green our planet

Hydroponics Materials Safety Information Booklet

2023-2024

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Table of Contents

Introduction

Green our Planet is dedicated to the safety and well being of all of its employees and customers. With that in mind, we are informing you of the following safe-handling and use information regarding materials included with your Hydroponics STEM Program. Please review the information carefully and contact us at hydroponics@greenourplanet.org if you have any questions or concerns.

The Hydroponics STEM Program uses **5** products that pose a possible risk to students and adults who are involved with the program. With proper use and disposal, potential harm will be mitigated. These products are:

1. General Hydroponics pH Up
2. General Hydroponics pH Down
3. General Hydroponics MaxiGro Plant Food
4. iDOO Plant Food A
5. iDOO Plant Food B

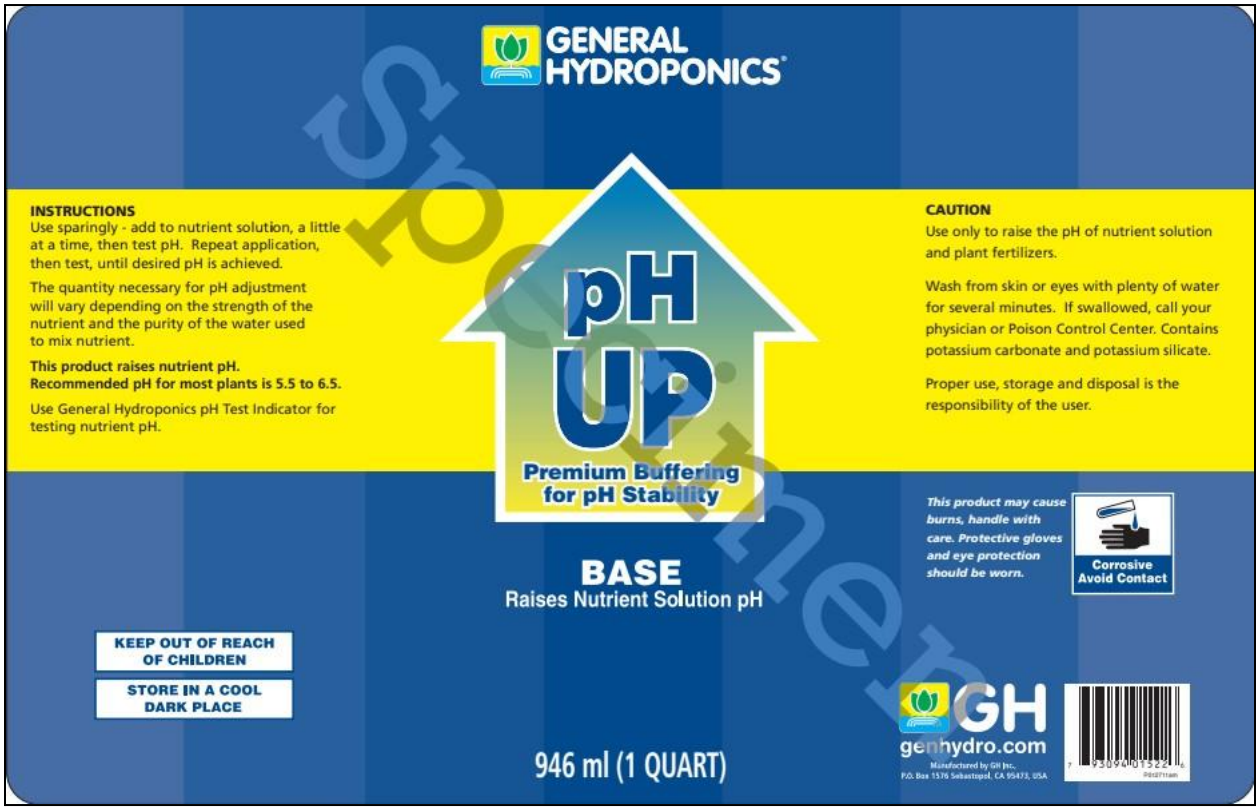
Contained in this Hydroponics Materials Safety Information Booklet are **The Material Safety Data Sheets (MSDS)** and **product labels**. Please review them to make sure you understand the content of the products, their use, the possible hazards and the mitigation strategies that should be used.

As a general overview, it is advised that adults handle the materials, and that anyone using them be given proper personal protective equipment (PPE) (e.g. safety glasses, latex gloves and aprons) and that an eyewash station is nearby in case of unwanted exposure. The materials should be stored in their original containers and kept out of unsupervised reach of children.

***Disclaimer:** The following labels and safety data sheets are derived directly from product manufacturers and do not belong to Green Our Planet. The written content was not altered in any way and therefore reports the information exactly as presented by the product manufacturers.

General Hydroponics pH Up

General Hydroponics pH Up Label



MSDS: 1.Identification; 2. Hazards identification

Conforms to HCS 2012 - United States

genhydro.com

Date : 03/01/2017
Version : 5.1

SAFETY DATA SHEET

PH UP LIQUID

Section 1. Identification

GHS product identifier : PH UP LIQUID
Other means of identification : Not available.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Not available.

Supplier's details : General Hydroponics
2877 Giffen Ave
Santa Rosa, CA 95407
Tel: (707) 824-9376
Fax: (707) 824-9377

Emergency telephone number (with hours of operation) : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887
24/7

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : SKIN CORROSION - Category 1
SERIOUS EYE DAMAGE - Category 1

GHS label elements
Hazard pictograms :

Signal word : Danger
Hazard statements : H314 - Causes severe skin burns and eye damage.
Precautionary statements
Prevention : P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P264 - Wash hands thoroughly after handling.
Response : P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.

MSDS: 2. Hazards identification; 3. Composition/information on ingredients; 4. First aid measures

Section 2. Hazards identification

P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : Not available.

Ingredient name	%	CAS number
Potassium carbonate	≥10 - <20	584-08-7
Silicic acid, potassium salt	≥0.3 - <1	1312-76-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

MSDS: 4. First aid measures; 5. Fire-fighting measures

Section 4. First aid measures

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes severe burns.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No known significant effects or critical hazards.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

MSDS: 5. Fire-fighting measures; 6. Accidental release measure; 7. Handling and storage

Section 5. Fire-fighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : No special precaution is required.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

MSDS: 7. Handling and storage; 8. Exposure controls/personal protection

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Potassium carbonate	None.
Silicic acid, potassium salt	None.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

MSDS: 9. Physical and chemical properties; 10. Stability and reactivity; 11. Toxicological information

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid.
Color	:	Blue.
Odor	:	Odorless.
Odor threshold	:	Not available.
pH	:	11.5 to 11.9
Melting point	:	0°C (32°F)
Boiling point	:	100°C (212°F)
Flash point	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	1.09
Solubility	:	Soluble in water.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Potassium carbonate	LD50 Oral	Rat	1870 mg/kg	-

Irritation/Corrosion

There is no data available.

MSDS: 11. Toxicological information

Section 11. Toxicological information

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Potassium carbonate	Category 3	Not applicable.	Respiratory tract irritation
Silicic acid, potassium salt	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes severe burns.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No known significant effects or critical hazards.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

MSDS: 11. Toxicological information; 12. Ecological information; 13. Disposal considerations

Section 11. Toxicological information

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	16892.5 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Potassium carbonate	Acute LC50 630000 µg/L Fresh water Acute LC50 650000 µg/L Fresh water	Crustaceans - Ceriodaphnia dubia Daphnia - Daphnia magna	48 hours 48 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

MSDS: 14. Transport information; 15. Regulatory information;

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN3266	UN3266	UN3266
UN proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium silicate, anhydrous)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium silicate, anhydrous)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium silicate, anhydrous)
Transport hazard class(es)	8 	8 	8 
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Additional information	-	**Emergency schedules (EmS)** F-A, S-B	-

AERG : 154

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 311: Edetic Acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

MSDS: 15. Regulatory information; 16. Other information

Section 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Potassium carbonate	≥10 - <20	No.	No.	No.	Yes.	No.
Silicic acid, potassium salt	≥0.3 - <1	No.	No.	Yes.	Yes.	No.

SARA 313

There is no data available.

State regulations

Massachusetts : None of the components are listed.
New York : None of the components are listed.
New Jersey : None of the components are listed.
Pennsylvania : None of the components are listed.

California Prop. 65

No products were found.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION - Category 1	On basis of test data
SERIOUS EYE DAMAGE - Category 1	On basis of test data

History

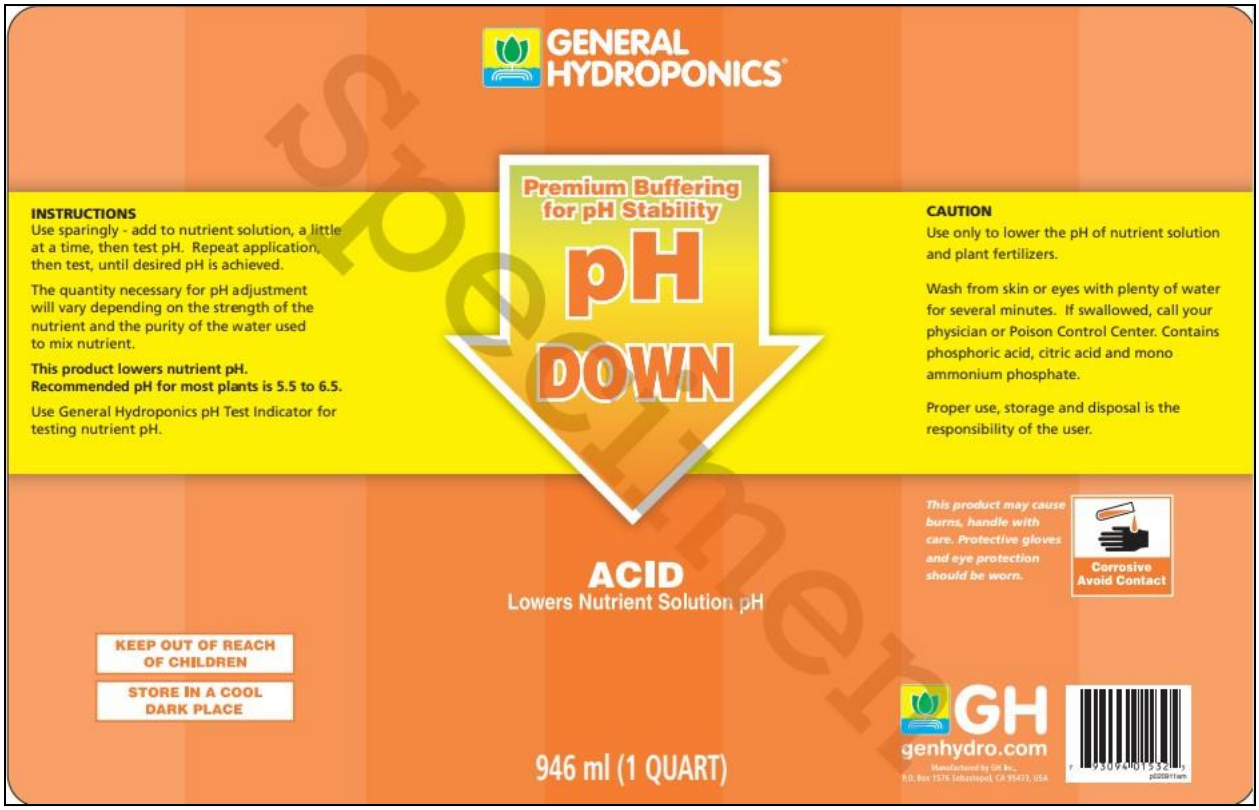
Date of issue mm/dd/yyyy : 03/01/2017
Date of previous issue : 02/15/2017
Version : 5.1
Prepared by : KMK Regulatory Services Inc.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

General Hydroponics pH Down

General Hydroponics pH Down Label



MSDS: 1. Material identification; 2. Composition/information on ingredients; 3. Hazards identification

MATERIAL SAFETY DATA SHEET

GENERAL HYDROPONICS pH Down™

3/12/09

SECTION 1. MATERIAL IDENTIFICATION

Product Name: pH Down™

Chemical Family: Corrosive mixture of acids in aqueous solution

Product Use: To lower the pH of hydroponic nutrient solutions and plant fertilizers.

Manufactured by: General Hydroponics, 3789 Vine Hill Rd. Sebastopol CA 95472

For Emergency Day or Night Call: CHEMTREC – Domestic North America 800-424-9300, International 703-527-3887 (collect calls accepted)

SECTION 2, COMPOSITION / INFORMATION ON INGREDIENTS

The percentage of mixture information for pH Down™ is withheld as a trade secret. The basic ingredients of pH Down™ are phosphoric acid, citric acid, and mono ammonium phosphate.

SECTION 3. HAZARDS IDENTIFICATION

***** Emergency Overview *****

DANGER! CORROSIVE. CAUSES SEVERE IRRITATION AND BURNS TO EVERY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED.

Potential Health Effects:

Primary Entry Routes: Ingestion, inhalation, skin.

Target Organs: Gastrointestinal and respiratory tract.

Acute Effects:

- **Ingestion:** severe digestive tract irritation with possible burns.
- **Inhalation:** irritation and possible burns.
- **Eye,** severe burns.
- **Skin:** severe irritation and burns.

Carcinogenicity: IARC, NTP, and OSHA do not list as a carcinogen.

Medical Conditions Aggravated by Long-term Exposure: Unknown.

Chronic Effects: Same as acute.

Other: None.

MSDS: 4. First aid measures; 5. Fire and explosion data; 6. Accidental release measures; 7. Handling and storage; 8. Exposure controls/personal protection

Section 4. FIRST AID MEASURES

Ingestion: Never give anything by mouth to an unconscious or convulsing person. Rinse out the mouth drink two to four cups of milk. **Do not induce vomiting.** See a physician immediately.

Eye Contact: Do not allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of water for at least 15 minutes. Consult a physician or ophthalmologist if pain or irritation develops.

Skin Contact: Wash exposed area with soap and water. For reddened or blistered skin, consult a physician.

Inhalation: Remove exposed person to fresh air and support breathing, if necessary. Consult a physician as soon as possible.

After first aid: Get appropriate community medical support.

SECTION 5. FIRE AND EXPLOSION DATA

Flash Point: Not flammable.

Auto-ignition Temperature: Not flammable.

LEL: Unknown

Flammability Classification: Not flammable.

Burning Rate: Not flammable.

Extinguishing Media: Use dry chemical, carbon dioxide, water spray, fog, or foam.

Unusual Fire or Explosion Hazards: Container may explode in heat of fire.

Hazardous Combustion Products: Unknown.

Fire-Fighting Instructions: Do not release run-off from fire control methods to sewers or waterways.
Fire Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full-face piece.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spill /Leak Procedures: Use personal protective equipment, cover with dry lime or soda ash, and place in closed container for disposal. Flush spill area with water. In case of large spill, clear the area and notify appropriate emergency response activity.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

SECTION 7. HANDLING AND STORAGE

Handling Precautions: Use only in well-ventilated areas. Avoid contact with skin and eyes; avoid inhalation of aerosols and ingestion. Wear an appropriate NIOSH-approved respirator for protection where airborne concentrations are excessive. Respirator usage must be in accordance with OSHA requirements (29 CFR 1910.134).

Storage Requirements: store as a corrosive in tightly closed containers away from incompatible materials.

Regulatory Requirements: Follow applicable OSHA regulations.

SECTION 8. EXPOSURE CONTROLS/Personal Protection

Airborne Exposure Limits for Phosphoric Acid:

MSDS: 8. Exposure controls/personal protection; 9. Physical and chemical properties; 10. Stability and reactivity; 11. Toxicological information

-OSHA Permissible Exposure Limit (PEL):1 mg/m3 (TWA)

-ACGIH Threshold Limit Value (TLV):1 mg/m3 (TWA), 3 mg/m3 (STEL)

Engineering Controls: Provide general or local exhaust ventilation systems to maintain airborne concentrations as low as possible.

Administrative Controls: Avoid inhalation, ingestion, skin and eye contact. **Do not mix with solutions containing bleach or ammonia.**

Respiratory Protection: If this product is used as directed, respiratory protection is not required. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/ NIOSH-approved respirator. If respirators are used, OSHA requires a written respiratory protection program that includes, at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/ Equipment: Wear gloves and aprons while using.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Odor and Physical State: Yellow liquid.

Odor Threshold Range: Odorless.

Vapor Pressure: @20 °C 17.5mm.

Water Solubility: Completely soluble.

Other Solubilities: Unknown.

pH: 1.2

Specific Gravity: 1.13

Boiling Point: 104° C.

Freezing Point: -8 ° C.

Viscosity: 1.00 $mNsm^{-2}$

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: General Hydroponics pH Down™ can react with, alkali's (bases), aldehydes, amines, amides, alcohol's, glycol's, azo-compounds, carbamates, cresols, esters, phenols, metals, metal nitrates, oxides, strong caustics, solutions containing bleach or ammonia.

Conditions to Avoid: Do not mix with ammonia or bleach. Do not put in metal containers. Do not expose to excessive heat.

Hazardous Decomposition Products: Oxides of phosphorus.

SECTION 11. TOXICOLOGICAL INFORMATION

The toxicity of the combination of the chemicals, in the concentrations used in General Hydroponics pH

MSDS: 11. Toxicological information; 12. Ecological information; 13. Disposal considerations; 14. Transportation information; 15. Regulatory information; 16. Other information

Down™ is unknown. The rat oral, LD50 for phosphoric acid is 1,530 mg/kg and the rabbit skin, LD50 is 220 mg/kg.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Unknown.

Environmental Fate: Not expected to be significant. Physical removal from air can occur via rainfall.

Environmental Degradation: Unknown.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal: Follow Federal, State, and local regulations.

SECTION 14. TRANSPORTATION INFORMATION

Do not transport with food and feedstuff

Proper Shipping Name: Phosphoric acid mixture

Hazard Class: 8 Canadian 8 (9.2)

UN/NA: UN 1805

Packing Group: III

SECTION 15. REGULATORY INFORMATION

EPA Regulations: Not listed

SECTION 16. OTHER INFORMATION

General Hydroponics pH Down™ is a plant nutrition aid. Information assembled for this Material Safety Data Sheet is for the use of this product as intended by the manufacturer. Users should take all precautions recommended herein while working with this product.

General Hydroponics 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 precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in using this product.

MaxiGro Plant Food

MaxiGro Plant Food Label

MSDS: 1. Identification 2. Hazards identification; 3. Composition/information on ingredients

Conforms to HazCom 2012/United States

genhydro.com

SAFETY DATA SHEET

MAXI GRO

Section 1. Identification

GHS product identifier : MAXI GRO

Other means of identification : Not available.

Product type : Powder.

Identified uses : Hydroponic plant nutrient.

Supplier's details : General Hydroponics
2877 Giffen Ave
Santa Rosa, CA 95407
Tel: (707) 824-9376
Fax: (707) 824-9377

Emergency telephone number (with hours of operation) : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887 (24/7)

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified (HNOC) : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : Not available.

MSDS: 3. Composition/information on ingredients; 4. First aid measures

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Calcium ammonium nitrate	30 - 60	15245-12-2
Citric Acid	3 - 5	77-92-9
Cobalt nitrate	0 - 0.1	10141-05-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Maintain an open airway. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

MSDS: 4. First aid measures; 5. Fire-fighting measures; 6. Accidental release measures

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
phosphorus oxides
metal oxide/oxides

Special protective actions for fire-fighters : No special measures are required.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

MSDS: 7. Handling and storage; 8. Exposure controls/personal protection

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid breathing dust.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Cobalt nitrate	**ACGIH TLV (United States, 3/2015).** TWA: 0.02 mg/m³, (as Co) 8 hours. Form: Inorganic

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : In some cases, dust collection, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

MSDS: 8. Exposure controls/personal protection; 9. Physical and chemical properties; 10. Stability and reactivity

Section 8. Exposure controls/personal protection

Respiratory protection	:	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance		
Physical state	:	Solid. [Powder.]
Color	:	Green.
Odor	:	Odorless.
Odor threshold	:	Not available.
pH	:	5.8 [Conc. (% w/w): 1%]
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	2.2
Solubility	:	Soluble in water.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Not available.
Volatility	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	Reactive or incompatible with the following materials: reducing materials, Oil, organic solvents.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

MSDS: 11. Toxicological information

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Calcium ammonium nitrate	LD50 Oral	Rat	4715 mg/kg	-
Citric Acid	LD50 Oral	Rat	3 g/kg	-
Cobalt nitrate	LD50 Oral	Rat	434 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Citric Acid	Eyes - Severe irritant	Rabbit	-	24 hours 750 µg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	0.5 mL	-

Sensitization

There is no data available.

Carcinogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

MSDS: 11. Toxicological information; 12. Ecological information

Section 11. Toxicological information

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	5270.6 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Citric Acid	Acute LC50 160000 µg/L Marine water	Crustaceans - Carcinus maenas - Adult	48 hours
Cobalt nitrate	Acute EC50 10233 µg/L Marine water	Crustaceans - Artemia salina - Egg	48 hours
	Acute IC50 19.57 mg/L Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase	72 hours
	Acute IC50 19.19 mg/L Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase	96 hours
	Acute LC50 3400 µg/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 66800 µg/L Fresh water	Fish - Carassius auratus	96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Citric Acid	-1.8	-	low
Cobalt nitrate	-	15600	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

MSDS: 13. Disposal considerations; 14. Transport information; 15. Regulatory information

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	Remarks Special Provision 34: This product is a calcium nitrate fertilizer, consisting mainly of a double salt (calcium nitrate and ammonium nitrate) containing not more that 10 percent ammonium nitrate and more than 12 percent water of crystalization.	Remarks Special Provision A83 (208): This product is a calcium nitrate fertilizer, consisting mainly of a double salt (calcium nitrate and ammonium nitrate) containing not more that 10 percent ammonium nitrate and more than 12 percent water of crystalization.	Remarks Special Provision A83 (208): This product is a calcium nitrate fertilizer, consisting mainly of a double salt (calcium nitrate and ammonium nitrate) containing not more that 10 percent ammonium nitrate and more than 12 percent water of crystalization.

AERG : Not applicable

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: Zinc(II) EDTA disodium salt; Copper disodium EDTA

MSDS: 15. Regulatory information

Section 15. Regulatory information

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Calcium ammonium nitrate	30 - 60	No.	No.	No.	Yes.	No.
Citric Acid	3 - 5	No.	No.	No.	Yes.	No.
Cobalt nitrate	0 - 0.1	Yes.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Potassium nitrate Ammonium dihydrogenorthophosphate	7757-79-1 7722-76-1	30 - 60 10 - 30
Supplier notification	Potassium nitrate Ammonium dihydrogenorthophosphate	7757-79-1 7722-76-1	30 - 60 10 - 30

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: Potassium nitrate

New York : None of the components are listed.

New Jersey : The following components are listed: Potassium nitrate

Pennsylvania : The following components are listed: Potassium nitrate; Sodium hydrogen ferric DTPA

California Prop. 65

No products were found.

MSDS: 16. Other information

Section 16. Other information

History

Date of issue mm/dd/yyyy	:	05/15/2016
Date of previous issue	:	06/30/2015
Version	:	3
Prepared by	:	KMK Regulatory Services Inc.
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

iDOO Plant Food

iDOO Plant food A and B Labels

iDOO Plant Food A MSDS: Product name and model number

Material Safety Data Sheet (MSDS)

Regulation (EC) No 1907/2006 (REACH), Annex II

Applicant	REESTAR INTERNATIONAL LIMITED
Address	UNIT 06-07, 28/F CONCORDIA PLAZA, 1 SCIENCE MUSEUM RD TST, EAST KLN, HONG KONG
Manufacturer	Shenzhen Ruiyi Business Technology Co., Ltd.
Address	Qianhai Complex A201, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, 518000 P.R.China
Product Name	Plant Food
Trade Mark	iDOO
Model Number	Plant Food A
Prepared By	Shenzhen DL Testing Technology Co., Ltd.
Address	101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
Issue Date:	Feb.20, 2023

Prepared by(Engineer): Cheney Wei

Approved(Manager): Jade Yang

This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.

MSDS: 1. Product and company identification; 2. Hazards identification

1. Product and Company Identification

1.1 GHS Product identifier

Product name	Plant Food

1.2 Recommended use of the chemical and restrictions on use

Recommended Use	none
Uses advised against	none

1.3 Details of the supplier of the material safety data sheet

Supplier	Shenzhen Ruiyi Business Technology Co., Ltd.
Address	Qianhai Complex A201, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, 518000 P.R.China
Postal Code	N/A
Phone	N/A
FAX	N/A
E-mail	N/A

1.4 Emergency telephone number

Emergency number	N/A

2. Hazards Identification

2.1 Classification of the substance or mixture

Not classified

2.2 GHS label elements, including precautionary statements

Pictogram(s)	No symbol.
Signal word	No signal word.
Hazard statement(s)	none

Precautionary statement(s)

Prevention	none
Response	none
Storage	none
Disposal	none

2.3 Other hazards which do not result in classification

no data available.

MSDS: 3. Composition/information on ingredients; 4. First aid measures; 5. Fire fighting measures; 6. Accidental release measures

3. Composition/information on ingredients

Chemical name	CAS number	EC number	Concentration(%)
Total N	7727-37-9	--	8.5
Soluble P2O5	1314-56-3	--	7.5
K2O	12136-45-7	--	29.5
Mg	1309-48-4	--	2.5
EDTA-Fe	15708-4-5	--	0.3
EDTA-Mn	15375-84-5	--	0.06
EDTA-Cu	14025-15-1	--	0.005
EDTA-Zn	14025-21-9	--	0.01
B	7440-42-8	--	1

4. First Aid Measures

4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Fire Fighting Measures

5.1 Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

5.2 Special hazards arising from the chemical

No data available

5.3 Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

MSDS: 6. Accidental release measures; 7. Handling and storage; 8. Exposure controls/personal protection; 9. Physical and chemical properties

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. Handling and Storage

7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

No data available

Biological limit values

No data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

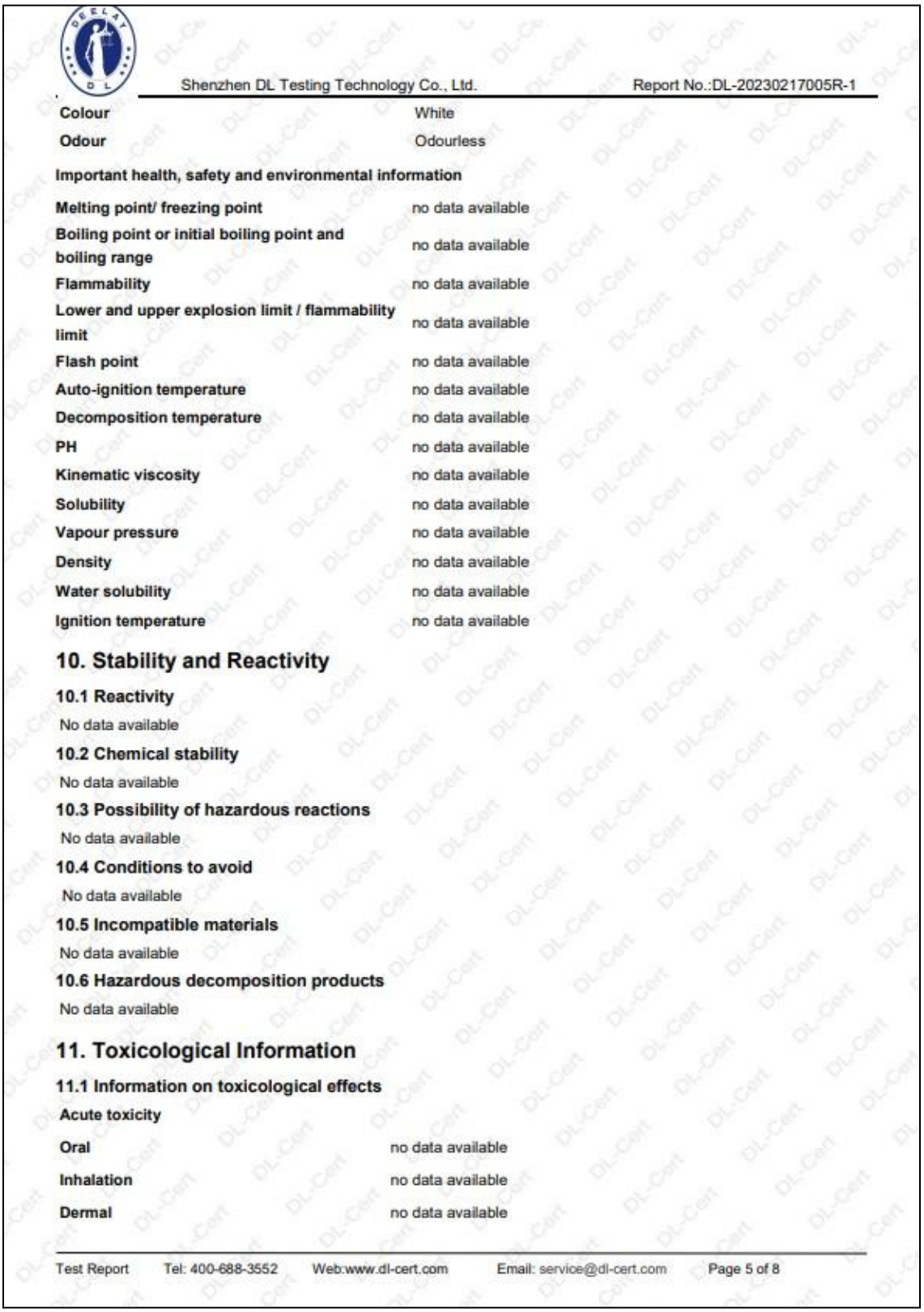
No data available

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state	Solid

MSDS: 9. Physical and chemical properties; 10. Stability and reactivity; 11. Toxicological information



Colour	White
Odour	Odourless

Important health, safety and environmental information

Melting point/ freezing point	no data available
Boiling point or initial boiling point and boiling range	no data available
Flammability	no data available
Lower and upper explosion limit / flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
PH	no data available
Kinematic viscosity	no data available
Solubility	no data available
Vapour pressure	no data available
Density	no data available
Water solubility	no data available
Ignition temperature	no data available

10. Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

No data available

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Oral	no data available
Inhalation	no data available
Dermal	no data available

MSDS: 12. Ecological information; 13. Disposal considerations

Skin corrosion/irritation	no data available
Serious eye damage/irritation	no data available
Skin corrosion/irritation	no data available
Respiratory or skin sensitization	no data available
Germ cell mutagenicity	no data available
Carcinogenicity	no data available
Reproductive toxicity	no data available
STOT-single exposure	no data available
STOT-repeated exposure	no data available
Aspiration hazard	no data available

12. Ecological Information

12.1 Toxicity

Toxicity to fish	no data available
Toxicity to daphnia and other aquatic invertebrates	no data available
Toxicity to algae	no data available
Toxicity to microorganisms	no data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Other adverse effects

No data available

13. Disposal Considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

MSDS: 14. Transport information; 15. Regulatory information

14. Transport Information

14.1 UN Number

ADR/RID	Not dangerous goods.
IMDG	Not dangerous goods.
IATA:	Not dangerous goods.

14.2 UN Proper Shipping Name

ADR/RID	unknown
IMDG	unknown
IATA:	unknown

14.3 Transport hazard class(es)

ADR/RID	Not dangerous goods.
IMDG	Not dangerous goods.
IATA:	Not dangerous goods.

14.4 Packing group, if applicable

ADR/RID	Not dangerous goods.
IMDG	Not dangerous goods.
IATA:	Not dangerous goods.

14.5 Environmental hazards

ADR/RID	No.
IMDG	No.
IATA:	No.

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

15. Regulatory Information

Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
EC Inventory			Not Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Not Listed.

MSDS: 15. Regulatory information; 16. Other information

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Not Listed.
Korea Existing Chemicals List (KECL)	Not Listed.

16. Other Information

Abbreviations and acronyms

CAS: Chemical Abstracts Service
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
IMDG: International Maritime Dangerous Goods
IATA: International Air Transportation Association
TWA: Time Weighted Average
STEL: Short term exposure limit
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
EC50: Effective Concentration 50%

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******* END OF REPORT *******

iDOO Plant Food B MSDS: Product name and model number

Material Safety Data Sheet (MSDS)

Regulation (EC) No 1907/2006 (REACH), Annex II

Applicant	REESTAR INTERNATIONAL LIMITED
Address	UNIT 06-07, 28/F CONCORDIA PLAZA, 1 SCIENCE MUSEUM RD TST, EAST KLN, HONG KONG
Manufacturer	Shenzhen Ruiyi Business Technology Co., Ltd.
Address	Qianhai Complex A201, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, 518000 P.R.China
Product Name	Plant Food
Trade Mark	iDOO
Model Number	Plant Food B
Prepared By	Shenzhen DL Testing Technology Co., Ltd.
Address	101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
Issue Date:	Feb.20, 2023

Prepared by(Engineer): Cheney Wei

Approved(Manager): Jade Yang

This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.

MSDS: 1. Product and company identification; 2. Hazards identification; 3. Composition/information on ingredients

1. Product and Company Identification

1.1 GHS Product identifier

Product name Plant Food

1.2 Recommended use of the chemical and restrictions on use

Recommended Use	none
Uses advised against	none

1.3 Details of the supplier of the material safety data sheet

Supplier	Shenzhen Ruiyi Business Technology Co., Ltd.
Address	Qianhai Complex A201, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, 518000 P.R.China
Postal Code	N/A
Phone	N/A
FAX	N/A
E-mail	N/A

1.4 Emergency telephone number

Emergency number N/A

2. Hazards Identification

2.1 Classification of the substance or mixture

Not classified

2.2 GHS label elements, including precautionary statements

Pictogram(s)	No symbol.
Signal word	No signal word.
Hazard statement(s)	none

Precautionary statement(s)

Prevention	none
Response	none
Storage	none
Disposal	none

2.3 Other hazards which do not result in classification

no data available.

3. Composition/information on ingredients

Chemical name	CAS number	EC number	Concentration(%)
Total N	--	--	11
CaO	1305-78-8	--	25

MSDS: 4. First Aid measures; 5. Fire fighting measures; 6. Accidental release measures 7. Handling and storage

4. First Aid Measures

4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Fire Fighting Measures

5.1 Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

5.2 Special hazards arising from the chemical

No data available

5.3 Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. Handling and Storage

7.1 Precautions for safe handling

MSDS: 7. Handling and storage; Exposure controls/personal protection; 9. Physical and chemical properties

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

No data available

Biological limit values

No data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

No data available

9. Physical and Chemical Properties

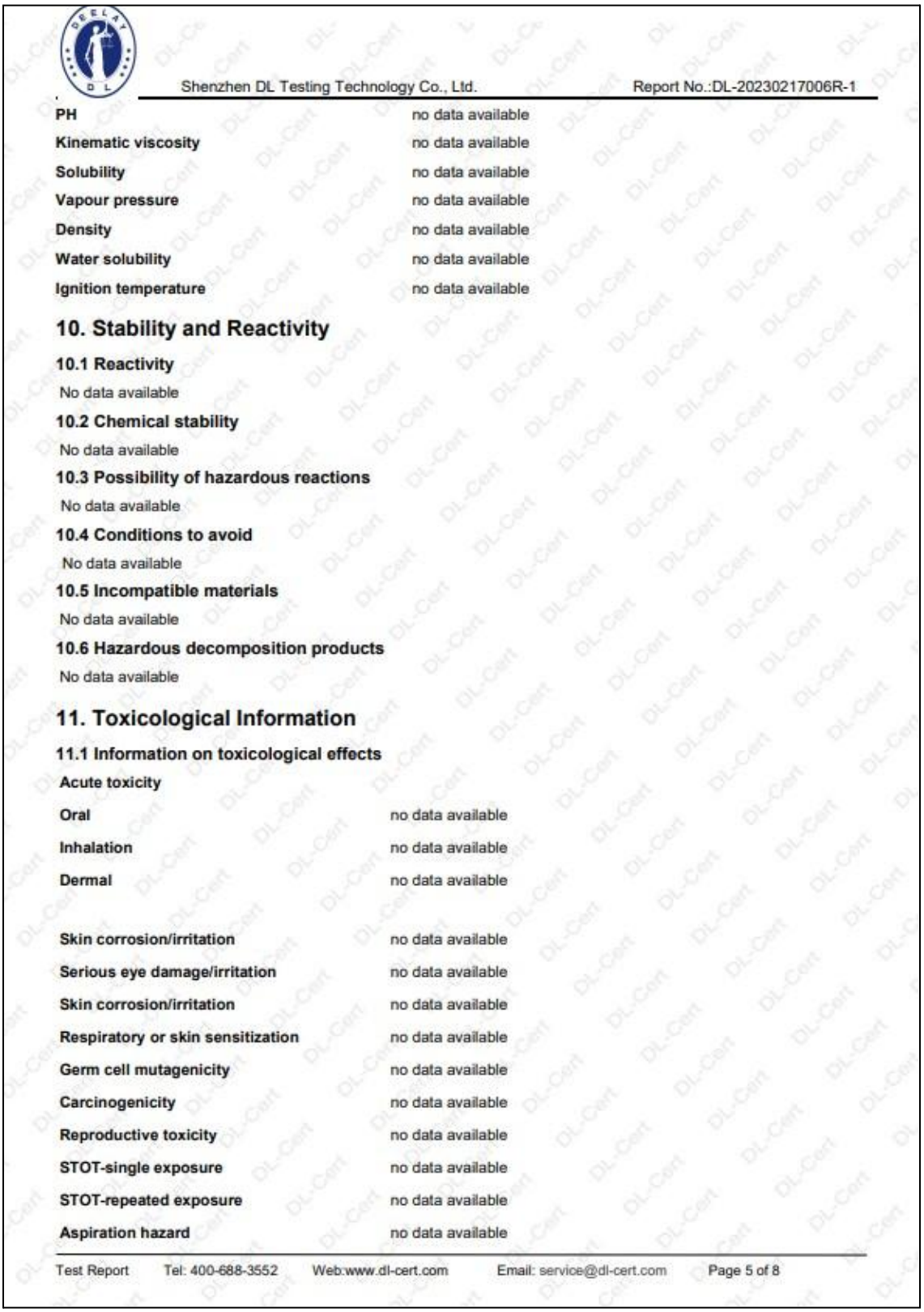
9.1 Information on basic physical and chemical properties

Physical state	Solid
Colour	White
Odour	Odourless

Important health, safety and environmental information

Melting point/ freezing point	no data available
Boiling point or initial boiling point and boiling range	no data available
Flammability	no data available
Lower and upper explosion limit / flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available

MSDS: 9. Physical and chemical properties; 10. Stability and reactivity; 11. Toxicological information



PH	no data available
Kinematic viscosity	no data available
Solubility	no data available
Vapour pressure	no data available
Density	no data available
Water solubility	no data available
Ignition temperature	no data available

10. Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

No data available

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Oral	no data available
Inhalation	no data available
Dermal	no data available
Skin corrosion/irritation	no data available
Serious eye damage/irritation	no data available
Skin corrosion/irritation	no data available
Respiratory or skin sensitization	no data available
Germ cell mutagenicity	no data available
Carcinogenicity	no data available
Reproductive toxicity	no data available
STOT-single exposure	no data available
STOT-repeated exposure	no data available
Aspiration hazard	no data available

MSDS: 12. Ecological information; 13. Disposal considerations; 14. Transport information

12. Ecological Information

12.1 Toxicity

Toxicity to fish	no data available
Toxicity to daphnia and other aquatic invertebrates	no data available
Toxicity to algae	no data available
Toxicity to microorganisms	no data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Other adverse effects

No data available

13. Disposal Considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. Transport Information

14.1 UN Number

ADR/RID	Not dangerous goods.
IMDG	Not dangerous goods.
IATA:	Not dangerous goods.

14.2 UN Proper Shipping Name

ADR/RID	unknown
IMDG	unknown
IATA:	unknown

14.3 Transport hazard class(es)

ADR/RID	Not dangerous goods.
IMDG	Not dangerous goods.

MSDS: 14. Transport information; 15. Regulatory information; 16. Other information

IATA:	Not dangerous goods.

14.4 Packing group, if applicable

ADR/RID	Not dangerous goods.
IMDG	Not dangerous goods.
IATA:	Not dangerous goods.

14.5 Environmental hazards

ADR/RID	No.
IMDG	No.
IATA:	No.

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

15. Regulatory Information

Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
EC Inventory			Not Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Korea Existing Chemicals List (KECL)			Not Listed.

16. Other Information

Abbreviations and acronyms

CAS: Chemical Abstracts Service
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
IMDG: International Maritime Dangerous Goods
IATA: International Air Transportation Association
TWA: Time Weighted Average
STEL: Short term exposure limit
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
EC50: Effective Concentration 50%
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MSDS: 16. Other information

data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

******* END OF REPORT *******