

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 3

GB / EN

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade name : 4302 Stärkelse kosmetisk
Use of the : Cosmetic additive
Substance/Preparation

Company : Naturkosmetikkompaniet AB
: Ullevi Enestorp 3, 59491 Gamleby
Sverige

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2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Not a hazardous substance or preparation according to EC-directives 67/548/EEC or 1999/45/EC.

Additional risk and advice

Risk of dust explosion.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Remarks : No dangerous ingredients according to Directive 67/548/EEC.

Non-hazardous substance

Chemical Name	CAS-No.	EC-No. / REACH Reg.-No.	Concentration [%]
Polymer			60 - 100
Water		231-791-2	0 - 20

4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

Inhalation : Remove to fresh air.
Keep patient warm and at rest.
Rinse nose and mouth with water.

Skin contact : Remove contaminated clothing.
Rinse with water.

Eye contact : Rinse with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

Ingestion : Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : For personal protection see section 8.
Avoid dust formation.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
- Methods for cleaning up : Sweep up and shovel.
Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : For personal protection see section 8.
No special handling advice required.
Dispose of rinse water in accordance with local and national regulations.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Avoid creating dust.
- Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.
No sparking tools should be used.
- Dust explosion class : St1

Storage

- Requirements for storage areas and containers : Keep in a dry place.
Store at room temperature in the original container.
Keep container tightly closed.
- Advice on common storage : No special restrictions on storage with other products.
- Other data : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure

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Components	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
Dust		TWA	4 mg/m ³	1997-01-01	UK EH40	Total dust

STEL: Short term exposure limit
TWA: Time Weighted Average (TWA)

Engineering Controls

Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
In the case of dust or aerosol formation use respirator with an approved filter.
Half mask with a particle filter P2 (EN 143).
- Hand protection : Glove material: For prolonged or repeated contact use protective gloves.
Protective gloves complying with EN 374.
- Eye protection : Safety glasses
- Hygiene measures : General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Form : powder
- Colour : white
- Odour : mild

Safety data

- Flash point : not applicable
- Ignition temperature : > 100 °C
- Melting point/range :
not applicable
- Boiling point/boiling range :
not applicable
- Vapour pressure : not applicable
- Bulk density : not determined

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Water solubility : soluble
 Viscosity, dynamic : no data available

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

10. STABILITY AND REACTIVITY

Hazardous decomposition products : No hazardous decomposition products are known.
 Hazardous reactions : No decomposition if used as directed.
 : Dust may form explosive mixture in air.

11. TOXICOLOGICAL INFORMATION

Product information

Inhalation : Product dust may be irritating to eyes, skin and respiratory system.
 Skin : Product dust may be irritating to eyes, skin and respiratory system.
 Eyes : Product dust may be irritating to eyes, skin and respiratory system.
 Ingestion : Not irritating.
 Ingestion

12. ECOLOGICAL INFORMATION

Product information

Biodegradability : Readily biodegradable.
 Bioaccumulation : No bioaccumulation is expected.

13. DISPOSAL CONSIDERATIONS

Contaminated packaging : Empty remaining contents.
 Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

ADR

Not dangerous goods

IATA

Not dangerous goods

IMDG_EU

Not dangerous goods

RID

Not dangerous goods

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Labelling according to EC Directives 1999/45/EC

Further information : The product does not need to be labelled in accordance with EC directives or respective national laws.

Other regulations

Major Accident Hazard Legislation : 96/82/EC Update: 2003
Directive 96/82/EC does not apply

Water contaminating class (Germany) : WGK 1 slightly water endangering

Notification status

EINECS : y (positive listing)
On the inventory, or in compliance with the inventory

TSCA : y (positive listing)
On TSCA Inventory

AICS : y (positive listing)
On the inventory, or in compliance with the inventory

DSL : y (positive listing)
All components of this product are on the Canadian DSL list.

ENCS : n (Negative listing)
Not in compliance with the inventory

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KECI	: y (positive listing) On the inventory, or in compliance with the inventory
PICCS	: n (Negative listing) Not in compliance with the inventory
IECSC	: y (positive listing) On the inventory, or in compliance with the inventory
ISHL	: n (Negative listing) Not in compliance with the inventory

For explanation of abbreviation see section 16.

Further information : This product is to be considered as a substance according to EU-legislation.

16. OTHER INFORMATION

PBT: Persistent, bioaccumulative and toxic according to 1907/2006/EC, Annex XIII. vPvB: Very persistent and very bioaccumulative according to 1907/2006/EC, Annex XIII. OEL: Occupational exposure limit Note: The above information is only given for substances that does not meet the classification criteria.

Notification status explanation

EINECS	EU. EINECS is drawn up by the European Commission in application of Article 13 of Directive 67/548/EEC, as amended by Directive 79/831/EEC, and in accordance with the detailed provisions of Commission Decision 81/437/EEC. Including corrigendum 2002/C 54/08
TSCA	US. Toxic Substances Control Act as amended 15 U.S.C. 2606 Sec. 8 (b)
AICS	Australia. AICS - Australian Inventory of Chemical Substances
DSL	Canada. Canadian Environmental Protection Act, 1999 Part 5 Sec. 66 (1)
ENCS	Japan. ENCS - Existing and New Chemical Substances Inventory
KECI	Korea. KECI - Korean Existing Chemicals Inventory
PICCS	Philippines. PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC	China. IECSC - Inventory of Existing Chemical Substances in China
ISHL	Industrial Safety and Health Law OEL

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

4302 Stärkelse kosmetisk

Hydroxypropyl Starch Phosphate

Specifications

Appearance White to off-white free flowing powder

Parameter	Limits	Method
% Moisture	12.0 maximum	
Brookfield Viscosity (cps)	2,000 - 7,000, 4.5% solids	
pH	4.5 - 7.0	

Microbiology		
Parameter	Limits	Method
E Coli	Negative	
Mold (cfu/g)	100 maximum	
Salmonella	Negative	
Total Plate Count (cfu/g)	100 maximum	
Yeast (cfu/g)	100 maximum	

Measurements

Moisture is measured on a Cenco Moisture Balance.

The pH is measured by preparing 10 grams of starch slurried in 100 mls of deionized water.

Stärkelse kosmetisk

INCI: Hydroxypropyl Starch Phosphate

Rheology/Aesthetics Modifier and Emulsion Stabilizer

INTRODUCTION

Stärkelse kosmetisk is a starch-based rheology modifier that provides excellent stabilization in emulsion products. This starch, delivered as a powder, is a new concept to simply create and process elegant and stable personal care emulsions. The ease of use and immediate dispersability in cold water make it ideal for use in continuous manufacturing processes.

In any type of emulsion for the Personal Care market, stärkelse kosmetisk can aid in emulsion stabilization, aesthetics enhancement and viscosity-build. An emulsion containing stärkelse kosmetisk will have outstanding stability over a broad temperature range (-30°C up to 50°C). It also brings body to the formulation and a conditioning after feel. Stärkelse kosmetisk is readily cold water dispersible so that no pre-mixes are needed. Stärkelse kosmetisk can be added to the oil phase or to adjust batch properties also at the end of a production.

Because of its nonionic character and broad compatibility, stärkelse kosmetisk provides the formulator with the flexibility to formulate over a wide pH range with high amounts of mono- and polyvalent salts (up to 20%) and a large variety of raw materials.

APPLICATION AREAS

AHA and DHA formulations, All natural creams, Antiperspirants, Cationic cleansing products, Cationic lotions and creams, Color cosmetics, Concealer, Conditioners, Cream rinses, Creams, Emulsions, Eye liner, Facial cleansers, Facial creams, Gels, High salt containing gels, Leave in conditioners, Liquid make-up, Liquid soaps, Liquid talc, Low surfactant or surfactant-free emulsions, Make-up, Ointments, Personal wash products, Protective creams, Shampoos, Shave creams, Skin lotions and creams, Sunscreens, Water resistant sunscreens

FEATURES / BENEFITS

Feature	Benefit
Cold water-swellable	Outstanding dispersability in cold water; improved efficiencies can be achieved in manufacturing and formulation development.
Nonionic	Compatibility with other ingredients offers formulation flexibility. Can be used with a wide range of other raw materials like oils, emollients, cationic as well as silicones, UV filters, vitamins, botanical extracts, alpha and beta hydroxy acids, dihydroxy acetone, mono- and polyvalent salts, fragrances and dyes
Shear Thinning	Extremely shear thinning, with rapid viscosity recovery, suitable for emulsion in spray or pump delivery.
Large particle size	Very low dusting compared to typical powder ingredients.
Salt tolerant	Stable in the presence of high electrolyte levels (20 %).

Stärkelse kosmetisk

Feature	Benefit
pH stability	Useful in emulsion systems from pH 3 - 9.
Modified waxy maize starch	Naturally-derived Biodegradable Emulsion stabilizer at any temperature. Simplifies the emulsion formulation procedure. Aesthetic enhancer bringing conditioning after-feel to emulsions.

SUGGESTED USE LEVELS, AS SUPPLIED

The stärkelse kosmetisk is effective at improving emulsion stability and aesthetics and modifying rheology at concentrations of about 1% to 2%. Straight aqueous dispersions of stärkelse kosmetisk are stable at concentrations greater than 4%.

FORMULATION GUIDELINES

Because stärkelse kosmetisk is a specially processed pregelatinized starch, it will disperse in cold water instantly without requiring sifting or premixing. This allows for flexibility in manufacturing and formulation. Within 3 minutes at room temperature, 90 % of the viscosity of an aqueous stärkelse kosmetisk dispersion is built.

COMPATIBILITY WITH OTHER INGREDIENTS

Stärkelse kosmetisk is compatible with salts (mono and divalent), cationic and anionic ingredients, and other ingredients common to personal care emulsions (oils, emollients, silicone, UV filters, AHA, DHA...). It can aid in the speed of dissolution of other powder ingredients, and will not contribute to dusting.

The stärkelse kosmetisk can be considered eco-friendly. It is naturally derived and biodegradable. It offers the potential for production by cold process, and thus can significantly reduce energy requirements as well as manufacturing costs. It should not be over extensively homogenized due to potential breakdown of the particles.

PERFORMANCE PROPERTIES

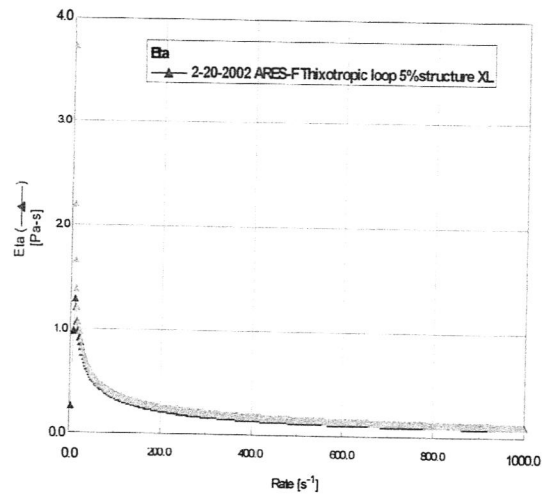
Rheology

Stärkelse kosmetisk is extremely shear-thinning, with rapid viscosity recovery. This is an ideal property for personal care products where good workability is desired, yet the formulation must set up instantly when shear is removed.

Figure 1 shows a hysteresis loop of an aqueous dispersion of 5% stärkelse kosmetisk.

Stärkelse kosmetisk

Figure 1



The close overlap of the increasing and decreasing shear sweeps demonstrates the pseudoplastic nature of this rheology modifier. A gap between the two curves would have indicated a longer viscosity recovery time, leaving a formulation prone to dripping when shear is removed.

In Creams in Lotions

Stärkelse kosmetisk has demonstrated unique performance attributes in such emulsion products as skin creams and lotions (daily and treatment products, sun care and baby care products). Not only can stärkelse kosmetisk enhance an emulsion's aesthetics and viscosity, it can also improve the stability of emulsions in temperatures ranging from -30°C to 50°C .

In Rinse-off Applications

Stärkelse kosmetisk has beneficial impact on foam and feel characteristics as denser, richer foam and conditioning after feel. In high surfactant systems it should be used in combination with stabilizers as exhibiting yield point.

Aerosol foams

The stabilizing properties of stärkelse kosmetisk can also be applied to aerosol foams. Incorporation of the starch in aerosol shave foams or skin mousses results in enhanced foam richness and stability.

Color Cosmetics

Stärkelse kosmetisk brings enhanced aesthetics, conditioning, and viscosity to color cosmetics, such as foundations, eye-liners, mascaras etc.

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STORAGE AND HANDLING

Stärkelse kosmetisk should be stored in a cool, dry location away from heat, sparks or fire. Good industrial hygiene practices should be followed when working with this starch.

Please read the MSDS before working with this or any other chemical.

HEALTH AND SAFETY

A health and safety summary for stärkelse kosmetisk is available on request.

It is non animal tested and non GM (genetically modified).

The suitability of the final formulations should be confirmed in all respect by appropriate evaluation. The marketer is advised to evaluate the final formulation with regard to performance and health safety.

Stärkelse kosmetisk

Regulatory
Information

Parameter	
CAS Number	113894-92-1
Australia	Yes
Canada	Yes
Europe	Polymers of EINECS listed monomers
USA (TSCA)	Yes