Safety Data Sheet
VitaLink Chill

Date: 17.12.2014
Revision Date: N/A
Version: 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Substance or preparation trade name: VitaLink Chill
REACH Registered number(s): N/A
CAS number: N/A
EINECS number: N/A
Synonyms:N/A

1.2 Relevant identified use of the substance or mixture and uses advised

Use of substance/mixture: Plant Bio stimulant that acts to protect against heat stress.
Dose: 3-5 ml/10L, use with main nutrient. Always add to fresh solution.
Foliar application: 5 ml/L, apply lightly as a fine mist. NEVER spray to run off.

1.3 Company/undertaking name and address:

Company Name: Hydrogarden Wholesales Ltd
Unit 2 Progress Way
Binley
Coventry
CV3 2NT
Telephone: +44(0)2476 651500
Fax: +44(0) 2476 651060
E-mail: info@hydrogarden.co.uk

1.4 Emergency telephone number:

Emergency telephone number: +44 (0) 2476651500

Opening hours: 8.30am -5.00pm Mon-Thurs, 8.30am - 4.00pm Fri.

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

2.1.1 classification according to Regulation (EC) No 1272/2008 (CLP):

Non Hazardous

2.1.2 Classification according to Directive 67/548/EEC (See SECTION 16 for full text of risk phrases)

does not meet the criteria for classification in accordance with Directive 67/548/EEC

2.1.3 Additional information:

For full text of R-phrases and Hazard and EU hazard statements see SECTION 16.

2.2 Label Elements

Label elements under CLP: None

Hazard Statements: N/A

Signal Words: N/A

Hazard Pictograms: N/A

Precautionary Statements: N/A

2.3 Other Hazards

Supplemental hazard information: Not applicable

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Substance or preparation trade name: VitaLink Chill.

Description of the mixture: Solution containing seaweed extract, betaines, amino acids, Vitamin B1 and trace elements.

Hazardous Ingredients: Listed in table below.
None of the ingredients are included in high enough concentrations to be classified under CLP regulations

Name	Cas No	EC No	Reach Registration No.	% (weight)	Classification according to 67/548/EEC	Classification according to Regulation EC No 1278/2008 (CLP)
Betaine HCl	590-46-5	209-683-1	/	0.5	Eye Irritant Cat 2. H319 Causes serious eye irritation	R36: Irritating to eyes.
Disodium Octoborate Tetrahydrate	12280-03-4	234-541-0	/	0.7	Reproductive toxicity (Cat 1B), H360FD	R60: May impair fertility. R61: May cause harm to the unborn child.
Citric Acid monohydrate	5949-29-1	201-069-1	/	1.0	Eye Irritant Cat 2. H319 Causes serious eye irritation	R36: Irritating to eyes.
Copper Suphate pentahydrate	7758-99-8	231-847-6	/	0.2	Acute toxicity, Oral (Cat 4), H302 Eye irritant (Cat 2), H319 Skin irritant (Cat 2), H315 Acute aquatic toxicity (Cat 1), H400 Chronic aquatic toxicity (Cat 1), H410	R22: Harmful if swallowed. R36/38: Irritating to eyes and skin. R50/53: Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment
Ferrous Sulphate Heptahydrate	7782-63-0	231-753-5	/	0.2	Acute toxicity, Oral (Category 4), H302 Skin irritation (Category 2), H315	R22: Harmful if swallowed.

					Eye irritation (Category 2), H319	
Manganese Sulphate Monohydrate	10034-96-5	232-089-9	/	0.8	Specific target organ toxicity - repeated exposure (Category 2) Chronic aquatic toxicity (Category 2) H373 H411	R20/22: Harmful by inhalation and if swallowed R48: Danger of serious damage to health by prolonged exposure. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Zinc sulphate Monohydrate	7446-19-7	231-793-3	/	0.7	Acute aquatic toxicity (Cat 1) Chronic aquatic toxicity (Cat 1) Acute toxicity, Oral (Cat 4) Serious eye damage (Cat 1) Acute aquatic toxicity (Cat 1) H302 H318 H410	R22: Harmful if swallowed. R41: Risk of serious damage to eyes. R50/53: Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.
Sodium Benzoate	532-32-1	208-534-8	/	0.1	Eye irritation (Category 2), H319	R36: Irritating to eyes.

% Contents:

Seaweed 5%
Nitrogen 2%
Sulphur 2.0 - 5.0%
Carbon 1.25%
Copper 0.05%
Manganese 0.1%
Magnesium 0.3%
Boron 0.05 - 0.15%
Iron 0.04 – 0.2%
Zinc 0.25 – 0.5%
Also contains gibberelins and auxins, betaines, amino acids and vitamin B1.

Content of Hazardous Elements Declaration for Czech Republic:
All hazardous elements are below the limits specified (Cadmium <1 mg/kg, Arsenic <10mg/kg, Chromium <50mg/kg, Lead <10 mg/kg and Mercury <1 mg/kg).

SECTION 4: First Aid Measures

4.1 Description of first aid measures

General notes:

Following Skin contact: IMMEDIATELY IRRIGATE WITH CLEAN WATER. If irritation persists seek medical attention.

Following Eye contact: IMMEDIATELY IRRIGATE WITH EYEWASH OR CLEAN WATER FOR 15 MINS. Cold water must be used. Seek medical aid.

Following Ingestion: SEEK MEDICAL ATTENTION DISPLAY LABEL WHERE POSSIBLE. Never give anything by mouth to unconscious person. Do not induce vomiting.

Self –protection of the first aider: No special protection required. Advise to wear gloves to avoid skin contact whilst treating patient.

4.2 Most important symptoms and effects, both acute and delayed

Delayed/immediate effects: No known effects.

4.3 Indication of any immediate medical attention/special treatment

Immediate/special treatment: See first aid treatment in section 4.1. No special treatment required.

SECTION 5: Fire fighting measures

5.1 Extinguishing media

Extinguishing media: Product not flammable. Use correct extinguishing media for surrounding material.

Unsuitable extinguishing media: not applicable

5.2 Special hazards arising from the substance or mixture

Exposure Hazards: toxic fumes of sulphur dioxide may be produced upon decomposition.

5.3 Advice for fire-fighters

Advice for fire-fighters: toxic fumes of sulphur dioxide may be produced upon decomposition. Use breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 for non-emergency personnel:

Personal Precautions: ensure PVC or rubber gloves and goggles are worn during clean up.

Protective equipment: gloves and goggles.

Emergency procedures: do not allow the liquid to enter drains or water courses.

6.1.2 for emergency responders:

Advice for fire fighters: toxic fumes of sulphur dioxide may be produced upon decomposition. Use breathing apparatus.

6.2 Environmental precautions

Environmental precautions: do not allow the liquid to enter drains or water courses.

6.3 Methods and material for containment and cleaning up

6.3.1 Methods for spill containment: Store in a bunded area, cover nearby drains.

6.3.2 Clean-up procedures: Absorb onto sand, earth or other suitable absorbent material.

6.4 References to other sections

Reference to other sections: refer to section 8 of SDS.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures: wear gloves and goggles in case of splashes

Measures to prevent fire: not applicable

Measures to prevent aerosol and dust generation: not applicable

Measures to protect the environment: do not allow to enter drains or water courses.

Advice on general occupational hygiene: prevent contact with eyes, skin and clothing. Wash hands after handling.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions: store between 5-25°C and away from direct sunlight. Keep out of reach of children.

Suitable packaging: store in original packaging only.

Storage class: n/a

Further information on storage conditions: none

7.3 Specific end use(s)

Recommendations: Shake well before use. Always use diluted. Dose: 3-5ml/10L, use with main nutrient. Always add to fresh solution. VitaLink Chill has a cumulative effect, when used regularly, your plants will be more tolerant to high temperatures.
When a sudden temperature rise occurs VitaLink Chill can be used as a foliar spray for fast protection. Use at 5ml/L as a fine mist, do not spray to run off. This will not be as effective as regular preventative usage but it can help you to salvage your crops.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Em
plo
y good industrial hygiene practice.

Hazardous ingredients: no hazardous ingredients at concentrations requiring classification according to CLP (Regulation (EC) No 1272/2008).

Workplace exposure limits: n/a

8.2 Exposure controls

8.2.1 Engineering measures: none required

Mixture related measures to prevent exposure during identified uses: n/a

8.2.2 Personal protective equipment:

Respiratory protection: not applicable

Hand protection: gloves

Eye protection: safety glasses or goggles

Skin protection: gloves/long sleeves

8.2.3 Environmental exposure controls: do not allow spills to enter drains. Use bunding or store away from drains.

Mixture related measures to prevent exposure: no specific measures for mixtures.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: brown
State: liquid
Odour: woody/molasses
pH: 4.2-4.6
Melting/freezing point: unknown
Boiling point: unknown
Flash point: unknown
Evaporation rate: unknown
Flammability: not flammable
Vapour pressure: unknown
Vapour density: unknown

Relative density: 1.26 g/cm^3
Viscosity: unknown
Oxidising properties: unknown
Explosive properties: unknown
Solubility in water: 100% soluble

9.2 Other information

Other information: None

SECTION 10: Stability and reactivity

10.1 Reactivity

Reactivity: no data available.

10.2 Chemical stability

Chemical stability: Under storage at normal ambient temperatures (7-30°C) the product is stable.

10.3 Possibility of hazardous reactions

Hazardous reactions: No data available.

10.4 Conditions to avoid

Conditions to avoid: Low or high temperatures may impair the product**.** Store between 5-25°C and out of direct sunlight.

10.5 Incompatible materials

Materials to avoid: Ammonium thiosulphate. Strong reducing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products: toxic fumes of sulphur dioxide may be produced upon decomposition.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute Toxicity: no toxic effects
Irritation: not toxic, irritation may occur
Corrosivity: no toxic effects
Sensitization: not toxic, irritation may occur
Repeated dose toxicity: no toxic effects
Mutagenicity: no toxic effects
Carcinogenicity: no toxic effects
Reproductive toxicity: not a known reproductive toxin.

SECTION 12: Ecological information

12.1 Toxicity

Ecotoxicity values: no specific information available

12.2 Persistence and degradability

Persistence and degradability: biologically degradable

12.3 Bioaccumulative potential

Bioaccumulative potential: ingredients not bioaccumulative

12.4 Mobility in soil

Mobility: no specific data available

12.5 Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT or vPvB substance.

12.6 Other adverse effects

Other adverse effects: none known

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Product/packaging disposal: Dispose of packaging and contents in accordance with local/national regulations

Waste codes/waste designations according to LoW: None

13.1.2 Waste treatment – relevant information: dispose of at local waste disposal site in accordance with local regulations.

13.1.2 Sewage disposal – relevant information: waste should not be released to sewers.

13.1.4 Other disposal recommendations: none

SECTION 14: Transport information

UN number: not classified according to ADR, non hazardous for transport

14.2 UN proper shipping name

Shipping name: not classified as hazardous for transport

14.3 Transport hazard class(es)

Transport class: not classified as hazardous for transport

14.4 Packing group

Packing group: not applicable

14.5 Environmental hazards

Environmentally hazardous: Not classified as environmentally hazardous.

Marine Pollutant: Not a marine pollutant

14.6 Special precautions for user

Special precautions: none

Tunnel code: not applicable

Transport category: not applicable

SECTION 15: Regulatory information

15.1 Safety, health and Environmental regulations/legislation specific for the mixture

EU regulations: not applicable

Authorisations and/or restrictions on use: none

Specific regulations: not applicable

15.2 Chemical safety assessment

Chemical safety assessment: a COSHH assessment has been carried out for the substance or mixture by the supplier

SECTION 16: Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010 and EC Regulation No 1272/2008.

MSDS sheets from Sigma Aldrich:

- Betaine Hydrochloride – Product No. B3501.
- Citric Acid Monohydrate - Product No. – C1909
- Copper (II) Sulphate Pentahydrate- Product No. -209198
- Iron (II) Sulphate Heptahydrate – Product No. – 215422
- Manganese (II) Sulphate Monohydrate- Product No.- M7634
- Zinc Sulphate Monohydrate- Product No.-96495
- Sodium Benzoate – Product No.-71295
- Boric Acid – Product No.-B6768

*Indicates text in the SDS which has been changed since the last revision

Phrases used in Section 2 and Section 3:

H319 Causes serious eye irritation
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H360FD May damage fertility. May damage the unborn child.

R20/22: Harmful by inhalation and if swallowed.
R22: Harmful if swallowed.
R36: Irritating to eyes.
R36/38: Irritating to eyes and skin.
R41: Risk of serious damage to eyes.
R48: Danger of serious damage to health by prolonged exposure.
R50/53: Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60: May impair fertility.
R61: May cause harm to the unborn child.

Legal Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall only be used as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.