

RAW MATERIAL DATA SHEET

FaraHyal HAC (cosmetic grade)

PRODUCT IDENTIFICATION

Supplier name

Farachem Solutions Inc. | 25 Greenview Ave. 1119, Toronto, Ontario, Canada, ON M2M0A5
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EU/US INCI name

EU INCI name	US INCI name
Hydrolyzed Hyaluronic Acid	Hydrolyzed Hyaluronic Acid

Regulatory information

Empirical Formula: (C₁₄H₂₀NO₁₁Na)

Chemical name: Sodium Hyaluronate

Common name	CAS n.	EC n.	Composition
Hydrolyzed Hyaluronic Acid	9067-32-7	---- (polymer)	100%

- US and European Pharmacopoeia: Not applicable
- Classification & labelling according to EU Chemical regulation: this product is not subjected to labelling as it is not a dangerous substance (regulation 1272/2008).
- Transport: not regulated
- Tariff code: 3913900090

Functions

Humectant; Skin conditioning

Geographical Origin

Produced in China

REGULATORY STATUS

Chemical Inventory position

- Component(s) listed in EU Inventory: yes
- Component(s) listed in IECSC (China): yes
- Component(s) listed in TSCA (USA): no
- Component(s) listed in NZIoC (New Zealand): yes
- Component(s) listed in TCSI (Taiwan): no

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- Component(s) listed in ECNS (Japan): no
- Component(s) listed in KECI (Korea): no
- Component(s) listed in PICCS (Philippines): no
- Component(s) listed in AICS (Australia): yes (Sodium Hyaluronate)
- Component(s) listed in DSL (Canada): yes (Sodium Hyaluronate)
- Component(s) listed in Proposition 65 (California): not listed

Cosmetic Regulatory Status

- No restrictions in Europe.
- Other countries: Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate is accepted in most other legislative areas. Please refer to your local legislation of interest.
- Restriction or limitation for personal care applications: no
- Canadian cosmetic ingredient hotlist: no
- Component listed in Cosmetic China IECIC: yes

Cosmetic Regulatory Conformity

- Regulatory Conformity: Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate is in line with Cosmetics Regulation 1223/2009 and further amendments. It does not contain any of restricted or prohibited substances listed in Annex II and Annex III of cosmetics regulation.
- CMR: Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate does not contain any substances intentionally added and classified as Carcinogenic, Mutagenic or Reprotoxic substances.
- Allergens: We certify that Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate complies with Regulation (EC) 1223/2009 regarding the presence of the 26 substances identified as allergenic in cosmetics. Due to the nature of the materials used for our productions and to bibliographic data, it can be stated that these allergens are absent.
- TSE/BSE: We confirm that Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate does not contain any animal raw material, therefore it is free from BSE/TSE transmitting agents.
- Animal testing: we declare that no animal testing was made by either by Farachem or the manufacturer of this product for cosmetic use accordingly to Regulation (EC) 1223/2009.
- Ionization: the product is not subjected to ionization process.
- REACH: According to Article 2(9), polymers are exempted from the provisions on regulation of Title II of REACH.
- Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate meets the criteria set for a polymer defined in Article 3(5). Its monomers can be considered as non-isolated intermediates, for which REACH regulation is not applicable according to Article 2(1).
- Based on the available data, the criteria for exemption from REACH registration are fulfilled for Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate (CAS: 9067-32-7).

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TOXICOLOGY ECOTOXICITY & BIODEGRADABILITY INFORMATION

Toxicological information**Tests for cosmetic safety evaluation (sponsored by the company)**

- Skin irritation test: NOT IRRITANT (method: MTT/ %Tested: 0.5% & 0.1% / Date: April 2009)
- Ocular irritation test: NOT IRRITANT (method: Red Blood Cell Test/ %Tested: 1% & 10% /Date: April 2009)
- Skin sensitization test: NON-SENSITIZING (method: Repeated Patch test / %Tested: Pure 100% / Date: April 2009)
- Mutagenicity test: Not available
- Photo toxicity test/ Photo allergenicity: test Not available

Bibliographic data*

- Eye irritation (Draize test): non irritant
- Skin irritation: non-irritant
- Skin sensitization: non sensitizing
- NOAEL: Sodium Hyaluronate: 60 mg/Kg
- Following our bibliographic research on our raw material, to date no scientific data and/or reference has been found which could be interpreted as a sign of toxicity. This lead us to assume it is not toxic when used at normal dose.

*CIR- Final Report of the Safety Assessment of Hyaluronic Acid, Potassium Hyaluronate, and Sodium Hyaluronate. (July/August 2009)

Ecological & Biodegradability information

Biodegradability: expected to be biodegradable

Unavoidable impurities and possible traces of contaminants

- SVHC: absence
- Heavy metals: see SDS
- Pesticides: absence GMO: absence
- Food allergens (as per Regulation (EC) no. 1169/2011): absence
- Latex: absence
- Residual solvents: yes (maximum content < 0,5% Ethanol)
- Polycyclic Aromatic Hydrocarbons: absence
- Free amines: absence
- Phthalates: absence Glycol ethers: absence
- Formaldehyde: absence
- Ethylene oxide: absence

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- Nanomaterials: absence
- Monomers: absence
- Proteins: see SDS
- VOC (volatile organic components as per European and Swiss laws): maximum content < 0.5% Ethanol
- Gluten: absence (no starting materials containing gluten are used in the product).
- Other impurities or residues: absence
- Absence: based upon data from our starting material suppliers and knowledge of the manufacturing process, we have no reason to believe that these substances are present.

Additives

- Neutralizers: no.
- Preservatives (following annex V of Regulation (EC) NO. 1223/2009): no.
- Antioxidants: no.
- Stabilizers: no.
- Catalysts: no.
- Bleaching agents: no.
- Chelating agents: no.
- Ethanol: yes (maximum content < 0,5% Ethanol)

Ingredients origin

- Synthetic: No
- Animal: No
- Animal Protection (Cites): NA (not applicable)
- Vegetable: No
- Plant name: NA (not applicable)
- Plant Protection (Cites): NA (not applicable)
- Palm oil and derivatives: No
- GMO: No
- Mineral: No
- Polymer: yes (Sodium Hyaluronate)
- Biotechnological processing: Yes
- Component name: Sodium Hyaluronate
- Strain used for biotechnological fermentation: *Streptococcus equi* subsp. *Zooepidemicus*
- Components of the fermentation broth:

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Substrate/Organism	Origin
Peptones	Wheat
Glucose	Corn starch
Yeast extract	Yeast

- **GMO:** We herewith declare that the raw materials and processing aids used in the production of Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate do not contain or consist of GMO's and they are not produced from GMO's.
- **Monomers:** no

Halal/Kosher

We confirm that the product does not contain any substance of animal origin neither these substances are used during manufacturing process.

Vegan/vegetarian

Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate is suitable for vegetarian use. Furthermore, to the best of our knowledge, we declare that Sodium Hyaluronate does not contain any animal origin ingredients or animal derivatives.

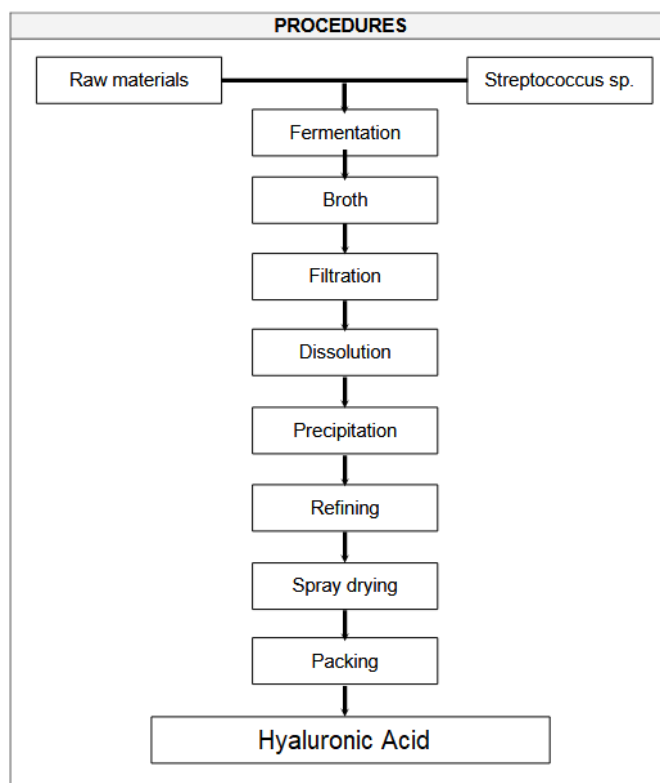
PRODUCT INFORMATION**Properties**

Due to the refining steps included in the manufacturing process and to the low availability of water in the finished product we can guarantee the microbiological specifications of the SDS for any batch (absence of common pathogens).

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Manufacturing flow chart*



**Steps subjected to fine tuning process in order to obtain a specific molecular weight spectrum.*

Code	Trade name	Molecular weight
FH0001	FaraHyal HAC-XXS	(5-10) KDa
FH0002	FaraHyal HAC-XS	(20-100) KDa

Specification: SDS available

Material safety data sheet: MSDS or equivalent statement available

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PERSONAL CARE APPLICATIONS AND FORMULATION

Particular instructions for the use of Hydrolyzed Sodium Hyaluronate in cosmetic applications:

- **Solubility:** soluble in water.
- **Temperature:** The ingredient is not sensitive to usual temperature range. It can be heated up to 80° C for 1 to few hours before starting/accelerating degradation process.
- **Incorporation:** prepare a pre-solution of the powder (e.g.: at 1%) in water, at ambient temperature. Mix under mechanical agitation for approximately 40 minutes, until totally dispersed. Include then the solution:
 - either in aqueous phase before mixing
 - either in formed emulsion during cooling phase
- **Compatibility:** Hydrolyzed Hyaluronic Acid / Sodium Hyaluronate is a large molecule polyanion polysaccharide. During dissolution, avoid cation emulsifiers or cation preservatives to keep a stable and transparent formula.
- **pH range:** the ingredient is stable at cosmetic pH: its rheological attitude is perfectly maintained in a pH range of 2.8 – 12.0. For further information, let's note that around pH 2.5, a thermo-reversible gel-like behavior can be registered, attributed to an interaction mechanism. At pH lower < 2.5, the polymer is re-solubilized again, and the solution-gel transition is pH-reversible. At higher pH (> 12.5), a transition to a random coil configuration can occur. This phenomenon is due to the –OH groups dissociation in alkaline conditions, and a consequent reduction of –OH bonds that control the physiological stiffness of the hyaluronan molecule.
- **Other:** this ingredient is very hygroscopic and should be maintained in closed packaging away from humidity. It is preferable to avoid turbo mixer.
- **Formulation information:** the typical dosage is 0.1 – 2.0 %

Its use is recommendable for the following cosmetic products:

- Emulsion, cream, gel, lotion, serum, compact powder, mask
- Skin care, body-care, make-up
- Face, eye-contour, baby % specific

Usual finished product applications are diverse:

- Anti-aging formulas
- Lifting & boosting solutions
- Multi-function formulas
- Short-term hydration
- Sagging or inelastic skins
- Mature & young skins

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Efficacy test: No test for efficacy

Storage and handling: Keep the product in the original container well closed in fresh and dry place, repaired from humidity, light or heat sources.

Shelf Life: 36 months from the production date**

***24 months from production date if the molecular weight is greater than 1800kDa.*

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