

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Substance (UVCB)
Trade name	: SeaRx (Soluble seaweed powder)
IUPAC name	: <i>Ascophyllum nodosum</i> extract
EC-No.	: 283-907-6
CAS-No.	: 84775-78-0
REACH registration No.	: 01-2119575389-21
Product group	: Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture	: Biostimulant Fertiliser
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Acadian Plant Health, a division of Acadian Seaplants Limited
30 Brown Avenue
Dartmouth, Nova Scotia B3B 1X8
Canada
T +1 902 468 2840, F +1 902 468 3474
info@acadian.ca, www.acadianplanthealth.com

1.4. Emergency telephone number

Emergency number	: For chemical emergency call Chemtrec (CCN # 1017009) 24hr/day 7days/week Within USA and Canada: 1-800-424-9300 Outside USA and Canada, collect calls accepted: +55 11 4349 1359 (South America) +52 55 8526 4930 (Central America) +44 20 3885 0382 (EMEA) +65 3163 8374 (APAC)
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SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

No labelling applicable

Nordic countries regulation**Denmark**

MAL code	: 00-3 (Executive Order No. 301 from 1993)
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2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII.

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	<i>Ascophyllum nodosum</i> , extract (84775-78-0)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	<i>Ascophyllum nodosum</i> , extract (84775-78-0)

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : UVCB
Name : Acadian® Soluble Seaweed Powder 0.5-0-14.1

Name	Product identifier	%
<i>Ascophyllum nodosum</i> , extract	CAS-No.: 84775-78-0 EC-No.: 283-907-6 REACH-no: 01-2119575389-21	> 95

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.

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5.3. Advice for firefighters

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|--------------------------------|---|
| Firefighting instructions | : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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| General measures | : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage. |
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6.1.1. For non-emergency personnel

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| Protective equipment | : Wear recommended personal protective equipment. |
| Emergency procedures | : Ventilate spillage area. |

6.1.2. For emergency responders

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|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
| Emergency procedures | : Evacuate unnecessary personnel. |

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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|-------------------------|---|
| For containment | : Using a clean shovel, put the material in a dry container and cover without compressing it. |
| Methods for cleaning up | : Mechanically recover the product. |
| Other information | : Dispose of materials or solid residues at an authorized site. |

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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|-----------------------------------|---|
| Additional hazards when processed | : Not expected to present a significant hazard under anticipated conditions of normal use. |
| Precautions for safe handling | : Ensure good ventilation of the work station. Wear personal protective equipment. Protect from moisture. Avoid raising dust. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Do not breathe dust. Comply with the legal requirements. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

7.2. Conditions for safe storage, including any incompatibilities

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| Technical measures | : Keep in a cool, well-ventilated place away from heat. |
| Storage conditions | : Store at temperatures not exceeding -5 to 40 °C. |
| Storage area | : Keep container tightly closed. Store in a dry area. Store at ambient temperature. Meet the legal requirements. |
| Packaging materials | : Store always product in container of same material as original container. |

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Germany

Storage class (LGK, TRGS 510)

Joint storage table

: LGK 13 - Non-combustible solids

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for

Joint storage with restrictions permitted for

Joint storage permitted for

: LGK 1, LGK 6.2, LGK 7

: LGK 4.1A, LGK 5.1C

: LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

Switzerland

Storage class (LK)

: NG - Non-hazardous

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

SeaRx (Soluble seaweed powder)	
PNEC (Water)	
PNEC aqua (freshwater)	65.3 µg/L
PNEC aqua (marine water)	6.53 µg/L
PNEC aqua (intermittent, freshwater)	653 µg/L
PNEC (Soil)	
PNEC soil	4.7 µg/kg dw
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment: Wear recommended personal protective equipment.

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Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Safety glasses

8.2.2.2. Skin protection

Skin and body protection: Wear suitable protective clothing

Hand protection: Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Consumer exposure controls:

The substance is not classified for human health hazards or for environment effects and it is not PBT or vPvB so that no exposure assessment or risk characterisation is required. For tasks where the intervention of workers is required, the substance must be handled in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Black
Appearance	: Flakes
Odour	: Marine
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not applicable
Boiling point	: Not applicable
Flammability	: Non flammable
Explosive properties	: Not explosive
Oxidising properties	: Not oxidising
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: 10 – 10.5
pH solution concentration	: 1 %
Viscosity, kinematic	: Not applicable
Solubility	: Soluble in water
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 0.5 – 0.75 g/cm ³
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Acadian® Soluble Seaweed Powder 0.5-0-14.1	
LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 inhalation - rat (dust/mist)	> 2.88 mg/l/4h

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met). pH: 10 – 10.5
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met). pH: 10 – 10.5
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

11.2. Information on other hazards

No additional information available

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Ascophyllum nodosum, extract (84775-78-0)

LC50 - fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, <i>Danio rerio</i> , Static system, Fresh water, Experimental value, GLP)
EC50 72h - algae [2]	> 100 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

SeaRx (Soluble seaweed powder)

Persistence and degradability	Not rapidly degradable
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Ascophyllum nodosum, extract (84775-78-0)

Persistence and degradability	Not readily biodegradable in water
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12.3. Bioaccumulative potential

Ascophyllum nodosum, extract (84775-78-0)

Partition coefficient n-octanol/water (Log Pow)	≤ 3.3 (Weight of evidence approach, EU Method A.8: Partition Coefficient, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4)

12.4. Mobility in soil

Ascophyllum nodosum, extract (84775-78-0)

Surface tension	51.1 mN/m (20 °C, 1 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Ecology - soil	No (test) data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	<i>Ascophyllum nodosum</i> , extract (84775-78-0)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	<i>Ascophyllum nodosum</i> , extract (84775-78-0)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

- | | |
|--|---|
| Employment restrictions | : Observe restrictions according to the Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according to the Act on the Protection of Young People in Employment (JArbSchG). |
| Water hazard class (WGK) | : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 10675). |
| Hazardous Incident Ordinance (12. BImSchV) | : Is not subject to the Hazardous Incident Ordinance (12. BImSchV) |

Netherlands

- | | |
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| ABM category | : A(4) - low hazard for aquatic organisms, may have long-term hazardous effects in aquatic environment |
| SZW-lijst van kankerverwekkende stoffen | : The substance is not listed |
| SZW-lijst van mutagene stoffen | : The substance is not listed |
| SZW-lijst van reprotoxische stoffen – Borstvoeding | : The substance is not listed |
| SZW-lijst van reprotoxische stoffen – Vruchtbaarheid | : The substance is not listed |
| SZW-lijst van reprotoxische stoffen – Ontwikkeling | : The substance is not listed |

Denmark

- | | |
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| MAL code | : 00-3 (Executive Order No. 301 from 1993) |
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15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect Level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.