

## Material Safety Data Sheet

Product Name	ALUMINUM TRIHYDROXIDE		
CAS NO	KE NO	UN NO	EC NO
21645-51-2	KE-00980		244-492-7

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

1. Product Name: WH-50, WH-63, WH-83, DH-100, DH-50P, KH-17R, KH-10R, KH-8R, KH-5R, SH-25B, SH-8K, SH-15K, KH-101, KH-101LC, KH-101LP, KH-108, KH-101HRT

2. Application and limit the use :

- aluminum salt, medicine, ceramics raw material, refractory, catalyst and catalyst carrier, flame retardant, artificial marble
- Limit the use : Not applicable

3. Information of Manufactory/Supplier/Distributor

- Manufactory's Name : KC CORPORATION
- Address : 85, Sandanseobu-ro, SamHo-Eup, YeongAm-Gun, JeonNam, KOREA
- Tel : 82-70-7015-1073(Sales div), 82-61-460-7241 (QA Team)
- Department responsible for information : Sales, QA Team

### SECTION 2. HAZARDS IDENTIFICATION

1. Hazard Classification :

- Acute aquatic environmental hazard Category 1
- Chronic aquatic environmental hazard Category 1

2. Warning mark Classification



○ Figure Character

○ Signal : Danger

○ Harmful Risk phrases

H400 Very toxic to aquatic organisms.

H410 Toxic to aquatic life with long lasting effects.

○ Precautions phrase

- Precautions

P260 Do not inhale of dust, Hume, gas, mist, steam, spray.

P273 Do not discharge into the environment

- Measures

P314 If you feel uncomfortable, seek medical advice to attention.

P304 If you inhale it, go out to fresh area and take a rest with comfortable position to breath.

P391 Collect spillage.

- Storage : No data



- Waste disposal

P501 (In accordance with related regulations) dispose contents and containers

3. Other Hazardous risk, which was not included in hazardous risk classification standard

○ NFPA : Health=0, Fire=No data, Reaction=0

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

1. Substance description : Aluminum Trihydroxide
2. Synonyms : Aluminum Hydroxide
3. CAS No : 21645-51-2
4. Content : Over 99wt%

## SECTION 4. FIRST-AID MEASURES

1. Eye contact : Get emergency medical attention. In case of contact with substance, immediately wash skin and eyes with running water for more than 20 minutes.
2. Skin contact : Remove contaminated clothing and shoes. Wash with soap and water.  
Wash contaminated clothing and shoes. In case of contact with substance, wash skin and eyes immediately with running water for more than 20 minutes.
3. Inhalation : If adverse effects occur, move to uncontaminated area.  
Move to fresh air. If not breathing, give CPR. If breathing is difficult, give oxygen.
4. Ingestion : Seek medical attention if ate a large amount.
5. Acute and delayed symptoms/effects : No data
6. Emergency care and the doctor's Note : No data

## SECTION 5. FIRE AND EXPLOSION HAZARDS

1. Appropriate extinguishing media (or Inappropriate extinguishing media)
  - Appropriate extinguishing media : Alcohol foam, carbon dioxide or water spray, dry sand or earth when extinguishment by smothering
  - Inappropriate extinguishing media : No data
  - Large fire : No data
2. Special exposure hazards arising from the chemical substance
  - Pyrolysis product : No data
  - Fire & explosion risk : Containers may explode on heating. Some can be burnt, but not easily ignite.  
May cause irritation and toxic gas in case of fire.
3. Protection equipment for fire-fighter & preventive measures :
  - Extinguish the area and keep at a safe distance.
  - Be aware that some can be transported at high temperatures.
  - Drill ditches for the disposal of waters and keep them from scattering.
  - Move containers from fire area if it is not hazardous.
  - In case of fire, cool containers with plenty of water even after extinguishing.
  - In case of tank fire, if there is a high sound level in the pressure relief device or if the tank is discolored, immediately withdraw.
  - In case of tank fire, withdraw from flame tank.

## SECTION 6. ACCIDENTAL SPILLAGE MEASURES

### 1. Measures and gears to protect human bodies

- If the worker is not in danger, wear a dust mask, safety glasses, protective gloves and protective clothing and stop the leak.
- Immediately wipe off any spills and follow protective precautions.
- Do not touch or walk with exposed material.
- Stop the leak if it is not dangerous.
- Prevent scattering of dust.
- Be aware of the materials and conditions to avoid

### 2. Measures to protect environment

- Atmosphere : To minimize the spreading, prevent scattering by using tent covering
- Soil : Although they do not cause pollutions, isolate spilled materials in the banks to prevent spreading by using some soil or sandbags
- Water : Although they do not cause pollutions, use inhalation hose in case of leakage

### 3. Purification & Removal methods

- Take away by using proper containers
- Repress raising dust
- Collect the spills.
- Absorb spillage with inert material (e.g. dry sand or earth) and place in a chemical waste container.
- Absorb liquid and rinse contaminated area with detergent and water.
- In case of large spills, create a ditch by distancing from liquid spills.
- With a clean shovel, place the spill in a clean, dry container, loosely closed and remove the container from the spill area.
- In case of powder leakage, cover with plastic sheet to prevent spread and keep dry.
- In case of small leakage, absorb with sand, non-combustible material and put into container.

## SECTION 7. HANDLING AND STORING METHODS

### 1. Safety Handling Tips

- Separate from prohibited mixture materials
- Prevent raising dust and scattering
- Do not eat or inhale
- Refer to engineering controls and personal protective equipment.
- Be careful of the high temperature.

### 2. Safe storing methods

- Load products on the flat surfaces, do not load more than the number of 3 pallet-layers
- Keep in the low - humidity, good ventilation and dried place

## SECTION 8. EXPOSURE CONTROL & PERSONAL PROTECTION

### 1. Exposure standard of Chemical & biological

- Domestic : No data
- ACGIH : No data



- Exposure standard of biological : No data
- 2. Appropriate Technical measures : No data
- 3. Personal protection equipments
  - Respiratory protection : Wear a dust mask, Wear respiratory protection
  - Eye protection : Wear safety glasses
  - Hand protection : Wear safety gloves
  - Body protection : Wear a dustproof clothing

## SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

1. Form : White powder
2. Odor : Odorless
3. Odor ability : No data
4. pH :  $9.3 \pm 0.3$
5. Melting/freezing point :  $300^{\circ}\text{C}$
6. Boiling point : 0
7. Flash point : Not applicable(inflammable)
8. Evaporation Rate : Not applicable
9. Flammability (Solid, Gas) : Not applicable(inflammable)
10. Flammability, explosion range : Not applicable
11. Vapor pressure : Less than 10Pa( $20^{\circ}\text{C}$ )
12. Solubility in water : Not soluble
13. Vapor density : Not applicable
14. Specific gravity : 2.42
15. Partition coefficient (N-Octanol/Water) : Not applicable
16. Autoignition temperature : Not applicable
17. Decomposition temperature :  $200^{\circ}\text{C}$
18. Viscosity : Not applicable
19. Molecular Weight : 78

## SECTION 10. SAFETY & REACTIVITY

1. Chemical stability
  - The container may explode on heating.
  - Some can be burnt, but not easily ignite
  - May cause irritation and toxic gas in case of fire
2. Possibility of Hazardous reaction : Soluble in acid, alkaline
3. Conditions to avoid : Heat
4. Materials to avoid : No data
5. Hazardous decomposition products : Toxic gas

## SECTION 11. TOXICOLOGICAL INFORMATION



1. Information about the route of exposure

- Inhalation through respiratory organs : No data
- Ingestion through mouth : No data
- Skin contact : No data
- Eye contact : No data

2. Delay by short-term and long-term exposure, acute effects and chronic effects :

- Acute toxicity :
  - Oral: LD50> 2000 mg / kg Species: Rat (female, no death (OECD TG 423, GLP))
  - Dermal : No data
  - Inhalation : Dust LC50 7.6 mg / l 1 hr Species: Rat (Male (OECD TG 403))
- Skin corrosive or irritation : No signs of irritation (OECD TG 404)
- Severe eye damage or Irritation : No irritation (OECD TG 405, GLP) as a test result of severe eye damage /

irritation test using rabbit.

- Respiratory hypersensitivity : No data
- Skin hypersensitivity : Skin irritability test using guinea pig (male) showed non-hypersensitivity (OECD TG 406, GLP)
- Carcinogenicity : No data
- Mutagens : No data
- Generative toxicity : No data
- Target organ systemic toxicity (Single exposure) : No data
- Target organ systemic toxicity (Repeated exposure) : No data
- Draft hazard : No data

3. Measure of toxicity estimate (Acute toxicity estimate) : No data

## SECTION 12. ECOLOGICAL INFORMATION

1. Aquatic, terrestrial eco-toxicity

- Fish : LC50> 218.6441 mg / l 96 hr Pimephales promelas (ASTM 2000, GLP)
- Shellfish : LC50 22 mg / l 96 hr Others (Gammarus sp., Exponential formula)
- Bird : ErC50 0.6999 mg / l to 0.0455 mg / l 72 hr Other (Pseudokirchneriella subcapitata, exponential, OECD Guideline 201)

2. Residual & resolubility

- Residual ability :  $-0.5304 \log Kow$  ()
- Resolubility : No data

3. Bioconcentration

- Biodegradable : No data
- Condenasability : No data

4. Soil mobility : No data

5. Other harmful effects :

- Fish: Pimephales promelas, NOEC, 7d, = 156.5  $\mu\text{g} / \text{L}$ , Ring formula, EPA 2002, GLP,
- Crustaceans: Ceriodaphnia dubia, EC50, 7d, = 250  $\mu\text{g} / \text{L}$ , Ring formula, USEPA 2002,
- Algae: Pseudokirchneriella subcapitata, NOEC, 72h,  $\geq 4 \mu\text{g} / \text{L}$ , exponential, OECD Guideline 201, GLP

## SECTION 13. DISPOSAL CONSIDERATION



1. Disposal method : Incinerate at high temperature
2. Note : No data

## SECTION 14. TRANSPORTATION INFORMATION

1. UN classification No. : Not applicable
2. UN Proper Shipping Name : Not applicable
3. UN Hazard level : Not applicable
4. Container Class : Not applicable
5. Marine pollutant : No data
6. Necessary safety regulation or the information need to know about transportation and transport means
  - Fire emergency measures : Not applicable
  - Effluence emergency measures : Not applicable

## SECTION 15. LEGAL RESTRICTED STATUS

1. Restrictions by Industrial Safety and Health Law :

Controlled substances

Materials of Working Environment Measurement (Measurement Cycle: 6 months),

Special Medical Examination (Examination Cycle: 12 months)

2. Management law of hazardous chemicals : Not applicable
3. Dangerous Goods Safety Management law : Not applicable
4. Waste management law : No data
5. Other domestic & foreign countries regulatory information
  - Residual organic pollutants management : Not applicable
  - EU classification information
    - Result of classification : Not applicable
    - Danger phrase : Not applicable
    - Precautions phrase : Not applicable
  - U.S.A regulatory information
    - OSHA (29CFR1910.119) : Not applicable
    - CERCLA 103 (40CFR302.4) : Not applicable
    - EPCRA 302 (40CFR355.30) : Not applicable
    - EPCRA 304 (40CFR355.40) : Not applicable
    - EPCRA 313 (40CFR372.65) : Not applicable
  - Rotterdam Convention material : Not applicable
  - Stockholm Convention material : Not applicable
  - Montreal Protocols material : Not applicable

## SECTION 16. OTHERS INFORMATION

1. Provenance

Industrial poisoning handbook, Shin Kwang Publishing Co.



# KC Corporation ALUMINUM TRIHYDROXIDE

85, Sandanseobu-ro, SamHo-Eup,  
YeongAm-Gun, JeonNam, KOREA

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TOXNET, U.S. National Library of Medicine (<http://toxnet.nlm.nih.gov>)

Corporate Solution From Thomson Micromedex (<http://csi.micromedex.com>)

The Chemical Database, The Department of Chemistry at the University of  
Akron (<http://ull.chemistry.uakron.edu/erd>)

International Chemical Safety Cards (ICSC) (<http://www.nihs.go.jp/ICSC>)

European Chemical Substances Information System (ECB-ESIS) (<http://ecb.jrc.it/esis>)

The ECOTOX Database, EPA (<http://cfpub.epa.gov/ecotox>)

Chemical Information System, National Institute of Environmental Research (<http://ncis.nier.go.kr>)

Dangerous Goods Information Management System, National Emergency Management Agency (<http://hazmat.nema.go.kr>)

2. First edition issued : Dec 15, 2003

3. New edition issued : Dec 18, 2017

4. Other : This Material Safety Data Sheet was made for employee, buyers, or other people to do the safe handling of this material. Thus, please note that we can not guarantee or don't have any responsibility technically, legally for the use of special purpose or commercial applications and expression.