Stimulates growth, increases flowering and aids fruit set

Improves tolerance to heat, drought and frost

Increases natural resistance to insect and fungal attack

Is a natural food source for soil flora and fauna

Optimises balanced plant nutrition with a full range of organic trace elements
Seasol is a 100% organic extract that provides a synergistic range of natural compounds and trace elements derived from a blend of the finest brown kelps from around the world. King Island Bull Kelp, *Durvillaea potatorum* from the waters of northwest Tasmania and Knotted Kelp *Ascophyllum nodosum* from the North Atlantic Ocean. The processing plant used to extract the liquid concentrate is the only one of its type in the world and the manufacturing process is also unique and maximises the extraction of plant essential compounds.

Seasol has been manufactured in Tasmania since the 1970’s. The company has expanded significantly over the years, with huge growth into the horticultural and agricultural markets.

**Seasol – Benefits in brief:**

- **Seasol** increases cell division, stimulating plant and root growth, bud set and extending flowering periods.
- **Seasol** improves fruit set and quality. The use of Seasol as an organic health tonic significantly improves the benefits of a balanced nutritional program for optimising fruit set and delivering more consistent yields, year after year.
- **Seasol** enhances the sugar content in some fruits and treated plants show higher brix readings.
- **Seasol** improves plant establishment. Seasol stimulates root growth needed for rapid establishment of new plantings and reduces the effects of transplant shock.
- **Seasol** enhances cell turgidity resulting in crops which can better withstand adverse environmental conditions such as heat, drought and frost
- **Seasol** increases natural resistance to insect and fungal attack.
- **Seasol** contains virtually no nitrogen or phosphorus, so will not interfere with other nutritional inputs and can be used all year round.
- **Seasol** can be used every 4 - 6 weeks during the growing season as a general plant conditioner and tonic to aid in optimising plant health, flowering and fruit production.
**Seasol Commercial**  
**Seaweed Concentrate**

**typical analysis :**
- Total Nitrogen: 0.13% w/w
- Phosphorus: 0.17% w/w
- Potassium (K): 2.8% w/w
- Chloride (Cl): 0.33% w/w
- Calcium (Ca): 0.098% w/w
- Magnesium (Mg): 0.04% w/w
- Sulphur (S): 0.2% w/w
- Sodium (Na): 0.9% w/w
- Cobalt (Co): 0.40 p.p.m
- Boron (B): 13 p.p.m
- Iron (Fe): 300 p.p.m
- Fluoride (F): 24 p.p.m
- Manganese (Mn): 5.4 p.p.m
- Zinc (Zn): 32 p.p.m
- Copper (Cu): 0.64 p.p.m
- Nickel (Ni): 2.0 p.p.m
- Molybdenum (Mo): 3 p.p.m
- Aluminium (Al): 30 p.p.m
- Selenium (Se): 0.02 p.p.m
- pH value: 9.5 – 10.5
- Specific gravity: 1.08
- Solids: 16% w/w

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**Recommended application rates :**

**Note :** The following is a generalised program for the application of Seasol, details may vary to suit individual production systems. Please check the Seasol Technical Bulletin pertaining to the individual crop or contact your local territory manager  Toll free on 1800 214 882.

- **Vegetables:** 3-4 L/ha  
- **Olives:** 3-4 L/ha  
- **Stone fruit:** 3-4 L/ha  
- **Nursery:** 1 :500 solution  
- **Wine grapes:** 3-4 L/ha  
- **Strawberries:** 1:1000 solution  
- **Citrus:** 3-4 L/ha  
- **Cut flowers:** 1:1000 solution  
- **Pasture:** 3-4 L/ha  
- **Turf & lawns:** 1:250 solution  
- **Potatoes:** 3-4 L/ha  
- **Transplanting:** 1:500 solution  
- **Frost protection & heat stress:** 3-5 L/ha

**Note:** This product is safe to use on Australian natives. The commercial strength Seasol is double the concentration of the retail product.

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**Improved plant establishment**
Seasol provides a synergistic range of natural compounds and trace elements which stimulate root growth, needed for rapid establishment of new plantings. Seasol reduces transplant shock by increasing root growth giving the plant the ability to better access moisture and nutrients from the soil.

**Heat & drought tolerance**
Seasol significantly increases heat & drought tolerance of the plants, by reducing transpiration / water loss from the plant cells. It can even reverse the effects of dehydration after a single foliar application.

**Frost tolerance**
Seasol reduces frost damage, by lowering the temperature at which plant cells will freeze. This ‘anti-freeze’ effect reduces tree damage and hastens the return to productive growth once the temperature improves.
Seasol can be used as a foliar application or applied directly to the soil. Seasol can be applied through boom sprays, air blasters, drip system, travelling irrigators and centre pivots. Seasol can be mixed with many agricultural chemicals. Compatibility of any chemical should be checked first. Once diluted Seasol should be used within 24 hours.

**COMPATIBLE:**
- Wettable Sulphur.
- Copper Fungicides.
- Mancozeb, Trace Elements
- N.P.K.s except Ca & P
- Wettable Powders.
- Wettable Granules.
- Flowable Liquids.
- Dry Flowables.

**NON COMPATIBLE:**
- Emulsifiable Concentrates.
- Calcium & Phosphorous.
- Oil based Wetters.
- Winter/Summer Oils.

The Company:
Seasol International is dedicated to the manufacture and marketing of organically based horticultural products. We are committed to environmentally friendly products offering a viable alternative to traditional chemical fertilising practices. In the past, many of the traditional practices, whilst providing a fertilising solution for many growers, have also led to damage to the ecosystem. Seasol will continually strive to be at the forefront of innovation in this field, constantly searching for better, safer and more sustainable solutions for plant health in commercial markets.

Wherever you are, whatever you grow, our products will make a difference.

**Proudly Distributed by:**
and all good independent rural stores.

Seasol International Pty Ltd
1027 Mountain Highway (PO Box 160)
Bayswater, Victoria, Australia 3153
Tel: (61 3) 9729 6511  Fax: (61 3) 9720 4792
Toll Free: 1800 214 882
Email: commercial@seasol.com.au
Website: www.commercial.seasol.com.au

Seasol® Proven by science...Confirmed in the paddock!
100% AUSTRALIAN OWNED AND MANUFACTURED
Seasol Seaweed Concentrate

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Seasol Seaweed Concentrate

Synonym: Seasol Liquid Seaweed

Use: Seasol seaweed concentrate, soil revitaliser and plant tonic.

SEASOL INTERNATIONAL PTY LTD
1027 Mountain Highway
BAYSWER VICTORIA 3153
Tel: +61 3 9729 6511
Toll Free: 1800 335 508 (Australia Only)
Web: www.seasol.com.au

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC/NOHSC/EU CRITERIA

Hazard Category: None allocated

Hazard Classification: NON-HAZARDOUS SUBSTANCE, NON-DANGEROUS GOODS

RISK PHRASES
None allocated

SAFETY PHRASES
None allocated

Road Transport (ADR/RID)
UN Number: None allocated
Proper Shipping Name: NONE ALLOCATED
Dangerous Goods Class: None allocated
Packing Group: None allocated

Air Transport (IATA/ICAO)
UN Number: None allocated
Proper Shipping Name: NONE ALLOCATED
Dangerous Goods Class: None allocated
Packing Group: None allocated

Poison Schedule: None allocated [Aust].

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>SUBSTANCE NAME</th>
<th>Proportion</th>
<th>CAS Number</th>
</tr>
</thead>
</table>

All ingredients not hazardous according to ASCC/NOHSC/EU Criteria.

4. FIRST AID MEASURES

Swallowed:
If swallowed, **DO NOT** induce vomiting. If conscious, rinse mouth with water.

Eye:
If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or at least 15 minutes.

Skin:
If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.
4. FIRST AID MEASURES (Continued)

Inhaled:
Move victim to fresh air. Apply resuscitation if victim is not breathing.

First Aid Facilities:
Eye wash fountain, safety shower and normal wash room facilities.

Advice to Doctor:
Treat symptomatically.
In case of poisoning, contact Poisons Information Centre
In Australia call Tel: 13 1126
In New Zealand Tel: 034747000

5. FIRE-FIGHTING MEASURES

Fire/Explosion Hazard
If safe to do so, move undamaged containers from fire area.

Suitable Extinguishing Media: Use extinguishing media suitable for surrounding fire situation.

Hazards From Combustion Products: Decomposes on heating emitting oxides of carbon and small quantities of noxious smoke.

Precautions for Fire Fighters and Special Protective Equipment: Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.

HAZCHEM CODE: None allocated [Aust]

FLAMMABILITY
This material is not a flammable or combustible liquid.

Flash Point: Not applicable, water content interferes with flash point.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:
Very low hazard product. If product spills onto floors it will represent a slip hazard, walk cautiously. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS.

Methods and Materials for Containment and Clean Up Procedures:
Assess situation, if possible, use a wet-dry vacuum system and collect all the spill, if the site of the spill is not contaminated with other chemicals, then consider using the collected spill, suitably diluted on vegetation, plants and trees.

Otherwise, if a large spill occurs, bund area, throw absorbent (diatomaceous earth or other inert material) on top of spill, ALLOW TO ABSORB, then shovel up and seal in properly labeled containers for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling:
Very low hazard product, do not store for long periods at -10°C - 40°C. Store in a cool place and out of direct sunlight. For further information please refer to the Engineering Controls of this MSDS.

Conditions for Safe Storage:
Keep containers tightly closed, when not using this product. Store in original packages as approved by manufacturer.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

No exposure standards have been assigned by [NOHSC] for this product or any of the components:

Engineering Controls
Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate.

Personal Protection Equipment

GLOVES: The use of neoprene or nitrile is recommended.

EYES: Chemical goggles or spectacles with side shields to protect eyes.

RESPIRATORY PROTECTION: Not normally required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark brown coloured liquid with seaside like odour.

Boiling Point: Not available.

Vapour Pressure: Not available.

Density: 1.00 - 1.10 g/cm³

Flash Point: Not applicable, water content interferes with flash point.

Flammability Limits: Not available.

Solubility in Water: Completely soluble.

Other Properties

pH: 9.5 - 10.5

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:
Stable under normal conditions of use.

CONDITIONS TO AVOID:
Ignition sources and mixing with incompatibles.

INCOMPATIBLE MATERIALS:
Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:
Decomposes on heating emitting oxides of carbon and small quantities of noxious smoke.

HAZARDOUS REACTIONS:
Will not occur.

11. TOXICOLOGICAL INFORMATION

No adverse health effects are expected, if the product is handled in accordance with this Material Safety Data Sheet and the product label. Symptoms and effects that may arise if the product is mishandled and overexposure occurs are:

ACUTE HEALTH EFFECTS:

Swallowed:
Swallowing large quantities may cause irritation, leading to pains in the stomach, nausea, vomiting and possible diarrhoea.

Eye:
May cause mild irritation to the eyes.

Skin:
May cause mild irritation to the skin.
11. TOXICOLOGICAL INFORMATION (Continued)

Inhaled:
Mists from the product may cause mild irritation.

Chronic:
Prolonged exposure may cause drying and potential redness of the skin in some susceptible individuals.

12. ECOLOGICAL INFORMATION

There is no ecological information available for this product, however, large quantities should not be discharged into drains, sewers or waterways.

13. DISPOSAL CONSIDERATIONS

Seasol is non-toxic and safe to use as recommended by the manufacturer's instructions. Instead of disposal, consider the environment and use to nurture all vegetables, vegetation and trees.

14. TRANSPORT INFORMATION

Road Transport (ADR/RID)
UN Number: None allocated
Proper Shipping Name: NONE ALLOCATED
Dangerous Goods Class: None allocated
Packing Group: None allocated

Air Transport (IATA/ICAO)
UN Number: None allocated
Proper Shipping Name: NONE ALLOCATED
Dangerous Goods Class: None allocated
Packing Group: None allocated

Sea Transport (IMDG)
UN Number: None allocated
Proper Shipping Name: NONE ALLOCATED
Dangerous Goods Class: None allocated
Packing Group: None allocated

15. REGULATORY INFORMATION

Poison Schedule: None allocated [Aust]

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia (AICS)</td>
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</tr>
<tr>
<td>United States (TSCA)</td>
<td>Y</td>
</tr>
<tr>
<td>Europe (EINECS/ELINCS)</td>
<td>Y</td>
</tr>
</tbody>
</table>

Y = all ingredients are on the inventory.

EU Label: None allocated
Material Safety Data Sheet
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Seasol Seaweed Concentrate

16. OTHER INFORMATION

Date of Preparation:

Issue date: March 30, 2009

Reasons for Update:

2. Additional information supplied by manufacturer.

Key Legend Information:

NOHSC - National Occupational Health & Safety Commission  {Formerly Worksafe}[Aust]
ASCC - Australian Safety and Compensation Council [Aust]
SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]
TWA - Time Weighted Average [Int]
STEL - Short Term Exposure Limit [Int]
AICS - Australian Inventory of Chemical Substances
EPA - Environmental Protection Agency [Int]
NIOSH - National Institute for Occupational Safety and Health [US]
TSCA - Toxic Substances Control Act [US]
OSHA - Occupational Safety and Health Administration [US]
AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]
Hazchem Code - Fire fighters designation [Aust]
IATA - International Aviation Transport Authority [Int]
ICAO - International Civil Aviation Organization [Int]
IMO - International Maritime Organisation. [Int]
IMDG - International Maritime Dangerous Goods [Int]
United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals. [Int]
EINECS - European Inventory of Existing Commercial Chemical Substances. [Int]
ELINCS - European List of Notified Chemical Substances. [Int]
EU - European Union [Int]
ADR/RID - European Road & Rail Transport Union - [Int]

EU Directives: The classification criteria used, are adopted from the European Community's (EC) legislation for classifying dangerous substances. The criteria are taken from:


[Aust/NZ] = Australian New Zealand
[Int] = International
[US] = United States of America

Principal References:
Information supplied by manufacturer, reference sources including the public domain.

END OF MSDS