

MATERIAL SAFETY DATA SHEET

SODIUM ALGINATE AND PEPTIDE COUPLED ALGINATE

MSDS Ref. No.: **MSDS-001**
 Approved date: **06.11.2023**
 Version: **9.0**

This document has been prepared to meet the requirements of the EC Directive, 2001/58/EC.

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:

PRONOVA -	NOVATACH -
UP XXXX ^{#)}	XXXX ^{#)} GRGDSP
UP OligoG	XXXX ^{#)} 4 GRGDSP
SLM 20 / SLM 100	M REDV
SLG 20 / SLG 100	G VAPG
UP LG 20 / LG 100 / LG 100 in saline	
#) XXXX refers to one of the following : VLVG, LVG, MVG, VLVM, LVM, MVM	

CHEMICAL FAMILY: Polysaccharide
SYNONYMS: Sodium alginate, Algin (INCI name)
GENERAL USE: Viscosifier, film-forming agent, gel-forming agent; for use in drug delivery compositions and devices, cell encapsulation and cell therapy applications, tissue engineering and regenerative medicine or other medical devices

MANUFACTURER

NovaMatrix
 IFF N&H Norway AS
 Industriveien 33
 1337 Sandvika, NORWAY

EMERGENCY TELEPHONE NUMBER

+47 67 81 55 00 (Sandvika, Norway)
 (303) 595-9048 (Medical – U.S. – Call Collect)

For leak, fire, spill, or accident emergencies, call:
 (800) 424-9300 (CHEMTREC – U.S.A. & Canada)
 (703) 527-3887 (CHEMTREC – All Other Countries)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- White to off-white, odorless, free-flowing powder or pad (lyophilized) or aqueous solution.
- Powder becomes slippery when wet.
- Product will burn when in contact with flame; however, it self-extinguishes when ignition source is removed
- Accumulation of overhead settled dust may form explosive concentrations in air when disturbed and dispersed.

POTENTIAL HEALTH EFFECTS: No significant health effect expected.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Wt. %	EC No.	EC Class
Sodium Alginate	9005-38-3	100	None	Not classified
Synthetic peptide		50-100	None	Not classified

4. FIRST AID MEASURES

EYES: Irrigate with clean water. Get medical attention if irritation occurs and persists.

SKIN: Wash with soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Drink 1 to 2 glasses of water. If any discomfort persists, obtain medical attention.

INHALATION: Remove to fresh air. If any breathing difficulty or discomfort occurs and persist, obtain medical attention.

NOTES TO MEDICAL DOCTOR: This product has low oral and inhalation toxicity. It is not a skin sensitizer and is non-irritating to the skin and eyes. It is expected to have low dermal toxicity. Aspiration or inhalation of this product could cause chemical pneumonitis. Treatment is symptomatic and supportive.

5. FIRE FIGHTING MEASUREMENTS

EXTINGUISHING MEDIA: Water, foam, dry chemical, CO₂.

FIRE / EXPLOSION HAZARDS: As with most organic materials, excessive accumulation of dust on overhead structures may produce explosive concentrations when disturbed and dispersed by a small explosion that shakes down accumulated dust and causes, momentarily, an ignitable concentration. Product will burn when in contact with a flame but self-extinguishes when ignition source is removed.

FIRE FIGHTING PROCEDURES: None. Treat as "Class A" fire. Once ignited, the products tends to smolder.

FLAMMABLE LIMITS: Auto Ignition temperature is above 200°C.

6. ACCIDENTAL RELEASE MEASUREMENTS

RELEASE NOTES: In case material is released or spilled: Sweep or vacuum. Note that an extreme slip hazard can develop if material spilled on the floor becomes wet.

7. HANDLING AND STORAGE

HANDLING AND STORAGE: To protect quality of product, store in a tight container in a cool dry Place

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:

Particulates Not Otherwise Classified (PNOC):
 ACGIH/TWA
 10 mg/m³ (inhalable particulate)
 3 mg/m³ (respirable particulate)

ENGINEERING CONTROLS: Use local exhaust sufficient enough to remove airborne dust.

PERSONAL PROTECTION EQUIPMENT

EYES AND FACE: Goggles recommended in heavy dust concentrations.

RESPIRATORY: Whenever dust in the worker’s breathing zone cannot be controlled with ventilation or other engineering means, workers should wear respirators or dust masks approved by NIOSH/MSHA, EU CEN or comparable certification organization to protect them against airborne dust.

PROTECTIVE CLOTHING: No special clothing is required.

GLOVES: Not necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	Odorless.
APPEARANCE:	White to off-white powder or pad (lyophilized), or clear, colorless to slightly yellowish aqueous solution.
AUTOIGNITION TEMPERATURE:	> 200 °C (>392 °F)
BOILING POINT:	Not volatile
MELTING POINT:	Not volatile
FLASH POINT:	N/A (Product will burn when in contact with a flame. Self-Extinguishes when ignition source is removed)
EVAPORATION RATE:	N/A
PERCENT VOLATILE:	N/A
pH:	5.5 to 8.5 in 1% solution
SOLUBILITY IN WATER:	Slowly soluble, forming a viscous solution
VAPOR DENSITY:	N/A
VAPOR PRESSURE:	N/A

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Strong oxidizing agents, high temperature and high humidity levels.
STABILITY:	Stable.
POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	None

11. TOXICOLOGICAL INFORMATION

EYE EFFECT:	No data available for the formulation Sodium alginate: Non-irritating (rabbit)
SKIN EFFECT:	No data available for the formulation Sodium alginate: Non-irritating (rabbit)
DERMAL LD 50:	No data available.
ORAL LD 50:	Essentially non-toxic. No data available for the formulation Sodium alginate: >5,000 mg/kg (rat)
INHALATION LC 50:	No data available for the formulation. Sodium alginate: 4.72 mg/l (1 h) (rat)
SENSITIZATION:	No data available for the formulation Sodium alginate: (skin) Non-sensitizing (guinea pig)

ACUTE EFFECT FROM OVEREXPOSURE: This product is expected to have low oral and inhalation toxicity. It is expected to be minimally irritating to the eyes and non-irritating to the skin. Ingestion of large quantities of alginates may cause intestinal obstruction. Aspiration or inhalation of this product could cause chemical pneumonitis.

CHRONIC EFFECT FROM OVEREXPOSURE: No data available for the formulation. Sodium alginate showed no adverse effects in chronic studies when administered in the diet (5 – 15 %). The Joint WHO/FAO Expert Committee on Food Additives (JECFA) has granted an Acceptable Daily Intake (ADI) of “not specified” (no upper limit), the best possible classification for food additives (JECFA, 39th session of 23/12 February 1992). No further data are available.

CARCINOGENICITY:

- NTP:** Not listed.
- IARC:** Not listed.
- OSHA:** Not listed.
- OTHER:** ACGHI: Not listed.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available for the formulation. Alginates and peptides are biodegradable. No significant environmental effects expected.

ECOTOXICOLOGICAL INFORMATION: No data available, however, no significant effect on aquatic organisms are expected.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:

NOTE: Handle as a non-hazard material.
 BOD (5) : Approximately 300mg O₂/g.
 COD : Approximately 660mg O₂/g.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

PROPER SHIPPING NAME: Stabilizer/emulsifier; water soluble, dry

MARINE POLLUTANT: None.

ADDITIONAL INFORMATION: Not listed in title 49 of CFR as a hazardous material.

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

ADDITIONAL INFORMATION: Not regulated.

**ADR – EUROPEAN AGREEMENT CONCERNING THE
INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD**

ADDITIONAL INFORMATION: Not regulated.

**INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) /
INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)**

ADDITIONAL INFORMATION: Not regulated.

OTHER INFORMATION: N/A

15. REGULATORY INFORMATION

UNITED STATES:

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355 , APPENDIX A): Not listed.

SECTION 311 HAZARD CATEGORIES (40 CFR 370): Not applicable

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370): The threshold planning quantity (TPQ) for this product, if treated as a mixture, is 10 000 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000lbs.: None

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): This product does not contain any toxic chemicals subject to the reporting requirements of Section 313, Title III of the SARA (Superfund Amendments and Reauthorization Act) of 1986.

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA DESIGNATION AND REPORTABLE QUANTITIES (RQ) (40 CFR 302,4): Not listed.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA INVENTORY STATUS (40 CFR 710): Listed (sodium alginate)

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):

Domestic Substance List: Listed (sodium alginate)

E NUMBERS:

E 401 (Sodium Alginate)

INTERNATIONAL LISTINGS:

Sodium Alginate
Australia (AICS): Listed
China: Listed
Japan (ENCS): (8)-237
Korea: KE-00492
Philippines (PICCS): Listed

HAZARD, RISK AND SAFETY PHRASE DESCRIPTIONS:

EC Symbols: (Not classified as hazardous)
EC Risk Phrases: (Not classified as hazardous)
EC Safety Phrases: (Not classified as hazardous)

16. OTHER INFORMATION

The information given in this MSDS is based on present knowledge of the product and is intended to describe the product from a safety point of view. The MSDS is not a chemical specification. The customer is responsible for the correct use of the product.

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