	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	1/10

1. Product and Company Identification

- A. Product name : Tribasic Sodium Phosphate (Anhydrous)
- B. Relevant identified uses of the substance or mixture and uses advised against
- Recommended Use : pH buffer for food production, baking powder, binder for meat processing, fluxing agent for cheese, stabilizer for dairy products, antiscals, acid detergent, electronic gilding, metal surface processing agent, water treatment, dyeing assistant, organic synthesis buffer.
 - Usage Limits : No data available
- C. Details of the supplier of the safety data sheet
- Company : Youngjin co. ltd.
 - Address : 38, Ojeong-ro, Ojeong-gu, Bucheon-si, Gyeonggi, Korea
 - Department : Quality Control Department
 - Telephone : 82-32-674-4221

2. Hazards Identification


- A. Hazards Identification Classification
- Acute toxicity : oral toxicity classification 1
 - Acute toxicity : dermal toxicity classification 1
 - Acute toxicity : dust/mist inhalant toxicity classification 3
 - Skin corrosive or irritative substance : classification 1
 - Severe eye damage or Eye irritative substance : classification 1
 - Specific target organ toxicity (single exposure) : classification 3 (Respiratory System Irritation)

B. Warning marks

- Pictorial symbol



- Signal word: Danger
- Hazardous expression
H300 Inhalation is fatal.
H310 Skin contact is fatal.

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	2/10

H314 Causes severe skin burns and eye damage.

H318 Causes severe damage to eyes

H331 Inhalation is hazardous

H335 May cause irritation in Respiratory System

○ Precaution expression

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P262 Avoid eyes, skin, and clothing contact.

P264 Wash thoroughly after handling

P270 Do not eat, drink or smoke while using this product.

P271 Handle only in exterior or well-ventilated place.

P280 Wear protective gloves/protective clothing/ eye protection/face protection.

○ Respond

P301+P310 IF SWALLOWED: consult medical personnel immediately.

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

P302+P352 IF ON SKIN: Wash out with much water.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

P312 If uncomfortable, consult medical personnel.

P330 Wash mouth out.

P361+P364 Take off all contaminated clothing immediately and clean before reuse.

○ Storage

P403+P233 Store container in well-ventilated place and securely airtight.


○ Disposal

P501 Dispose of container in conformity with relevant regulations.

C. NFPA Rating (0-4 level): Health=3, Fire=0, Reactivity=0

3. Composition, Information on Ingredients

Chemical Name	Idiomatic name	Percent (%)	CAS No.
---------------	----------------	-------------	---------

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	3/10

Tribasic Sodium Phosphate (Anhydrous)	Tribasic Sodium Phosphate (Anhydrous)	100%	7601-54-9
--	--	------	-----------

4. First Aid Measures

A. Eye Contact

- Take emergency medical service.
- Rinse cautiously with water for several minutes. Remove contact lenses, continue rinsing.

B. Skin Contact

- Prevent spread of contaminated area if skin contact is slight.
- Take emergency medical service.
- Wash contaminated clothing thoroughly before re-use.
- If the material is hot, soak affected area in a great quantity of cold water and wash to remove heat.
- If uncomfortable, consult medical personnel.
- Remove contaminated clothing and shoes. Isolate contaminated area.
- If on skin (or hair), take off immediately all contaminated clothing. Rinse skin with water/shower.

C. Inhalation

- If exposed to excess dust or fume, wash clear air. If there are cough or other symptoms, take medical action.
- Consult medical personnel immediately

D. Ingestion

- If the person ingested or inhaled the material, do not mouth-to-mouth resuscitation and use proper medical respiratory equipment.
- If swallowed, wash mouth out and do not induce vomiting.
- If swallowed, consult medical personnel immediately.


E. Other medical notices.

- Let medical personnel recognize the material and take protective measure.
- Symptoms by Inhalation or contact may be delayed.

5. Explosion / Fire Fighting Measures

A. Appropriate (and inappropriate) Extinguishing Media

- Use alcohol foam, carbon dioxide or water spray.

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	4/10

- If extinguishing by smothering, use dry sand or earth.

B. Specific Hazards in Presence of Chemical Substances

- If boiled, container may explode.
- Nonflammable, but material can decompose and generate corrosive and toxic fume if boiled.
- While burning, thermal decomposition or combustion can generate irritative and highly hazardous gas.
- Inhalation, ingestion, skin contact can cause severe injuries and death.


C. Precaution and Protective equipments for Fire Fighting

- Rescuer should use appropriate protective equipment.
- Dig a ditch to dispose fire fighting water and keep material not dispersed.
- Keep water out of container.
- If not dangerous, move container from fire area.
- Keep proper distance while extinguishing.
- Fire involving Tanks; In case of great fire, use unmanned fire apparatus. If fire suppression is impossible, step back and leave it burn.
- 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; Extinguish fire in maximum range or use unmanned fire apparatus
- Fire involving Tanks; Do not approach tank in flames.

6. Accidental Release Measures

A. Require measures and protection to protect human body

- Do not inhale dust, smoke, gas, mist, steam, spray.
- Avoid eyes, skin, and clothing contact.
- Do not enter if not needed, or if protection equipment is not prepared.
- Clear spilth immediately, follow precaution of Personal Protection section.
- Isolate contaminated area.
- Keep water out of container.
- If not dangerous, stop any leakage.
- Do not touch broken container or leaked material without appropriate protective clothing.
- Use plastic sheet to stop spreading.

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	5/10

- Take notice of material and condition to avoid.

B. Required measures to protect environment

- leaked material is corrosive and toxic, and can cause contamination.
- Prevent of inflow into waterway, drain, basement, or closed space.

C. Purification or removal method

- Absorb spilth with inactive material(e.g. dry sand or earth), put into chemical waste container.
- Remove airborne dust and humidify with water to stop dispersing.
- Absorb spilt liquid and wash out contaminated area with detergent and water.

7. Handling & Storage

A. Safe handling

- Do not inhale dust, smoke, gas, mist, steam, spray.
- Open cap carefully.
- Work in reference to Engineering Controls and Personal Protection.
- Avoid eyes, skin, clothing contact. Wash thoroughly after handling.
- Handle only in exterior or well-ventilated place.
- Follow all precautions of MSDS/LABEL though container is emptied. Product residues can rest.
- Do not eat, drink or smoke while using this product.
- Prevent long term or continuous skin contact.
- Use carefully taking notice of Handling & Storage.
- Pay attention to Conditions and Materials to Avoid.


B. Safe Storage

- Drain the water out from an empty drum and close properly and put it back to drum regulator or place appropriately.
- Store container in well-ventilated place and securely airtight.
- Keep away from food and beverage.
- Pay attention to Conditions and Materials to Avoid.

8. Exposure Controls & Personal Protection

A. Chemical Exposure Limits, Biological Exposure Limit

- Korean Regulation : No data available
- ACGIH Regulation : AIHA Workplace Environmental Exposure Level: STEL5 mg/m³
- Biological Exposure Limit : No data available

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	6/10

B. Engineering Controls

- Install local exhaust ventilation, use process isolation or other ways to comply tolerable standard.
- If dust, fume or mist is generated while operating, ventilate to maintain air pollution lower than exposure limit.
- Install facility to clean and wash up nearby working place for emergency.

C. Personal Protective Equipment

○ Respiratory Protection

- Use respiratory protective equipment that is appropriate to exposed material's physical & chemical properties and authorized by Korean Occupational Safety and Health Act.

○ Eyes Protection : No data available.

○ Hands Protection : No data available.

○ Body Protection : No data available.

9. Physical & Chemical Properties

A. Appearance: Solid crystallized powder.

B. Odor: None.

C. Odor Threshold : None

D. PH: 1% solution pH11.5~12.5

E. Melting point/Freezing point: No data available / No data available.

F. Initial Boiling point and Boiling point range: No data available.

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: N/A

L. Solubility: (1) Solubility in water : 4% at 20°C

(2) Insoluble in Alcohol and Carbon Disulfide.

M. Vapor Density: 1.6


N. Specific Gravity: 2.536

O. n-Octanol/water partition coefficient: -7.64(estimated)

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

Q. Decomposition Temp.: No data available.

R. Viscosity: No data available

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	7/10

S. Molecular Weight and Molecular Formular: 163.94 / Na₃PO₄

10. Stability & Reactivity

A. Chemical stability and Possibility of hazardous reactions

- May decompose and generate toxic gas at high temperature.
- If boiled, container may explode.
- Material is nonflammable and does not burn itself, but can decompose and generate corrosive and toxic fume if boiled.
- Inhalation, ingestion, skin contact can cause severe injuries and death.

B. Conditions to Avoid : Heat

C. Materials to Avoid : No data available.

D. Hazardous Decomposition Products :

- While burning, thermal decomposition or combustion can generate irritative and highly poisonous gas.
- Corrosive and toxic fume.

11. Toxicological Information

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

B. Health effect

○ Acute oral toxicity:

- ORAL : LD₅₀ 4.8mg/kg Rat
- SKIN : LD > 2mg/kg Rabbit
- Inhalation : LC₅₀ ≥ 0.54 mg/l 4hr Rat

○ Skin corrosivity or irritation : pH 11.5(0.1% sol), 11.7(0.5% sol), 11.9(1% sol)

Corrosive substance for skin.

○ Severe eye damage or irritation : pH 11.5(0.1% sol), 11.7(0.5% sol), 11.9(1% sol)


Corrosive substance for eyes.

○ Respiratory sensitization : No data available

○ Skin sensitization : No data available

○ Carcinogenesis

- Occupational Safety and Health Act : No data available
- Ministry of Employment and Labor : No data available
- IARC : No data available

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	8/10

- OSHA : No data available
- ACGIH : No data available
- NTP : No data available
- EU : No data available
- CLP : No data available
- Gamete Mutagenicity : No data available
- Reproductive toxicity : No data available
- Specific target organ toxicity (single exposure) : Inhalation cause burning sensation on airway.
- Specific target organ toxicity (repeated exposure) : No data available
- Aspiration Hazard : No data available


12. Ecological Information

- A. Aquatic & Eco-toxicity:
- Fish : LC50 748.17 mg/l 96 hr
 - Crustacean : No data available
 - Algae : No data available
- B. Residue property and degradability
- Residue property : log Kow -7.64 (estimated)
 - Degradability : No data available
- C. Bioaccumulative potential
- Bioaccumulation : BCF 3.162
 - Biodegradation : No data available
- D. Movement in soil : No data available.
- E. Other hazardous effect : No data available.

13. Disposal Considerations

- A. Disposal method
- Dispose of contents/container according to Waste Control Act(if specified).
- B. Disposal Considerations
- Consider precautions in Waste Control Act(if specified).

14. Transport information

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	9/10


- A. UN Number : 2588
 B. UN proper shipping name : (PESTICIDE, SOLID, TOXIC, N.O.S.)
 C. UN hazardous ranking : 6.1
 D. Un package group : 1
 E. Marine pollutant : No data available
 F. Special precautions:
 - In case of fire : F-A
 - in case of leakage : S-B

15. Regulatory Information

- A. Regulation by Occupational Safety and Health Act : N/A
 B. The Chemicals Control Act : N/A
 C. Dangerous Material Safety Management Regulation : N/A
 D. Waste Control Act : Designated waste
 E. Other regulation by Korea and foreign acts
 - Korean Regulation
 Persistent organic pollutants control acts : N/A
 - Foreign Regulation
 U.S.A management information(OSHA Regulation) : N/A
 U.S.A management information(CERCLA Regulation) : 2267.995 kg 5000lb
 U.S.A management information(EPCRA 302 Regulation) : N/A
 U.S.A management information(EPCRA 304 Regulation) : N/A
 U.S.A management information(EPCRA 313 Regulation) : N/A
 U.S.A management information(Rotterdam Protocol) : N/A
 U.S.A management information(Stockholme Protocol) : N/A
 U.S.A management information(Montreal Protocol) : N/A
 EU classification information(Classification) : N/A
 EU classification information(Risk Phases) : N/A
 EU classification information(Safety Phrases) : N/A

16. Other Information

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

	Material Safety Data Sheet(MSDS-GHS)	Date of establishment	June, 3, 1996.
	Tribasic Sodium Phosphate (Anhydrous)	Date of revision	April, 3, 2017.
		Page	10/10

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

C. Revision Number and recent revision date : Rev. No.6 / April, 3, 2017.

D. Others : None.