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|  | Material Safety Data Sheet(MSDS) | Date of establishment | June, 3, 1996. |
| | Monobasic Sodium Phosphate (Anhydrous) | Date of revision | Nov, 16, 2017. |
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1. Product and Company Identification

- A. Product name : Monobasic Sodium Phosphate (Anhydrous)
- B. Relevant identified uses of the substance or mixture and uses advised against
- Recommended Use : Industrial fermentation. Buffer for food industry. As neutralizing agent with Dibasic Sodium Phosphate, stabilizer, raw material for leavening agent, bind agent of dairy (cheese and others) /meat/fish product. Antiscales.
 - Usage Limits : No data available
- C. Details of the supplier of the safety data sheet
- Company : YOUNGJIN CORECHEM INC.
 - Address : 1055 Yedeok-ro, Godeok-myeon, Yesan-gun, chungcheongnam-do, Korea
 - Department : Quality Control Department
 - Telephone : 82-41-338-7317

2. Hazards Identification

- A. Classification of the substance
- Skin corrosion/ irritation : Category 1C
 - Serious eye damage/ eye irritation : Category 1


Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
This substance is not classified as dangerous according to Directive 67/548/EEC.

B. Label elements

- Pictogram



- Signal word: Danger
- Hazardous statement
 - H314 Causes severe skin burns and eye damage.
 - H318 Causes serious eye irritation.
- Precautionary statement
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 - P264 Wash thoroughly after handling
 - P280 Wear protective gloves/protective clothing/ eye protection/face protection.

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○ Respond

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water[or shower].

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P363 Wash contaminated clothing before reuse.

○ Storage

P403+P233 Store in a well-ventilated place, keep container tightly closed.

○ Disposal

P501 Dispose of container in conformity with relevant regulations.

C. NFPA Rating (0-4 level): Health=1, Fire=0, Reactivity=0

3. Composition, Information on Ingredients

| Chemical Name | Other names | CAS No. | EC NO. | Percent (%) |
|--|----------------------------------|-----------|-----------|-------------|
| Monobasic Sodium Phosphate (ANHYDROUS) | sodium dihydrogen orthophosphate | 7558-80-7 | 231-449-2 | 100% |

4. First Aid Measures

A. Eye Contact


- If exposed, rinse eyes immediately with running water more than 20 minutes.
- Receive medical treatment immediately.

B. Skin Contact

- If exposed, rinse skin immediately with running water more than 20 minutes.
- Remove and isolate contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-use.
- Receive medical treatment immediately.

C. Inhalation

- Take emergency medical treatment.
- Move victim to well-ventilated place.
- If breathing is hard, supply oxygen.
- If victim is not breathing, perform artificial respiration.

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D. Ingestion

- Do not put anything to eat into unconscious victim's mouth.
- Give victim medical treatment immediately.

E. Other medical notices.

- Let medical personnel recognize the material and take protective measure.

5. Explosion / Fire Fighting Measures

A. Appropriate (and inappropriate) Extinguishing Media

- Inappropriate : High-pressure water (inappropriate)
- Suitable extinguishing:
 - Great fire : Water spray/mist, normal foam.
 - Small fire: dry sand, desiccant, alcohol resistant foam, water spray, normal foam, CO₂.

B. Specific Hazards in Presence of Chemical Substances

- If boiled, container may explode.
- Inhalation may be hazardous.
- May burn partly, does not ignite easily.
- Fire can cause irritative and corrosive gas from material.


C. Precaution and Protective equipments for Fire Fighting

- If not dangerous, move container from fire area.
- May be transported at high temperature.
- Leakage may cause contamination.
- Contact to eyes and skin may cause burn.
- Dig a ditch to dispose fire fighting water and keep material not dispersed.
- Fire involving Tanks;
 - After extinguish, cool down container with water spray for considerable time
- Fire involving Tanks;
 - Step back immediately if pressure relief device makes loud sound or tank discolors.
- Fire involving Tanks;
 - Do not approach tank in flames.

6. Accidental Release Measures

A. Require measures and protection to protect human body

- Do not touch and walk on leakage.
- Remove all ignition sources.
- Prevent forming dust.
- Ventilate contaminated area.
- If not dangerous, stop any leakage.

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- Take notice of material and condition to avoid.

B. Required measures to protect environment

- Prevent of inflow into waterway, drain, basement, or closed space.

C. Purification or removal method

- In case of big leakage, dig a ditch distant from leaked liquid.

- In case of leakage of powder, cover with plastic sheet to prevent spreading and keep it dry.

- In case of small leakage, wash out contaminated area with much water.

- In case of small leakage, use sand and inflammable material to absorb and put in container.

- Use clear shovel to put leakage into dry container and shut loose and move container away from leakage area.

7. Handling & Storage

A. Safe handling

- Work in reference to Engineering Controls and Personal Protection.

- Avoid contact with eyes, skin and clothing.

- Keep container airtight.

- Wash thoroughly after handling.

- Pay attention to Conditions and Materials to Avoid.

B. Safe Storage

- Store in airtight container.

- Store in cool and dry place.

- Take notice of material and condition to avoid.

8. Exposure Controls & Personal Protection

A. Chemical Exposure Limits, Biological Exposure Limit

○ Korean Regulation : No data available

○ ACGIH Regulation : No data available

○ Biological Exposure Limit : No data available

B. Engineering Controls

- Install local exhaust ventilation, use process isolation or other ways to comply tolerable standard.


C. Personal Protective Equipment

○ Respiratory Protection

: Use respiratory protection tested and approved under appropriate government standards such NIOSH(US) as CEN(EU)

○ Eyes Protection

: Use equipment for eye protection tested and approved under appropriate government standards

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such as NIOSH (US) or EN 166(EU).

○ Hands Protection

: Wear appropriate chemical-resistant gloves that have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

○ Body Protection

: Wear appropriate chemical-resistant apron and boots.

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

9. Physical & Chemical Properties

A. Appearance: White, colorless powder

B. Odor: None.

C. Odor Threshold : No data available

D. PH: 1% solution pH 4.2~4.6

E. Melting point/Freezing point: 225℃(decomposed) / No data available.

F. Initial Boiling point and Boiling point range: 204℃

G. Flash point: No data available.

H. Evaporation Rate: No data available.

I. Flammability (solid, gas): nonflammable

J. Low & Upper limit of Flammable or Explosion Range: N/A.

K. Vapor Pressure: 0.000000000122mmHg

L. Solubility: 487mg/L

(1) Solubility in water, anhydrous type.

(2) Solubility in Solvents : Weakly soluble in ether, chloroform, toluene.

(3) Insolubility : Alcohol.

M. Vapor Density: N/A

N. Specific Gravity: 0.9996

O. n-Octanol/water partition coefficient: -3.96(estimated)

P. Auto-ignition Temp.: No data available.

Q. Decomposition Temp.: No data available.

R. Viscosity: No data available

S. Molecular Weight and Molecular Formular: 119.98 / NaH₂PO₄


10. Stability & Reactivity

A. Chemical stability and Possibility of hazardous reactions

- No data available

B. Chemical Stability

- Stable under recommended storage conditions.

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C. Possibility of Hazardous Reactions

- None under normal processing.

D. Conditions to Avoid

- Protect from moisture.

E. Incompatible Materials

- Strong acids.

F. Hazardous Decomposition Products

- No data available.

11. Toxicological Information

A. Information about possible exposure route : No data available.

B. Health effect

○ Acute toxicity:

- ORAL : LD₅₀ 8290mg/kg Rat
- Dermal : LD₅₀ > 7940mg/kg Rabbit
- Inhalation : No data available.

○ Skin corrosion/irritation

- Corrosive effect causes severe irritation, erythema, blister.

○ Serious eye damage/eye irritation

- Corrosive effect causes severe irritation, erythema, blister.

○ Respiratory sensitization : No data available.

○ Carcinogenicity

- Korea occupational Safety and Health Act : No data available
- Korea Ministry of Employment and Labor : No data available
- IARC : No data available
- OSHA : No data available
- ACGIH : No data available
- NTP : No data available
- EU : No data available

○ Germ cell mutagenicity : No data available.

○ Toxic to reproduction : No data available


○ Specific target organ toxicity following single exposure : No data available

○ Specific target organ toxicity following repeated exposure : No data available.

○ Aspiration Hazard : No data available

12. Ecological Information

A. Aquatic & Eco-toxicity:

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- Fish : LC₅₀ 186 mg/ℓ 96hr Gambusia affinis

- Crustacean : No data available

- Algae : No data available

B. Persistence and degradability

- No data available

C. Bioaccumulative potential

- No data available

D. Mobility in soil : No data available

E. Other adverse effect : No data available.

13. Disposal Considerations

A. Disposal method

- Put contents in polyethylene bag or similar bag and bury in managed landfills.

- Waste must be disposed of in accordance with federal, state and local environmental control regulations.

B. Disposal Considerations

- Consider precautions in Waste Control Act(if specified).

14. Transport information

A. UN Number :

ADR/RID: - IMDG: - IATA:-

B. UN proper shipping name :

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

IATA : Not dangerous goods

C. Transport hazard classes :

ADR/RID: - IMDG: - IATA:-

D. package group :

ADR/RID: - IMDG: - IATA:-

E. Environmental hazards :

ADR/RID: no IMDG: no IATA: no


F. Special precautions for user :

- In case of fire : No data available

- in case of leakage : No data available

15. Regulatory Information

A. EINECS : European inventory of Existing commercial chemical substance

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B. ELINCS : EU list of notified chemical substance

C. Others

Korea- Regulation by occupational safety and health act : No data available

Korea- The chemicals control Act : No data available

Korea- Persistent organic pollutants control acts : No data available

U.S.A management information(OSHA Regulation) : No data available

U.S.A management information(CERCLA Regulation) : No data available

U.S.A management information(EPCRA 302 Regulation) : No data available

U.S.A management information(EPCRA 304 Regulation) : No data available

U.S.A management information(EPCRA 313 Regulation) : No data available

U.S.A management information(Rotterdam Protocol) : No data available

U.S.A management information(Stockholm Protocol) : No data available

U.S.A management information(Montreal Protocol) : No data available

16. Other Information

A. Data Source : Korean Occupational Safety and Health Act.

B. Date of establishment : June, 3, 1996.

C. Revision Number and recent revision date : Rev. No.7 / November, 16, 2017.

D. Others : The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We shall not be held liable for any damage resulting from handling.