the Photostabilizer to protect the sensitive products in formulations:

0.05-0.5 %; generally: 0.1-0.3%

**REGULATIONS:**

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

**Approval status:**

EU	China	Australia	USA	Japan
+ (5%)	+ (5%)	+ (5%)	+ (5 %)	+ (5-10%)

**Max. amounts:**  
(W/W)

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

SIMPSSN™ OSC [INCI Name: Ethylhexyl Salicylate (EHSC/OSC)] 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.

## Toxicological Information

**Toxicological Information:**

The SIMPSSN™ OSC 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**

LD<sub>50</sub> /oral / rat: ≥ 5000 mg/kg (BW)

LD<sub>50</sub> / dermal / rat: ≥ 5000 mg / kg (BW)

**Local effects:**

Eye: slightly irritant (rabbit)

**Skin:**

Practically non-irritating to rabbit skin (25% corn oil).

**Sensitization:**

Non- sensitizer to guinea pig skin.  
 Human RIPT: Non-irritating / Non-sensitizing (5% in mineral oil).

**Other Information:**

Phototoxicity: Nonphototoxic (5% in ethanol).

**Safety:**

**SIMPSSN™ OSC** can be safety handled without any irritation caused to the skin at recommended use level. Read and understand the **Material Safety Data Sheet (MSDS)** before using or handing this product.

**Product Technical Information**

**Properties & Specification:**

<b>Appearance:</b>	Transparent, colorless to yellow oily liquid with almost odorless or slight characteristic odor. (RT)	
<b>Identification:</b>	UV and IR.	conforms
<b>Assay:</b>	≥ 98.0	% [GC/HPLC]
<b>Density:</b>	1.010- 1.022	g/cm <sup>3</sup> (25°C)
<b>Refractive Index:</b>	1.495- 1.515	n <sup>20</sup> <sub>D</sub>
<b>Boiling point:</b>	≥ 189	°C (28 hPa)
<b>Flash point:</b>	≥ 140	°C
<b>pH value:</b>	6.0-7.0	(10 g/l in H <sub>2</sub> O, RT)
<b>Vapor pressure:</b>	< 1	hPa (25°C)
<b>Log POW:</b>	5.9 (Octanol / water partition coefficient)	

**Note:**

The properties and specification in detail also can be seen on **TDS** (‘**Technical Data Sheet**’) of **SIMPSSN™ OSC**. 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™ OSC** of the **SIMP**, and / or **order on agreement !**

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

## Other Information

<b>Packaging:</b>	Drums of net: 200kg / drum capacity. <i>or order on agreement !</i>
<b>Storage:</b>	Store in tightly-closed containers under normal conditions (RT).
<b>Stability:</b>	The minimum storage time for the <b>SIMPSSN™ OSC</b> in the original sealed containers is at least 2 years.
<b>Shipping / Handling:</b>	No restrictions. See <b>Material Safety Data Sheet (MSDS)</b> .

### Order Information

- |                               |  |
|-------------------------------|--|
| <b>A. Product Trade Name:</b> | <b>SIMPSSN™ OSC</b>  |
| <b>B. Package:</b>            | Net: 200kg lacquer-lined drum.<br><i>or order on agreement !</i> |

### 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™ OSC** 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.

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**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, handling, 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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