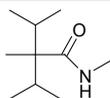


Specifications and Characteristics

FRESH'IN

INCI	Methyl Diisopropyl Propionamide
CAS REG. N°	51115-67-4
APPEARANCE	White solid
ODOUR	Fresh
PURITY	Min. 99.0 %
SOLUBILITY	Alcohol, 1,2-alkanediols, cosmetic esters and ethers like Dicaprylyl Ether, Caprylic/Capric Triglyceride...
RECOMMENDED USE LEVEL	0.04 ▶ 1.5 % (max. 0.04% for leave-on body care applications)
REGULATORY STATUS	Globally approved
ORIGIN	Non-natural (petrochemical)

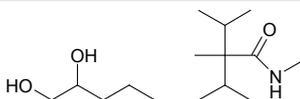
CHEMICAL STRUCTURE



FRESH'IN GREEN +

INCI	Pentylene Glycol (and) Methyl Diisopropyl Propionamide
CAS REG. N°	5343-92-0; 51115-67-4
APPEARANCE	Clear, colourless liquid
ODOUR	Fresh
SOLUBILITY	Alcohol, 1,2-alkanediols, water, cosmetic esters and ethers like Dicaprylyl Ether, Caprylic/Capric Triglyceride...
RECOMMENDED USE LEVEL	0.1 ▶ 2.5 % (max. 0.1 % for leave-on body care applications)
REGULATORY STATUS	Globally approved
ORIGIN	Derived-natural
NATURALITY INDEX	0.55, Contains 43 % renewable carbon

CHEMICAL STRUCTURE



MINAFIN[®]

GROUP

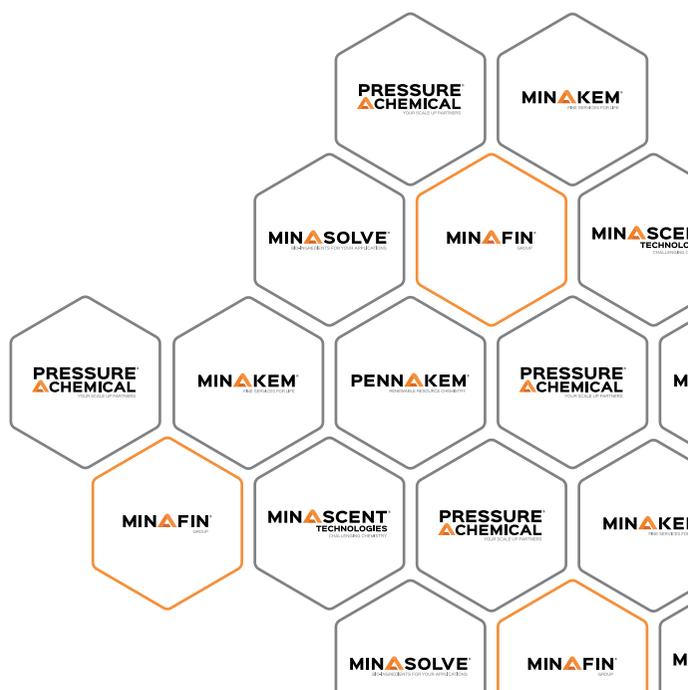
Minasolve[®] is a brand of Minafin[®] Group

The Minafin[®] Group, whose affiliates develop and manufacture active pharmaceutical ingredients, organic intermediates and specialty fine chemicals for the life science industries and technical applications **is organized around 5 brands**, each dedicated to specific end-users or chemical technologies :

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Serving market leaders as well as emerging players, we support our customers' efforts to improve the quality of life in the global community by:

- ▶ Improving our chemistry and operational excellence today
- ▶ Creating and innovating for tomorrow
- ▶ Driving our enterprises together to **go beyond expectations**



Allergen-free Cooling Agents

FRESH'IN

- ✓ *Safe alternative to Menthol*
- ✓ *Long-lasting cooling effect*

FRESH'IN GREEN+

- ✓ *Ready to use liquid*
- ✓ *Dispersible in water*



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BIO-INGREDIENTS FOR YOUR APPLICATIONS

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Fresh'in is a powerful refreshing agent and a safe alternative to menthol.

Menthol is used since a long time as physiological cooling agent, However, it has several drawbacks: It tends to crystallize and to sublime, has an odour that is difficult to mask, and is a listed fragrance allergen.

Fresh'in avoids all major drawbacks of Menthol:

- ▶ **Fresh'in** provides a **long-lasting cooling sensation**.
- ▶ **Fresh'in** is a **non-volatile** solid of faintly **fresh odour** without any camphor note.
- ▶ **Fresh'in** is not derived from Menthol and can be regarded as **free of allergens**.

Depending on the concentration and area of use, the cooling effect of **Fresh'in** can range from a **subtle freshness** to a **powerful chilling**.

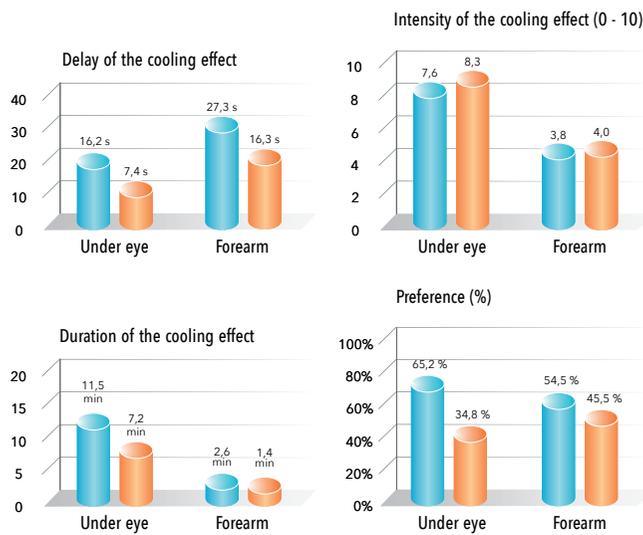
Fresh'in is recommended for applications in skin care, oral care, toiletries, make-up, and perfumes.



Performance

A comparative consumer test of **Fresh'in** vs. L-Menthol was carried out on a mixed population of 66 volunteers, aged 19 to 50. Both cooling agents were applied in a hydrogel at concentrations of 0.5 %. The following criteria were investigated:

- Delay of the cooling effect
- Intensity of the cooling effect
- Duration of the cooling affect
- Volunteers preference



■ Product A (Fresh'in)
 ■ Product B (L-Menthol)

- Two out of three consumers preferred the **cooling effect** of **Fresh'in** over that of Menthol.
- The volunteers confirmed a slightly **delayed cooling action** of **Fresh'in** and its **longer-lasting cooling effect**.

In summary, the panelists preferred the progressive, long-lasting, and pleasant cooling effect of **Fresh'in** over menthol.

Fresh'in is a powder and therefore needs to be solubilised. The solubilisation can be carried out in solvents like 1,2-alkanediols or lower alcohols before incorporation into the formulation. In the case of emulsions **Fresh'in** can also be melted or mixed with the lipophilic phase.

Fresh'in Green+ is a **ready-to-use** and **patent pending solution** of the solid cooling agent **Fresh'in** in the nature-derived skin humectant **A-Leen 5**. The liquid **Fresh'in Green+** has the same refreshing properties as the solid **Fresh'in**.

- ▶ **Fresh'in Green+** **simplifies** the application of the cooling agent in cosmetic and personal care formulations.
- ▶ **Fresh'in Green+** is **free of menthol-derivatives** and other **fragrance allergens**.
- ▶ **Fresh'in Green+** can be used during **cold** and **hot** processing (max. 130 °C).

Fresh'in Green+ is suitable for emulsions, surfactant-based products and solutions. Nevertheless, for applications in pure water we recommend using max. 0.5 % of **Fresh'in Green+** in order to obtain a clear and stable solution.

Fresh'in Green+ is also suitable for skin care, oral care, toiletries, make-up, and perfumes.

Guidance Formulation: Fresh Kiss Lipstick

Phase	Ingredients (INCI)	%
A	Beeswax (Cera Alba)	20.00
	Lipovol CO ¹ Ricinus Communis (Castor) Seed Oil	45.00
	Joboba Oil ² (Simmondsia Chinensis (Jojoba) Seed Oil)	24.30
	Lipex Cocosoft ³ (Theobroma Cacao Butter)	10.00
	Fresh'in⁴ (Methyl Diisopropyl Propionamide)	0.40
	Pigments (Carmine, Titanium Dioxide, Mica)	0.20
B	DL- α -Tocopherol (Tocopherol)	0.10

Raw material suppliers:

⁽¹⁾ Lipo Chemicals ⁽²⁾ Caesar & Loretz ⁽³⁾ AAK ⁽⁴⁾ Minasolve

Manufacturing Process:

- 1) Mix ingredients from phase A while heating up to 75°C. Stir to homogenize
- 2) At 75°C, add phase B while stirring, then pour the mixture rapidly into a cold mould. Cool down at 5°C for at least 30 minutes

Properties and stability:

Aspect: pink opaque solid
 Stable during 3 months at 8°C, 42°C and room temperature, as well as during centrifugation for 1hr at 20°C and 1500 g for at least 30 minutes