

	<h1>Material Safety Data Sheet</h1>	Issue date	2008. 05. 28.
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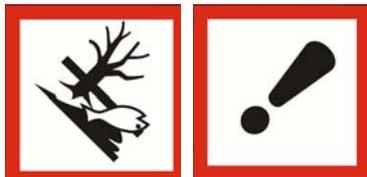
## 1. Identification of substance

- ① Product Name : HI-TAL P4 (Magnesium Zinc Aluminium Hydroxide Carbonate Hydrate)
- ② Recommended use of the chemical and restrictions on use :
- Recommended use : Heat stabilizer for PVC resin
  - Restrictions on use :
- ③ Information on manufacture/supplier/distributor :
- Company name : SINWON INDUSTRIAL CO., LTD.
  - Address : No. 1203-4 Wonjeong-Ri, Posung-Eup, Pyeongtaek-City, Gyeonggi-Do, Korea
  - Tel. : +82-31-684-6688 / Fax : +82-31-682-6055
  - Responsible department : Q.C & Research Department

## 2. Hazards identification

- ① Hazards classification : Hazardous material in the aquatic environment(chronic) 2 (R52/53 S61)
- ② Label elements including precautionary statements

- Pictograms



- Signal word : Warning

- Hazard statements :

- H302 Acute toxicity material(oral rat) classification 4
- H332 Acute toxicity material(inhalation rat) classification 4
- H411 Hazardous material in the aquatic environment classification 2

- Precautionary statements

- Prevention :

- P264 Wash thoroughly hand after handling.
- P270 Do not eat and have a smoke during using this product
- P261 Do not inhale spray from Dust · hum · gas · mist · vapor '...' .
- P332 When irritating a skin
- P410 Avoid a direct ray of light

- Opposition :

- P301+P312 Get doctor's advice if you feel uncomfortable after swallowing.
- P330 Wash your mouth.
- P304+P340 Move to the place in fresh air in case of Inhalation and take a rest by good posture to inhale.
- P312 Get doctor's advice if necessary.

- Storage : Not available information

- Disposal

- P501 Dispose in accordance with all applicable regulations .

③ Other hazards which do not result in classification : Not available information

### 3. Composition/Information on ingredient

Chemical name	CAS NO.	EC/ELINCS	Content(%)
Magnesium Zinc Aluminium hydroxide Carbonate Hydrate	169314-88-9	423-570-6	> 97
Fatty acid C16~18	67701-03-5	266-928-5	< 3

### 4. First aid measure

- ① Contact with eyes : Because of mechanical irritation, wash with plenty of water for 10~15 minutes.
- ② Contact with skins : Get medical advice if necessary.
- ③ Inhalation : Get medical advice if necessary.
- ④ Ingestion : Get medical advice if swallow many amounts.
- ⑤ Most important acute and delayed symptoms/effects : not available information
- ⑥ First aid and notes for physicians : not available information

### 5. Fire-Fighting measures

- ① Fire and explosion hazards : None
- ② Suitable extinguishing methods : No specific measure is necessary.
- ③ Suitable extinguishing media : No specific measure is necessary.

### 6. Accidental release measures

- ① Measures required for personal protection and protective equipment : See point 8
- ② Measures for environmental protection : See point 12 and 13.
- ③ Clean up and removal method : Pur into a labelled container and provide safe disposal.

### 7. Handling and storage

- ① Precautions for safe handling : See point 8
- ② Conditions for safe storage
  - Store under dry conditions.
  - Materials to avoid : Acids

### 8. Exposure controls & personal protection

- ① Exposure limits of the chemical substance, biological exposure limits and etc. : No data
- ② Appropriate engineering controls : Not available information
- ③ Personal protective equipment
  - Respiratory protection : NISOH approved mask
  - Eye protection : Goggles
  - Hand protection : Gloves
  - Body protection : Normal overalls

### 9. Physical and chemical properties

- ① Appearance : White powder

- ② Odor and odor threshold : Not determined
- ③ PH : ~ 9
- ④ Melting point/freezing point : Not determined
- ⑤ Initial boiling point and boiling range : Not determined
- ⑥ Flash point : Not determined
- ⑦ Evaporation rate : Not determined
- ⑧ Flammability(Solid, gas) : None
- ⑨ Upper/lower flammable or explosive limits : Not applicable
- ⑩ Vapour pressure : Not determined
- ⑪ Solubility in water : Insoluble
- ⑫ Vapour density : Not determined
- ⑬ Specific gravity(water=1) : 2.21
- ⑭ Partition coefficient : n-octanol/water : None
- ⑮ Auto ignition temperature : Not determined
- ⑯ Decomposition temperature : 400°C (752°F)
- ⑰ Viscosity : Not determined
- ⑱ Molecular rate : 501

## 10. Stability and reactivity

- ① Chemical stability : Stable at a normal temperature and pressure
- ② Possibility of hazardous reactions : No dangerous reactions known
- ③ Conditions to avoid : Avoid heat, flames, sparks and other sources of ignitions. Avoid contact with incompatible materials.
- ④ Incompatible materials : Acids
- ⑤ Hazardous decomposition products : None

## 11. Toxicological information

- ① Information on the likely routes of exposure
  - Respiratory system : Not available information
  - Oral : Not available information
  - Eye : Not available information
  - Skin : Not available information
- ② Delayed and immediate effects and chronic effects from short or long term exposure
  - Acute toxicity :
    - Oral rat LD50 > 2,000 mg/Kg
    - Skin rat : Not available information
    - Inhalation rat LD50 > 5.17 g/m<sup>3</sup>
  - Skin corrosion/irritation : Not available information
  - Serious eye damage/eye irritation : Not available information
  - Respiratory sensitization : Not available information
  - Skin sensitization : Not available information
  - Carcinogenicity : Not available information
  - Germ cell mutagenicity : Not available information
  - Reproductive toxicity : Not available information
  - Specific target organ toxicity(single exposure) : Not available information

- Specific target organ toxicity (repeated exposure) : Not available information
- Aspiration hazard : Not available information
- ③ Numerical measures of toxicity(acute toxicity estimation (ATE), etc.) : Not available information

## 12. Ecological information

- ① Aquatic and terrestrial ecotoxicity :
  - Hazardous material in the aquatic environment classification 2
- ② Persistence and degradability : Not available information
- ③ Bioaccumulation : Not available information
- ④ Mobility in soil : Not available information
- ⑤ Other adverse effects : Not available information

## 13. Disposal considerations

- ① Disposal methods : Disposal must be done according to official regulations.
- ② Precautions for disposal : Put into a labelled container and provide safe disposal.

## 14. Transport information

- ① UN number : None
- ② UN proper shipping name : Not determined
- ③ Transport hazard classes : Not determined
- ④ Packing group, if applicable : Not determined
- ⑤ Marine pollutant : Not determined
- ⑥ Information on any special precautions, which a user needs to be aware of, or needs to comply
  - A kind of an emergency measures in case of fire : Not determined
  - A kind of an emergency measures in case of release : Not determined

## 15. Regulatory information

- ① Industrial Safety and Health Law : Not determined
- ② Toxic Chemical Control Law : Not determined
- ③ Dangerous Goods Safety Control Law : Not determined
- ④ Wastes Management Law : Not determined
- ⑤ Others

## 16. Others information

- ① The source of data.
  - ECB-ESIS(European chemical Substances Information System)(<http://ecb.jrc.it/esis>)
- ② The first date of preparation : 28 MAY 2008
- ③ Number of revision times and the latest revision date : 1st & 7 April 2009
- ④ Others
  - This information was prepared in accordance with the 41<sup>st</sup> article of the Korean law of industrial safety and healthy.
  - This product should be used in accordance of the above regulation and standards.
  - The above information is accurate to the best of our knowledge, and it is not meant for guaranteeing the specific properties of the product.