TECHNICAL DATA SHEET

GENENCARE® OSMS BA

The Moisturizing Osmolyte



Where science & creativity meet

Product description

GENENCARE® OSMS BA is highly purified anhydrous betaine, extracted from sugar beets and upcycled from a sugar production side stream. Betaine is an osmolyte and amino acid derivative which occurs naturally in plants and animals to protect them from hydric stress. Naturally present in skin, it helps to manage water balance in cells. GENENCARE® OSMS BA provides moisturization, protection and sensory benefits in many applications: skin care, hair care, toiletries and make-up.

Benefits

Skin Care

GENENCARE® OSMS BA is an osmoprotectant, which helps protect proteins and balance water in skin. It contributes to:

Moisturization

- **Osmosis**
  Protect skin cells from dehydration. Keratinocytes synthetize specific osmolyte transporters on their membrane to increase betaine uptake and allow cell rehydration *(in-vitro test)*.

Protection

- **Strengthen the skin barrier**
  - Reinforces the **Tight Junctions** in the stratum corneum *(in-vitro test)*.
  - **Reduces Trans-Epidermal Water Loss** *(4-week clinical study, 40 volunteers)*.

Sensory

- **Improve the sensory profile of formulations**
  Reduced stickiness and oily feeling, improved spreadability, and silky after-feel *(sensory evaluation of hand sanitizers by an expert panel)*.

Toiletries

- **Protect proteins** against denaturation by surfactants *(in-vitro zein test)*.
- **Mitigate surfactant irritation** *(Clinical patch test)*.
- **Improve foam volume,** sensory and stability.

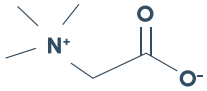
Suitable for sensitive skin

Suitable for intimate care

*Literature references and test details available upon request

Product identification

INCI name	Betaine
Chemical name	Trimethylglycine, glycine betaine
CAS number	107-43-7
HS Code	2923 9000 90



Typical characteristics	
Appearance	free-flowing white crystalline powder
Bulk density	0.6–0.8 g/ml
Melting point	241–242°C
Molar weight	117.15 g/mol
pH (5% solution in DiH_2O)	5–7
Betaine solubility at 25°C in:	
Water	160g/100g (readily soluble in water)
Ethanol	8.7g/100g
Purity (assay on dry substance)	99.0–100.0% betaine
Moisture	max 2% (when packed)

Hair Care

Betaine has strong affinity with keratin and can deeply penetrate the hair cortex as well as deposit on the hair surface by binding to damaged sites.

Hair strengthening

- **Strengthen the hair** and **reduce broken fibers and split ends** (instrumental tests)

Hair conditioning

- **Improve wet and dry combing** (instrumental tests)

Frizz control

- **Reduce frizz** in humid environment (instrumental tests)

Scalp protection

- **Improve the scalp barrier integrity** with a significant reduction of the Trans Epidermal Water Loss over a 5-week in-use test (clinical study, 39 volunteers).

Origin

- Sugar beet root (beta vulgaris)
- Upcycled from sugar production side stream
- 100 % natural from non-GM plants
- Beet sourcing from Europe
- Produced in Finland

Environmental profile

- Carbon Neutral, based on cradle-to-gate Life Cycle Assessment 2021
- No petrochemical solvent used
- Readily biodegradable
- Not classified as hazardous to the environment

Please refer to SDS and separate Product Declaration

Applications

GENENCARE® OSMS BA is a cosmetic ingredient; solely intended for cosmetic and personal care products.

Suggested uses

- Skin care (ex: moisturizing serums and creams, body lotion, sun care, face cleansers and masks, baby cream)
- Hair care (ex: shampoo, conditioners, scalp treatments)
- Hygiene (ex: shower gels, intimate wipes)
- Make-up (ex: water-based foundations)

Recommended use	2–5% *(maximum supported use: 10%, except toothpaste max 5% for 0–3 y.o. babies.)*
pH range of use	3.0–8.0; Avoid high pH formulations pH≥10.

Formulation

- Readily soluble in water therefore easy to formulate with.
- Can be formulated either by cold or hot process.
- Gives colorless and odorless solutions in water.
- Compatible with most ingredients.
- High concentration does not impact emulsion stability.

Additive	No additives

Starting point formulations are available for download on **ULProspector.com**

Certifications

Natural certifications	ECOCERT, COSMOS, NATRUE Approved
Natural Index (ISO 16128)	NI=1, NOI=1
Kosher and Halal	Certified
Production	Cosmetic GMP, ISO 22716:2007
Upcycling	Upcycled certified™ ingredient by UFA (Upcycled Food Association)

For other statements, please contact your sales representative.

Health & Biosciences
Home & Personal Care

NATRUE Approved

COSMOS APPROVED

Regulatory information

- Listed on relevant global chemical inventories.
- China: Compliant with CSAR and registered in NMPA system.

For more details on:

- List of supported uses, safety and toxicology summary
- Cosmetic ingredient status by country
- Quality standards and policies
- Manufacturing
- Compositional information
- Ecolabelling and sustainability

Please refer to SDS and separate Product Declaration or contact your sales representative.

Shelf life

36 months from date of manufacture when stored in original packaging.

Storage conditions

Product is hygroscopic (attracting water). It must be stored in unopened cartons and protected from humidity. It is recommended to store this product at temperature below 25°C and relative humidity less than 40%.
No double-stacking of pallets during storage.

Packaging

Available in 20kg cardboard box with polyethylene inner bag in one-way 1000kg pallet; and available in 600 kg big bags (MTO). For more details, please refer to the packaging statement or contact your sales representative.

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