



GROWING-UP INTERNATIONAL CORP.



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Material Safety Data Sheet

1. PRODUCT NAME: Link-Chitosan (item#GU-10803)

Product use: used for spraying water on plants.

For pest control, for controlling bacteria

(Be classified in the exempted pesticides registration of plant protection material.)

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product is to be considered as a substance in conformance to EC directives

Registration ingredients: Chitosan, Trehalose.

Composition / Information on Ingredients:

= Guaranty Active Ingredients (A.I.):

Active Ingredients Name	%w/w	CAS#	EINECS#	ICSC#	Hazard classification	Danger warning
Chitosan	5%	9012-76-4	222-311-2	-----	No	No
Trehalose	20%	99-20-7	202-739-6	-----	No	No
Water	75%	7732-18-5	231-791-2	-----	No	No

3. HAZARDS IDENTIFICATION

Light sweet transparent yellowish-brown liquid.

Hazardous Substance Identification System (HMIS) Level: Health=0 Fire=0 Body hazard=0

NFPA rating: Health=0 Fire=0 Instability=0

(0=minimum hazard, 1=minor hazard, 2=moderate hazard, 3=Severe hazard, 4=Extremely harmful)

Emergency Overview: This product is mainly used in the plant surface mixed with water spray. It is expected to contact the hair and skin. No abnormal hazards are expected.**European Union Classification (1999/45/EC):** Not classified as a hazardous substance or preparation.

The subject matter is not subject to the directives for classification and labeling of hazardous substances. (1999/45/EC)

US Occupational Safety and Health Administration classification (29CFR1910.1200): Non-hazardous**Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification:** Non-hazardous

EU grade and danger phrases as a reference

Xi irritant

R36/38 Irritating to eyes and skin

4. FIRST AID MEASURES

<p><u>Inhalation</u>: Move to fresh air. If you have a cough, shortness of breath or other breathing problems, consult your doctor.</p> <p><u>Skin contact</u>: Wash with water. This product is intended for use on plants. If redness, swelling, itching or burning occurs, then consult a doctor.</p> <p><u>Eye contact</u>: Rinse immediately with plenty of water, including inside the eyelids, for at least 15 minutes. Get medical attention if irritation persists.</p> <p><u>Swallow</u>: Call your doctor or poison control center immediately. Do not induce vomiting by hand. Drink 1 cup or 2 cups of water. Never give any food to an unconscious patient.</p>															
5. FIRE-FIGHTING MEASURES															
<p><u>Suitable extinguishing media</u>: water, water mist, foam, carbon dioxide, chemical dry powder.</p> <p><u>Special firefighting steps</u>: No.</p> <p><u>General fire and explosion hazards</u>: None.</p> <p><u>Hazardous combustion products</u>: carbon monoxide, carbon dioxide.</p> <p><u>Protective equipment</u>: Use self-contained respiratory equipment.</p>															
6. ACCIDENTAL LEAKAGE MEASURES															
Excess material is removed and placed in a container for recycling, reuse or disposal. Follow all central and local regulation.															
7. HANDLING AND STORAGE															
<p>Avoid contact with the eyes. Avoid sparks, flames and overheating.</p> <p><u>Handling</u>: Wash exposed skin surfaces before smoking, drinking or eating.</p> <p><u>Fire and explosion</u>: No specific recommendations.</p> <p><u>Storage requirements</u>: Store in a cool, dry, well-ventilated place. Recommended storage temperature is 40°F - 100°F (5°C – 37°C).</p> <p><u>Other information</u>: Keep container tightly closed and dry when not in use.</p>															
8. EXPOSURE CONTROLS/PERSONAL PROTECTION															
<p>The total mixture currently does not have an exposure limit for this product internationally. For the latest limits, please contact your local authorities.</p> <table> <tr> <td>Engineering controls</td><td>No specific recommendations</td></tr> <tr> <td>Exposure limits</td><td>No exposure limits have been established for this material</td></tr> <tr> <td>Personal protection</td><td></td></tr> <tr> <td>Respiratory</td><td>Use appropriate U.S. NIOSH/MSHA, approved equipment.</td></tr> <tr> <td>Hand</td><td>Wear suitable gloves</td></tr> <tr> <td>Eye</td><td>Wear eye/face protection</td></tr> <tr> <td>Skin and body</td><td>The usual precautions for handling chemicals should be observed For large-scale processing, it is recommended to wash your hands frequently and use general body protective clothing, safety goggles and gloves as a good industrial hygiene regulation.</td></tr> </table>		Engineering controls	No specific recommendations	Exposure limits	No exposure limits have been established for this material	Personal protection		Respiratory	Use appropriate U.S. NIOSH/MSHA, approved equipment.	Hand	Wear suitable gloves	Eye	Wear eye/face protection	Skin and body	The usual precautions for handling chemicals should be observed For large-scale processing, it is recommended to wash your hands frequently and use general body protective clothing, safety goggles and gloves as a good industrial hygiene regulation.
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9. PHYSICAL AND CHEMICAL PROPERTIES															

Appearance & Odor: Transparent and tasteless liquid
Boiling point/range: >300°C
Melting point/range: Decomposes without melting
Specific gravity (water = 1): 0.66 ± 0.01
Vapor pressure: No
Vapor density (air = 1): No
Solubility: unknown
pH value: 6.5±0.2
Separation factor (n-octanol/water): Do not have
Evaporation rate (butyl acetate = 1): No
Volatile volume percentage (%): Do not have
Volatile Organic Carbon Compound (VOC) (g/L): No
Flash point: No
Freezing point: No
Flammability limit in air % (volume):
 LEL (lower limit): not applicable UEL (upper limit): not applicable
Water/oil partition coefficient: Not applicable
Viscosity: not relevant
Auto ignition temperature: not determined
Explosive properties: not relevant
Oxidizing properties: not applicable
Other information: decomposition temperature: >300°C

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage and handling conditions (see section 7)
Conditions to avoid: none known
Materials to avoid: none known
Hazardous decomposition products: carbon monoxide, carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Inhalation: no obvious symptoms
Skin contact: The skin test did not show the possibility of irritation to human skin. Not expected to be a sensitizer.
Eye contact: May cause mild irritation.
Edible: Not intended for consumption, but no abnormal hazard is expected.
Chronic toxicity: currently unknown.
Deteriorating health due to exposure: currently unknown.
Carcinogenicity data: This product has no components by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), the US Occupational Safety and Health Administration (US OSHA) or the European Union Directive (67/548/EEC) is classified as a carcinogen.
Reproductive toxicity: currently unknown.
Acute toxicity value: currently unknown.

12. ECOLOGICAL INFORMATION

No experimental ecological data are available on the preparation as such. From structurally related products the following may be expected. Degradation Biotic: Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Product: According to local regulations.
Contaminated packaging: No specific recommendations.

14. TRANSPORT INFORMATION

DOT Shipping Class: 70

Land transport

ADR class	not restricted	ADR item number	not relevant
RID class	not restricted	RID item number	not relevant
Hazard Identification	none	Substance Identification	none
TREM-Card	not relevant	UN number	not relevant
Proper shipping name	not relevant		
National regulations			
Other information			

Sea transport

IMO/IMDG code	not restricted	Class	not restricted
Packing group	none	UN number	none
EMS	not relevant	MFAG	not relevant
Marine pollutant	no		
Proper shipping name	not relevant		
Other information			

Air transport

ICAO-TI-IATA-DGR		UN number	none
Class	not registered	Packing group	none
Proper shipping name	not relevant		

Other information keeps away from: humidity / water

15. REGULATORY INFORMATION

US regulations

US Environmental Protection Agency Toxic Substances Control Act (TSCA): All components of this product are listed in the TSCA catalog or exempt from TSCA.

Super Fund Amendment and Reauthorization Act (SARA) Section 302 Chemicals listed: None

SARA Section 311/312 Classification of Hazardous Materials: Not applicable

SARA313 This product contains SARA Section 313 (40 CFR 372) The following chemicals required for annual emissions reports:
None

California Proposal 65: This product does not contain the chemicals listed in the 1986 Drinking Water and Toxic Substances Enforcement Act.

International regulations

Canadian Workplace Hazardous Materials Information System (WHMIS) Classification: Not a regulated product.

This product has been classified according to the Hazardous Substances Standards of the Controlled Product Regulations (CPR).

This Material Safety Data Sheet contains all the information required by CPR.

EU label: none

16. OTHER INFORMATION

According to Kimberly-Clark', the information contained in this article is true and correct. However, we make no warranties, express or implied. Nothing in this document should be construed as a violation of an existing patent or a violation of any law or regulation. The user is solely responsible for the applicability of the final judgment.

It is hereby certified that this document shows the contents of Material Safety Data Sheet (MSDS) which be edited as per the Act of Pesticides Management Regulation, Council of Agriculture, Executive Yuan, Taiwan.

GROWING-UP INTERNATIONAL CORP.



S.Y. LIAU DIRECTOR
DATE: 2021-05-31

