



# SAFETY DATA SHEET

## SYMBIO 50% SEAWEED

SDS COMPLETED 8<sup>TH</sup> JUNE 2015

VERSION 01  
REVISION NUMBER: N/A

In accordance with Regulations (EC) n° 1907/2006, (EC) n° 1272/2008 and (EU) n° 453/2010 (Annex I)

### 1 IDENTIFICATION OF SUBSTANCE AND COMPANY

#### 1.1. Substance identifier

Substance name: **Ascophyllum nodosum, extract**  
Product name: Symbio 50% Seaweed  
CAS number: 84775-78-0  
CAS name: Ascophyllum nodosum, ext.  
IUPAC name: Ascophyllum nodosum, extract  
REACH registration number: 01-2120070500-70-0000

#### 1.2. Relevant identified uses of the substance and uses advised against

Relevant use(s): Plant strengthener/organic fertilizer/foliar spray for use in agriculture and horticulture.  
Uses advised against: There are no evidences of uses advised against.

#### 1.3. Details of the supplier of the safety data sheet

##### Company name:

Eco Solutions (C&R) Ltd T/a Symbio  
Unit 8  
Coopers Place  
Combe Lane  
Wormley  
Surrey  
GU8 5SZ

Tel: +44 (0) 1428 685762

Fax: +44 (0)1428 685702

Email: [info@symbio.co.uk](mailto:info@symbio.co.uk)

#### 1.4. Emergency telephone number

Emergency telephone number **+44 (0) 1428 685762**

### 2 HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance

Classification of the substance in accordance with Regulation (EC) n°. 1272/2008:

Hazard class	Class code and hazard category	Hazard statement	Hazard warning
Not classified			

Classification in accordance with Directive 67/548/EEC:

Classification	Risk phrases
Not classified	

#### Potential adverse physicochemical, human health and environmental effects:

Under normal conditions of use, the substance does not cause adverse effects to humans and to the environment.  
See also sections from 9 to 12



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### 2.2 Label elements

#### - Labelling in accordance with Regulation (EC) n°. 1272/2008:

GHS Pictogram	none
Signal word	none
Hazard Statement	none
Precautionary Statement	none
Other information	If skin irritation occurs: Get medical advice/attention Avoid breathing spray Use personal protective equipment as required Keep out of the reach of children This product may stain skin upon prolonged exposure.

### 2.3 Other hazards (which do not results in the classification)

The substance does not fulfil the PBT and vPvB criteria.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

#### Description:

Name of the component	Ascophyllum nodosum extract
Concentration	50% w/w soluble seaweed extract from Ascophyllum nodosum brown algae
Structural formula	Not applicable; Ascophyllum nodosum, ext. is an UVCB substance
Substance with Community OEL	NO
CAS name	Ascophyllum nodosum, ext.
CAS number	84775-78-0
IUPAC name	Ascophyllum nodosum, extract
EC number	700-983-2
Index number	n.a.

Note: Confidential business information has been omitted

#### Other information:

The substance is a UVCB substance, with a variable composition.

## 4 FIRST AID MEASURES

### 4.1 Description of the first aid measures

Under normal circumstances, the product has no harmful effect. If irritation occurs, seek medical advice.

-Eye contact: Wash immediately with large amounts of water or normal saline for  $\geq 15$  minutes. Keep eyelid open during the washing. Get medical advice if adverse symptoms will appear.

- Skin contact: Remove contaminated clothing. Wash affected area with soap or mild detergent and large amount of water. Get medical advice if adverse symptoms will appear.

- Inhalation: Move the person to fresh air. Get medical advice if adverse symptoms will appear.

- Ingestion: Rinse mouth thoroughly. Get medical advice if adverse symptoms will appear.

-First Aid Responders: Wear rubber or nitrile gloves to prevent staining of skin.

### 4.2 Most important symptoms and effects (acute and delayed)

-Acute : Inhalation: May cause irritation.

Skin: May be irritant for skin.



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Eyes: May cause irritation.

Ingestion: may be harmful.

Delayed: Delayed symptoms and effects are not known.

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

Medical monitoring: Not foreseen.

Antidotes, if known: Unknown.

## 5 FIREFIGHTING MEASURES

This substance is non-flammable and non-explosive

### 5.1 Extinguishing media

Suitable extinguishing media: Carbon dioxide, foam, powder and nebulized water.

In the event of a fire, keep containers cool with water spray. Slippery in liquid form or when mixed with water.

Unsuitable extinguishing media: Unsuitable extinguish media not known.

### 5.2 Special hazards arising from the substance

Hazardous combustion: Thermal decomposition or combustion may generate toxic and hazardous fumes of products CO<sub>x</sub>, NO<sub>x</sub>.

### 5.3 Advice for firefighters

-Technical actions for: Don't try to extinguish the fire without an autonomous respiratory device (SCBA) and protection: protective adapted clothes.

-Special protective equipment: Wear boots, overalls, gloves, eye and face protection and breathing apparatus. for firefighters: Equipment must be conformed with EN criteria and used in highest condition of protection on the basis of the information reported in the previous sub-sections. Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear.

## 6 ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel:** No action shall be taken without suitable training. Evacuate personnel to safe areas. Ventilate areas. Remove all sources of ignition.

#### For emergency responders

Stop the leak, if it can be done safely. Wear appropriate protective equipment (see Section 8) to minimize exposure to the product.

### 6.2 Environmental precautions

In case of accidental release in the environment avoid that the substance can reach drains, surface water and ground water and soil.

### 6.3 Methods and material for containment and cleaning up

- Containment techniques and clean-up procedures: Stop the spill if it can be done safely. Collect the material with mechanic means, wearing appropriate protective equipment, and store in a clean and appropriate waste disposal container. Wash the area with water.



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-Small spills	May be washed to drain.
-Large spills	Contain spill with sand, sawdust, absorbent clay or similar material. Sweep up and transfer material into labelled containers for transfer to a safe place for disposal. Flush the area with plenty of water when all the spillage has been removed. This product will stain concrete.
-Drainage	Prevent the spillage from entering watercourses, sewers or drains if possible. Inform the authorities if gross contamination of water is threatened or occurs.

### 6.4 Reference to other sections

See also section 8 and 13.

## 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Recommendations for handling: Handle in a well ventilated place.

Wear suitable personal Protection Equipment (see section 8).

Keep the substance away from drains, surface or ground waters.

If irritation occurs get medical advice/attention.

Keep out of the reach of children.

Avoid excessive handling which may cause staining of skin

Recommendations for hygiene: Do not eat, drink and smoke in the working areas. personal

Wash hands after handling the substance.

Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2. Condition for safe storage including any incompatibilities.

Recommendations for storage It can be stored for 2 years in unopened containers.

Avoid direct exposure to sunlight. Store in a cool, well ventilated, dry place.

Keep containers tightly closed. Store in containers correctly labelled. Protect from frost. Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end use(s)

Recommendations for specific end use as plant strengthener/organic fertilizer/foiar spray for use in agriculture and horticulture: avoid contact with eyes, skin and inhalation of the vapours/fume/gas/mist/spray/dust.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

- National/ European Occupational Exposure Limits Not established.

- Other National/ European Occupational Exposure Limits Not established.

- National/ European Biological Limits (BEI): Not established.

- Other National/ European Biological Limits (BEI): Not established.



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- Recommended monitoring procedures	Measurements of the substance/s in the workplace must be carried out in accordance with standardized methods described by EN guidance.
- DNEL values	<b>DNELs for workers</b> No information available
	<b>DNELs for general population</b> No information available
- PNEC values	PNEC fresh water: 65.3 µg/L
	PNEC marine water: 6.53 µg/L
	PNEC intermittent releases: 653 µg/L
	<b>PNEC water</b>
	<b>PNEC sediment</b> No information available
	<b>PNEC soil</b> PNEC: 4.7 µg/kg soil dw
	<b>PNEC for sewage treatment plant</b> PNEC - STP: 1 mg/L

### 8.2. Exposure controls

Appropriate risk management measures, that must be adopted at the workplace, have to be selected and applied, following the risks assessment carried out by the employer, in connection with his working activity (in accordance with Directive 98/24/EEC). If the results of this evaluation show that the general and collective prevention measures are not sufficient to reduce the risk, and if you cannot prevent exposure to the mixture by other means, adequate personal protective equipments must be adopted, complying with the relevant technical EN standards.

Eye/Face protection:	Wear eye protection. Eyewash facilities should be available.
Hands protection	Protective gloves, chemical-resistant according to EN 374.
Skin protection:	Wear a water impermeable bodysuit to prevent staining of skin. Person carrying out disposal should wear PVC gloves.
Respiratory protection:	Special protections are not required during the normal conditions of use. In case of handling of large quantities, wear masks with appropriate filters.
Environmental exposure controls:	Prevent the product from reaching surface water or groundwater. Check the pH and the presence of surfactants.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Appearance:	Liquid
Colour:	Black/ brown
Odour:	Marine
Odour Threshold:	Not determined
pH:	8.5 – 10.5
Melting point:	> 300 °C, no decomposition.
Initial Boiling Point/Boiling Range:	Not determined
Flash point:	not available
Octanol-water partition coefficient:	Log P = 3.3 at 22 °C
Flammability:	not flammable
Relative density:	1.22 – 1.25 at 20°C
Water solubility:	≥99.5% water soluble at 20 °C
Surface tension:	51.1 mN/m at 20°C and 1000 mg/L
Explosive properties:	non explosive



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Oxidising properties: Evaporation Rate:	non oxidizing Not determined
Upper/lower flammability or OEL:	Not determined
Vapour Pressure:	Not determined
Vapour Density:	Not determined
Decomposition Temperature:	Not determined
Auto-ignition Temperature:	550 °C
Viscosity:	<300 cP

### 9.2. Other information

Granulometry: After 5 minutes of shaking, over 93 % of the sample presents a particle size higher than 0.250 mm and no sample was found under the 0.045 mm sieve.

## 10 STABILITY AND REACTIVITY

### 10.1. Reactivity

This substance is not reactive under normal conditions of storage.

### 10.2. Chemical stability

Substance is stable under normal conditions of temperature and pressure and if it is stored in closed containers in a well ventilated and cool place.

### 10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, no hazardous reactions occur.

### 10.4. Conditions to avoid

Potential heat and ignition sources, moisture, direct sunlight, freezing.

### 10.5. Incompatible materials

Strong oxidizing and reducing agents. Do not mix with highly acidic chemicals. Oxidants and acids may cause degradation.

### 10.6. Hazardous decomposition products

Combustion may produce toxic and hazardous fumes (CO<sub>x</sub> and NO<sub>x</sub>).

## 11 INFORMATION ON TOXICOLOGICAL EFFECTS

### - Effects following the exposure:

Dermal:	may cause irritation.
Ingestion:	may cause irritation to the gastrointestinal mucous membranes.
Inhalation:	inhalation of the product may cause irritation to respiratory ways.
Contact with eyes:	may cause eye irritation.

### - Acute Toxicity



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- Oral: This information is not available.
- Dermal: This information is not available.
- Inhalation: This information is not available.
- **Skin corrosion/ irritation:** The substance is not irritant for the skin. (OECD Guideline 404)
- **Serious eye damage/ irritation:** The substance is not irritant for the eye. (OECD Guideline 405).
- **Respiratory or skin sensitisation:** This information is not available.
- **Germ cell mutagenicity:** The substance is not mutagenic in vitro test. (OECD Guideline 471 and 476)
- **Carcinogenicity:** This information is not available.
- **Reproductive toxicity:** This information is not available.
- **Repeated dose toxicity** This information is not available.

Based on the available toxicological data, Ascophyllum nodosum, extract is not classified as a specific target organ toxicant (single exposure).

- **STOT - repeated exposure:**

Based on the available toxicological data, Ascophyllum nodosum, extract is not classified as a specific target organ toxicant (repeated exposure).

- **Aspiration hazard:**

There is no human evidence that Ascophyllum nodosum, extract may cause aspiration toxicity. Therefore the substance is not classified as a Category 1 Aspiration hazard under the CLP and Harmful under DSD.

### 12 ECOLOGICAL INFORMATION

#### 12.1. Toxicity

**Fish:**

Danio rerio LC<sub>50</sub>: > 100 mg/L/96h (OECD Guideline 203 and EPA OPPTS 850.1075)

**Aquatic invertebrates:** Daphnia

Magna IC<sub>50</sub>: > 100 mg//48h (OECD Guideline 202 and EC 440/2008- Council regulation)

**Algae and aquatic plants:**

Selenastrum capricornutum EC<sub>50</sub> (yield rate): 60.35 mg/L/72 h (OECD Guideline 201)

EC<sub>50</sub> (growth rate): > 100 mg/L/72 h (OECD Guideline 201)

**Terrestrial plants** Zea mays

% inhibition (28 d): ca. 3 kg/ha length (cm) (estimated) based on: growth

% inhibition (28 d): ca. 3 kg/ha weight (g) (estimated) based on: growth

#### 12.2. Persistence and degradability

Ascophyllum nodosum, extract is readily biodegradable, even if failing the 10-days window; in fact, according to the respirometric test performed a % of biodegradation > 60% is reached within 17 days. The degradation products are naturally occurring elements. (OECD Guideline 301F and EU Method C.4-D)

#### 12.3. Bioaccumulative potential

This information is not available.

#### 12.4. Mobility in soil

This information is not available.

#### 12.5. Results of PBT e vPvB assessment



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Based on the assessment described in the subsections above the submission substance is not a PBT/ vPvB substance

### 12.6. Other adverse effects

Based on the available data, no other adverse effects are expected.

## 13 DISPOSAL CONSIDERATION

### 13.1. Waste treatment methods

Any disposal practice must be in compliance with all local, national and Community laws and regulations. Send wastes to disposal (landfill or incinerator) or recycle them. Do not dump into any sewers, on the ground, or into any body of water.

## 14 TRANSPORT INFORMATION

Not classified in accordance with ADR/RID, IMDG, IATA and DOT regulations.

## 15 REGULATORY INFORMATION

All other information on regulation are reported if not provided in other sections/subsection of the Safety Data Sheet.

### 15.1 Safety, Health and Environmental regulation/legislation specific for the substance

The substance is not the subject of provisions.

### 15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out.

## 16 OTHER INFORMATION

Revision n.08 dated 02/10/2015 (First Edition in accordance with Annex I of Regulation 453/2010/EU)

### Bibliographic sources:

Ascophyllum nodosum extract - Chemical Safety Report

### Information concerning health, safety and environment, in accordance with Regulation (EC) No. 1272/2008:

H-Statements None

P-Statements: P102: Keep out of reach of children

P261: Avoid breathing spray

P281: Use personal protective equipment as required

P332/313: If skin irritation occurs: Get medical advice/attention

### Information concerning health, safety and environment, in accordance with Directive 67/548/EEC and Regulation (EC) No 1907/2006:

R-Phrases:

None

S-Phrases:

S2: Keep out of the reach of children

S23: Do not breathe spray

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

### Acronyms

- ADR: Agreement concerning the carriage of dangerous goods by Road





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- BCF: Bioaccumulative factor
- CAS: Chemical Abstract Service (division of the American Chemical Society)
- CLP: Classification, Labelling and Packaging
- EINECS: European Inventory of existing Commercial Substances
- GHS: Globally Harmonised System
- IATA: International Air Transport Association Code
- IMDG: International Maritime Dangerous Goods Code
- IUPAC: International Union of Pure and Applied Chemistry
- N.A.: Not Applicable
- N.A.: Not Available
- NOAEL: No Observed Adverse Effect Level)
- PPE: Personal protective Equipment
- PBT: Persistent, Bioaccumulative and Toxic substances
- RID: Regulation concerning the International carriage of Dangerous goods by rail
- STOT: Specific Target Organ Toxicity
- TLV/TWA: Threshold Limit Value/Threshold Weighted Average
- vPvB: very Persistent, very Bioaccumulative
- **Restriction of use:** None
- **Substance under authorisation:** No

### Disclaimer

The information in this SDS was obtained from sources which we believe to be reliable. Symbio provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate handling of the product by properly trained and qualified personnel. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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