



SIMPSSN™ HMS

(INCI Name: **Homosalate**)

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

**Product Instruction Sheet
(PIS)**



SIMP GROUP

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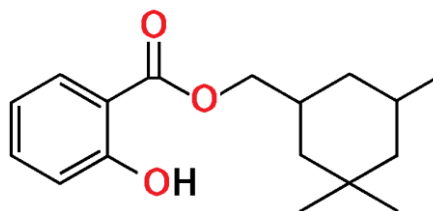
SIMPSSN™ HMS

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

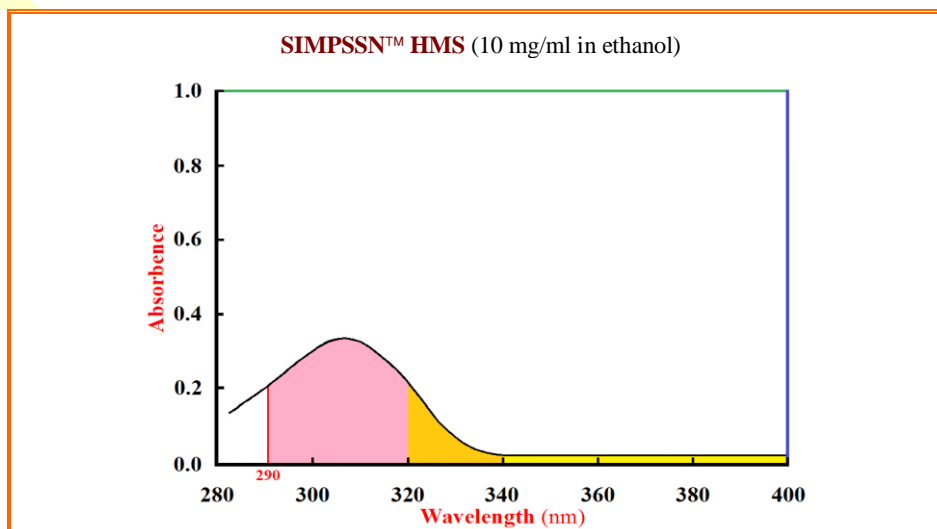
Product Information

Product Name:	SIMPSSN™ HMS	(ON: SIMPSSN™ TSC)
INCI Name:	Homosalate (HMS)	
USP Name:	Homosalate (HMS)	
Chemical name:	3,3,5-Trimethylcyclohexyl 2-hydroxybenzoate	
Synonyms:	Homomenthyle salicylate, Homosalate; HMS , salicylic acid-3,3,5—trimethyl cyclohexylester, Homomenthyl salicylate, Metahomenthyl salicylate	
CAS Name:	3,3,5-Trimethylcyclohexyl salicylate	
CAS No:	118-56-9	EINECS No: 204-260-8
Formula:	C ₁₆ H ₂₂ O ₃	Molecular Weight: MW =262.35 g/mol

Structural formula:



UV Absorption spectrum:



Definition, Properties, Benefits and Applications

Description: **SIMPSSN™ HMS (Homosalate)** belongs to the category of classic **UV** filters. However the number of new products from around the world containing **SIMPSSN™ HMS** today is still increasing. It is a useful **UV-B** filter additive for cosmetics and sun care products.

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

Key Properties & Solubility: **SIMPSSN™ HMS** 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**, **SIMPSSN™ EHT**, **SIMPSSN™ BEMT**, or other solid **SIMPSSN™ UV filters**, so that the overall solvent load could be reduced.

Solubility: **SIMPSSN™ HMS** is soluble in ethanol and most organic solvents; It is insoluble in water.

Solubility of SIMPSSN™ HMS in different solvents (20°C)

Solvent	Concentration
Water	< 0.0005 g/l
Mineral oil	miscible
Capric/Caprylic Triglyceride	miscible
Olive Oil	miscible
Aceton	miscible
IPM	miscible
Ethanol	miscible
Propanol	Partially miscible
Water/Ethanol (50%)	Immiscible
Water/Propanol (50%)	Immiscible
Propylene Glycol	Immiscible

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

Benefits and application:

- **SIMPSSN™ HMS** is an effective **UV-B** absorber with a **UV** absorbance (E 1%/1cm) of min. 170 at 305nm for various applications.
- It is used for products with low and – in combination with other **UV** filters – high sun protection factors.

- **SIMPSSN™ HMS** is an effective solubilizer for crystalline **UV** absorbers such as Butyl Methoxydibenzoylmethane, Benzophenone-3, 4-Methylbenzylidene Camphor, Ethylhexyl Triazone, Diethylhexyl Butamido Triazone, Diethylamino Hydroxybenzoyl Hexyl Benzoate and Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine etc.
- **SIMPSSN™ HMS** is oil soluble and can therefore be used in water-resistant sunscreens.
- Approved world-wide. Concentration maximum varies according to local legislation.
- **SIMPSSN™ HMS** is a safe and effective **UVB** absorber. Safety and efficacy studies are available on request.
- **SIMPSSN™ HMS** is a skin conditioning agent for personal care formulations.

Very stable:

SIMPSSN™ HMS 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™ HMS is an excellent **UV-B** absorber, insoluble in water. It is an excellent **SPF** booster widely used with other UV absorbers. **SIMPSSN™ HMS** is often found in sunscreen preparations having **SPF** factors greater than 30. 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™ HMS** and **SIMPSSN™ OMC**, **SIMPSSN™ OSC** etc. are the ideal choice for boosting and reaching higher **SPF** in conjunction with other popular **UV-AB** filters like **SIMPSSN™ BP-3**, **SIMPSSN™ MBC**, **SIMPSSN™ BEMT**, **SIMPSSN™ DTS** and **UV-A** filters **SIMPSSN™ BMDM**, **SIMPSSN™ DHHB** and the like.

Added value for sunscreen formulas:

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

Use level: (W/W):

(National regulations have to be observed) ≤ 10 %.

Generally concentration used: 2-8%.

As the Photostabilizer to protect the sensitive products in formulations:

0.05-0.5 %; generally: 0.1-0.3%

REGULATIONS:

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

Approval status:

Max. amounts: (W/W)

EU	China	Australia	USA	Japan
+ (10%)	+ (10%)	+ (15%)	+ (15%)	+ (10%)

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

SIMPSSN™ HMS [INCI Name: Homosalate (**HMS**)] 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™ HMS** 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: ≥ 8000mg/kg (BW)

Sensitization: Primary skin irritation / rabbit / **SIMP** test: non-irritant.
 Primary mucous membrane irritation / rabbits’ eyes / **SIMP** test: non-irritant.

Skin: Practically non-irritating to rabbit skin (5% corn oil).

Other Information: Phototoxicity: Nonphototoxic (5% in ethanol).

Safety: **SIMPSSN™ HMS** 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.

Technical Information

Properties & Specification:

Appearance:	Colorless to yellowish liquid with almost odorless or slight characteristic odor. (RT)	
Assay:	≥98.0	% [GC/HPLC]
Boiling point:	160-165	°C (5.3 hPa)
Density:	1.040-1.060	g/cm ³ (25°C)
Refractive Index:	1.515-1.520	n ²⁰ _D
Solubility:	Soluble in ethanol and organic solvents; Insoluble in Water	
Log POW:	~5.9 (Octanol / water partition coefficient)	

Note:

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

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

Other Information

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

Order Information

- | | |
|-------------------------------|---|
| A. Product Trade Name: | SIMPSSN™ HMS |
| B. Package: | Net: 200 kg lacquer-lined drum.
<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™ HMS** 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:

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

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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

General Editor: Z.M.Jiang / Dec.2020 revised from the **SIMP**

