

Date: Mar.7th, 2023

1 .Identification of substance

Product Name	ETHEPHON 91% TECH
Chemical Name	2-chloroethyl-Phosphonic Acid
Recommended Use	For Manufacturing Use Only- Plant Growth Regulator
Supplier Name	HEBEI JRAIN TECHNOLOGY CO.,LTD.
Address	No. 66 XIANGTAI ROAD, YUHUA DISTRICT, SHIJIAZHUANG CITY, HEBEI PROVINCE,CHINA
Phone Number	+86-311-80680379
Fax Number	+86-311-80680380

Section 2 – Hazards identification

GHS Pictograms



Signal words

Danger

Hazard statements

Harmful if inhaled.
Harmful in contact with skin.
Causes serious skin burns and eye damage
Harmful to aquatic life with long lasting effects

Precautionary Statement

Do not breathe dusts or mists

Prevention

Avoid breathing dust/fume/gas/mist/ vapours /spray.
Use only outdoors or in a well-ventilated area.
Wash hands thoroughly after handling.
Avoid release to the environment.
Wear protective gloves/eye protection/face protection.

Precautionary Statement

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
IF ON SKIN(or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position.
Specific measures (Reference to supplemental first aid instruction).
Immediately call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Wash contaminated clothing before reuse.

Precautionary Statement
Storage

Store locked up

Precautionary Statement
Disposal

Dispose of contents/container in according with local regulation.

Section 3 – Composition / information on ingredients

Component Information Component	CAS number	EINECS number	Mass(%)
2-Chloroethylphosphonic acid	16672-87-0		91.0%
Water	7732-18-5		9.0%

Section 4 – First-aid measures

NOTE TO PHYSICIAN

In case of shortness of breath, give oxygen. Keep victim warm.
Keep victim under observation.

After inhalation

Move to fresh air. Oxygen or artificial respiration if needed.
Get immediate medical attention.

After skin contact

Immediately flush skin with plenty of water.
Remove and isolate contaminated clothing And shoes.
If irritation persists, get medical attention immediately.
For minor skin contact, avoid spreading material on unaffected skin.
Wash clothing separately before reuse.

After eye contact

Immediately flush eyes with plenty of water for at least 15 minutes.
Assure adequate flushing of the eyes by separating the eyelids with fingers. Get medical attention immediately.

After ingestion

Do not induce vomiting without medical advice.
If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.
Loosen tight clothing such as a collar, tie, belt of waistband.
Do not use mouth-to-mouth method if victim ingested the substance.

Section 5– First-fighting measures

Suitable extinguishing agents	Water spray, alcohol-resistant foam, CO ₂ , Dry chemical powder.
Special hazards caused by the material, its products of combustion or flue gases	can be released in case of fire: Carbon monoxide, carbon dioxide, Chlorides and Phosphorus oxides(PO _x)
Protective equipment	Wear full protective clothing, including helmet, self-contained positive Pressure or pressure demand breathing apparatus, protective clothing and face mask.

Section 6– Accidental release measures

Person-related safety precautions	Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away..
Measures for environmental protection	Prevent further leakage or spillage if safe to do so. Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning / collecting	Pick up and arrange disposal without creating dust, then place in suitable container. Clean contaminated surface thoroughly.
Additional information	See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for information on disposal.

Section 7– Handling and storage

Handling

Information for safe handling	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. In case of insufficient ventilation, wear suitable respiratory equipment If ingested.
-------------------------------	--

protection against explosion and fires

Keep away from heat, sources of ignition, sparks or open flame.

STORAGE

Requirements to be met by storerooms and containers

Keep in a cool, dry, well-ventilated place. Keep tightly closed until used.

Information about storage in one common storage facility

Store away from incompatible substances such as oxidizing agents

Further information about storage conditions

No data

Section 8– Exposure controls/personal protection

Limit Values for Exposure

Component

**CAS
number**

**ACGIH
TLV-TWA**

**ACGIH
TLV-STEL**

**OSHA
PEL-TWA**

**OSHA
PEL-STEL**

2- Chloroethylphosphonic acid

16672-87-0

N.E.

N.E.

N.E.

N.E.

General protective and hygienic measures

Do not get this material in contact with skin. Do not get this material on clothing. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Breathing equipment

When workers are facing high concentrations they must use. Appropriated certified respirators.

Protection of hands

Wear appropriate chemical resistant gloves.

Eye/Face protection

Use safety with side shields or safety goggles as mechanical barrier for prolonged exposure.

Body protection

Use clean protective body-covering as needed to minimize contact with clothing and skin.

Note:1. N.E. means not established

Section 9– Physical and chemical properties

Physical state,	Solid
Appearance	White or light brown waxy
Odour	Not applicable
PH	1.5~3.0
Melting point	74~75°C
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour density(air=1)	Not applicable
Relative density	Not applicable
Solubility(water)	Not applicable
Partition coefficient n-octanol /water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	170 °C
Viscosity	Not applicable

Section 10– Stability and reactivity

Chemical stability	This is a preparation which is chemical stable.
Possibility of hazardous reactions	Not available
Conditions to avoid(e.g static discharge, shock or vibration)	Heat, flames and sparks.
Incompatible material	Avoid contact with strong oxidizing.
Hazardous decomposition	Carbon monoxide, carbon dioxide, Chlorides and Phosphorus

Section 11– Toxicological information

This product is a preparation for which toxicological data exists. The toxicological data for the product's hazardous ingredients are provided below.

Routes of Entry: Dermal contact, eye contact, inhalation, ingestion.

Acute Toxicity LD50(Rat, oral): 3400mg/kg

Skin corrosion/Irritation Serious Cause skin irritation.
Cause eye irritation.

Damage/irritation

Respiratory or skin sensitization No sensitizing effects known.

Germ cell mutagenicity No data available

Carcinogenicity No classification data on carcinogenic properties of this chemical is available from IARC, OSHA, ACGIH, EPA OR NTP..

Reproductive toxicity No data available

STOT-single exposure No data available

Aspiration hazard No data available

Chronic Effects To the best of our knowledge the chronic effects of this product is not fully known. This product may be harmful if absorbed through the skin. May be fatal if inhaled. Prolonged exposure may cause disorder of respiratory tract system.

Further Information No data available

Section 12– Ecological information

Ecotoxicity

Aquatic Toxicity No data

Additional Information No data

Do not allow material to be released to the environment without proper governmental permits.

Section 13– Disposal considerations

WASTE DISPOSAL INSTRUCTIONS

Contact a licensed professional waste disposal service to dispose of this material.
Dispose of in accordance with local environmental regulations or local authority requirements.

Page 6 of 8

Section 14– Transport information

The Recommendation of Transport of Dangerous GOODS(TDG)

UN Number	2923
Proper Shipping Name	Corrosive solid, Toxic, N.O.S.(Ethephon TECH)
Hazard Class	8(6.1)
Packing Group	II
Subsidiary risk	None
Labelling pictogram	



Maritime transport IMDG	Being same with TDG
Air transport ICAO-TI and IATA-DGR	Being same with TDG

Section 15–Regulatory information

European/International Regulations

OSHA	Hazardous by definition of Hazard Communication Standard (29CFR1910.1200)
EINECS Status	All components are included in EINECS inventory.
EPA TSCA Status	2-Chloroethylphosphonic acid is not included in TSCA inventory.
Canadian DSL(Domestic Substances List):	2-Chloroethylphosphonic acid is not included in DSL.
Material Identification System(Ratings)	Health: 4 Flammability: 1 Physical hazard: 0 Personal protection; K (4. Severe Hazard; 3. Serious Hazard; 2. Moderate Hazard;

WHMIS(Canadian Workplace Hazardous Material Identification System Ratings):	1. Slight Hazard; 0. Minimal Hazard) D1A E
GB12268-2005 List of Dangerous goods	This product is a dangerous goods on the GB12268-2005 list of dangerous goods.

Page 7 of 8

Section 16—other information

Edit date	05/08/2015
Revision Date	09/11/2020
Edit Standard	Globally Harmonized System of Classification and Labelling for Chemical Part 1.5
Disclaimer	Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

HEBEI JRAIN TECHNOLOGY CO.,LTD.

Page 8 of 8