



A Joint Venture of Amyris & NIKKOL GROUP

Technical Data Sheet: Neossance™ Hemisqualane

Product name: Neossance™ Hemisqualane

CAS number: 3891-98-3

EINECS number: 622-542-2

IUPAC name: 2,6,10-Trimethyldodecane

INCI name: C13-15 Alkane

Molecular formula: C₁₅H₃₂

Molecular weight: 212.41

Product Description

Neossance™ Hemisqualane is a non-polar C15 hydrocarbon sustainably sourced from sugarcane. It is a non-volatile emollient with a light and dry feel and is the perfect alternative for petroleum-based hydrocarbons like Isohexadecane and low molecular weight silicone ingredients including cyclomethicone. In skincare, it creates elegant and light textures with a non-tacky, non-greasy and silky finish. In suncare, it can mitigate the greasy feel of organic filters. In makeup it facilitates a smooth and even application for lipsticks and foundations. It also demonstrates excellent cleansing properties, superior to Isohexadecane, in makeup removal, especially for extra-long wearing and waterproof formulations. With high spreadability and soft after-feel, it is also an ideal ingredient for conditioners and leave on haircare applications. Studies have demonstrated performance equivalence to traditional materials such as dimethicones, proteins, and quats.

Typical Properties

Test Description	Typical Value	Unit of Measurement
Purity by GC	99	area %
Density @ 20 °C	0.770	g/cm ³
Refractive Index @ 20 °C	1.431	
Iodine Value	< 0.5	g I ₂ /100 g
Acid Value	< 0.01	mg KOH/g
Appearance and Color	Colorless liquid	
Odor	Nearly odorless	
Saponification Value	< 0.2	
Viscosity @ 20°C	2.7	cP
Surface Tension @ 20°C	25.5	mN/m
Flash Point	110	°C
Pour Point	< -57	°C

The properties and numbers shown are typical values, not specifications. For sales specifications, please contact your local sales representative.

Quality Compliance

Neossance Hemisqualane is manufactured in accordance with ISO 22716 Cosmetics Good Manufacturing Practices (GMP).

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Peace of Mind Ingredient

Sustainability	Features and Benefits	Proven Performance**
<ul style="list-style-type: none"> Renewable source Biodegradable ECOCERT-approved USDA certified 100% Bio-based NPA seal ISO 16128 Compliant 	<ul style="list-style-type: none"> Consistent composition Non-polar, fully saturated Chemically inert, full pH range High spreadability Non-comedogenic, Non-irritating Stable to heat, cold, oxidation and UV light 	<ul style="list-style-type: none"> Excellent pore cleansing properties Reduces frizz Provides color and heat protection Prevents hair damages Provides easier combing (wet & dry) Leaves hair silky and smooth Leaves skin soft and smooth

Applications

Skin, hair, sun, and body care, makeup, cleansers, makeup removers, antiperspirants, deodorants

Required HLB	6
Solubility	Oil soluble; water insoluble
Spreadability	Very high
Compatibility	Compatible with silicones, lipophilic ingredients
Polarity	Non-polar

Storage and Packaging

Shelf-life and Storage	36 months in unopened, original packaging; stored in a dry and mild environment at ambient temperature, and away from heat sources and light
Packaging	15 kg (Jerricans), 154 kg (Drums), 773 kg (Totes)

Regulatory Status

There are no known regulatory restrictions of Neossance Hemisqualane. Hemisqualane appears on the following regulatory inventories with the corresponding identifier/number:

Country: List	Identifier	Comments
Canada: NDSL	CAS 3891-98-3	
China: IECIC	C13-15 Alkane	
European Union: REACH registered	CAS 3891-3 Registration numbers: 01-2119948111-47-0001	Registered for Aprinnova by Amyris's Only Representative for quantities >100 tons / year
Japan: ENCS	2-10	
Korea: KECI/KECL	KE-34508	
Mercosur ¹ :	CAS 3891-98-3	No known restrictions
Russia: TR TS 009/2011	CAS 3891-98-3	No known restrictions
USA: present on TSCA	CAS 3891-98-3	No known restrictions

¹List of substances that cannot be used in personal hygiene products, cosmetics and perfumes.

**Purchasers of Neossance Hemisqualane from Aprinnova are solely responsible for ensuring compliance of their cosmetic products with all applicable regulatory requirements, including claims regarding the effect of Hemisqualane on skin and hair.